

RE-FOCUSING THE NIGERIAN UNIVERSITY SYSTEM FOR CREATIVITY AND NATION-BUILDING

BY

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Matriculation Ceremony on Saturday 10th August, 2019.

1.0 PROTOCOL

The Chairman and members of the Board of Trustees of Trinity University,

The Pro-Chancellor and Chairman of the University Governing Council

Pastor Samuel Olatunji

Members of the University Governing Council

The Vice-Chancellor, Professor Charles K. Ayo

Members of the University Senate

Principal Officers of the University

Management Staff

Academic and Non-Teaching Staff of the University

My Dear Pioneer Students

Distinguished Guests

Gentlemen of the Press

Ladies and Gentlemen

2.0 INTRODUCTION

I consider it a great honour and rare privilege to be selected to deliver this lecture at the maiden Matriculation ceremony of Trinity University, at its City campus in Lagos. Today's event, the maiden matriculation ceremony of Trinity

University has very serious significance for me personally given my association with this University from the time when it was merely an idea, through the long period of uncertainty and the rigours of traversing the 14-step process for the licensing of private Universities by the National Universities Commission, to the moment of ultimate triumph which culminated in its approval by the Federal Executive Council on 9th January, 2019 and the presentation of operational license to its proprietors(the Trinity Educational Foundation) on 5th February 2019.

This university is certainly the product of perseverance, diligence, dogged determination, strong conviction and grit. These characteristics give me supreme confidence that Trinity University will grow from strength to strength, outlive its illustrious founding fathers, actualize its mission and make its mark on the sands of the academia in perpetuity.

I am indeed very proud to be associated with this University and I thank the proprietors and Management, most sincerely for finding me worthy of this great honour.

Let me first of all congratulate the students matriculating at today's ceremony. You are indeed very fortunate and you should feel very proud to have been selected to be among the first cohort of a brand new citadel of learning such as Trinity University that has avowed its commitment core values academic excellence professionalism responsibility integrity Christian values and leadership

Permit me to say a few words on University Matriculation:

Matriculation is intended as a demonstration of the adoption of student's duties and obtaining of student's rights. The ceremony itself involves students taking the matriculation oath and symbolically touching the university mace and shaking the hands of the dean or Vice-Chancellor.

It is good practice for Universities to maintain a matriculation register which should be in the hand-writing of the matriculating students and the names of such students in exactly the same order of surname, Middle name and First name, as they appear in the matriculation register(except with legal authority) is the way such a students' names should appear on their degree certificates upon successful completion their courses of study at graduation. It is global best practice for admission to cease immediately after the Matriculation ceremony because it is taken that once the oath is administered , the matriculation register for that cohort is closed. It should be borne in mind that in line with good university practice all over the world, it is impossible for an individual who did not matriculate in a university to be admitted to the first degree of such a university

I therefor urge Trinity University to strive to maintain this time-tested University tradition and not emulate the bad practice in some Nigerian Universities where the matriculation Register is either unknown or is not honoured and admission of students goes on *ad infinitum*.

Now to the lecture.....

The topic that I have been asked to speak about today “ **Re-focusing the Nigerian University system for productivity and nation-building**” is quite apposite and germane as it fits snugly into the timeframe of the on-going revitalization of University education in Nigeria being ably championed by my very

cerebral boss- the NUC Executive Secretary , Professor Abubakar Rasheed, , who has been very aptly conferred with the title “ His Academic Eminence” by no less a personality than the globally acclaimed 5-star intellectual giant - Distinguished Professor Peter Okebukola.

The topic of today’s lecture, may cause one to wonder, do we really need to re-focus university education which started in Nigeria in 1948, if so, why?. What are the drivers or the imperatives of this need to re-focus university education?

A quick trip down memory lane will reveal that higher education started in Nigeria in the 19th century with the establishment of the Yaba College in 1932, as it was stated then,...**to provide “well qualified assistance”** in medical, engineering and other vocations as well as teachers for secondary schools, then known as “higher middle schools.”. The Yaba college eventually offered sub-degree courses in engineering, medicine, agriculture and teacher training **to fill specific vacancies in the colonial administration.**

Following agitation for the expansion of opportunities for Higher Education, the colonial government set up the Elliot commission in 1945 which recommended the establishment of a University college in Nigeria, based on the fact that **“the need for educated Africans in West Africa far outstrips supply, present and potential”**, This led to the establishment of the University College, Ibadan in 1948.

By 1949, technical education was added to meet the emerging requirements of commerce, industry and the society in general. Consequently, a College of Arts, Science and Technology was established in each of the regions: Zaria (1952), Ibadan (1954), and Enugu (1955). These were to provide technical education

qualitatively different in character from University education as well as professional disciplines such as secretarial studies, land and estate management, teacher certificates, accountancy, administration, pharmacy and engineering, leading to the award of diplomas.

In a bid to determine the educational needs of post-independence Nigeria as well as geographical spread of university education, the Ashby Commission which was set up in 1959, recommended the establishment of the University of Lagos in 1962 (the same year in which the University College Ibadan became a full fledged autonomous University).

The 1970s witnessed the take over of regional Universities at Zaria, Ile-Ife and Nsukka by the Federal government and the creation of new ones such as the University of Benin in 1970 and the second generation Universities established in Calabar, Jos , Maiduguri, Ilorin, Port Harcourt and Kano, in 1975 became full fledged Universities in 1977. State Universities emerged in 1979, the private Universities joined in 1999 after a previous botched attempt.

Today, the Nigerian University system which is the largest university system in sub-Saharan Africa has 171 Universities (comprising 43 Federal, 49 States and 79 Private universities) ***

This is not an attempt at rendering the full history of University education in Nigeria (we shall leave that to the education historians). The point here is to attempt to establish the *raison d'être* and purpose of University education in times past. For instance we have seen that the Yaba college established in 1932 which eventually offered sub-degree courses in engineering, medicine,

agriculture and teacher training was meant **to fill specific vacancies in the colonial administration.**

This suggests that university education started in Nigeria as a public sector project aimed largely at producing personnel to fill positions in the public service particularly to replace the colonial officers upon their departure after independence. It may therefore be concluded that Nigerian Universities at that time, fulfilled their mission.

Given the complexities of the Nigerian society today, her demographics, socio-economic condition, the demands of nation building not to mention the competition foisted on all nations of the world in the wake of globalization, the new knowledge economy, and the fourth Industrial revolution, can Nigerian Universities be described as fulfilling their mission and living up to national or societal expectations?

If the answer is not in the affirmative, what then must we do to re-focus university education in order to enhance its relevance and strengthen its ability to contribute more meaningfully to nation-building?

As we attempt to find answers to the above troublesome question, let us start from the stated expectations of University education as enunciated in the National Policy on Education(NPE).

The National Policy on Education (2004) highlighted the aims of university education in Nigeria as follows:

- i. To contribute to national development through high-level relevant manpower training;
- ii. To develop and inculcate proper values for the survival of the individual and the society;

- iii. To develop the intellectual capability of individuals to understand and appreciate their local and external environments;
- iv. To acquire both physical and intellectual skills which will enable individuals to be self-reliant and useful members of the society;
- v. To promote and encourage scholarship and community service;
- vi. To forge and cement national unity; *and*
- vii. To promote national and international understanding and interactions

Time will not permit us to analyse these stated aims clause by clause, but suffices it to say that comments and observation by various stakeholder groups such as employers of labour (in both the public and especially the private sector) , development partners and even those members of the public who have never employed a single graduate of the Nigerian University system suggest that graduates of Nigerian universities are not employable, not job-ready, exhibit deficiencies in various skills such as communication skills, critical thinking skills and so on.

Whereas the issue of graduate employability and skills gaps especially soft skills, critical thinking skills, technical skills and lack of job readiness may enjoy seeming consensus, some of us repudiate any generalization about the poor quality of graduates from NUC-approved degree programmes in approved Nigerian Universities as there is abundant evidence pointing in the direction that majority of the graduates of Nigerian Universities have a sound theoretical knowledge of their respective disciplines. This is corroborated by the fact that many a graduate of the NUS including those with second class lower degrees, often perform creditably in postgraduate programmes in foreign universities in the UK, US and other countries with some graduating with distinction.

It may therefore be argued that what is deficient in these graduates, are practical skills, especially hands-on skills required in industry. We shall dwell more on the aetiology and pros and cons of the deficiencies in skills and practical competences in succeeding sections

Apart from the aspect of graduate quality and employability, the perception of Nigerian Universities as knowledge-generating institutions expected to drive the creation of new useful knowledge and innovation through cutting - edge research endeavours that have a direct nexus to the technological and socio-economic development of Nigeria, is not altogether positive because not a few pundits criticize Nigerian Universities for not doing enough to demonstrate relevance to national developmental aspirations.

The feeble attempts at research are concentrated on publications for purposes of promotion and the advancement of the careers of individual academics with little or no efforts at conducting research that is focused on proffering innovative solutions targeted at solving the current and emerging developmental challenges of the country or to drive innovation and the evolution of a robust National system of innovation that will result in patents and new products and services. The “publish or perish phenomenon” still reigns supreme in the Nigerian academia to the detriment of the other 3 Ps of research namely: Patents, Policy impact and products and services. Little wonder therefore, that it is quite difficult for many Nigerian universities to positively impact even their immediate communities beyond the employment of unskilled workers from host communities.

Re-Focusing University Education in Nigeria: NUC's on-going Reforms

The dynamic nature of the society and the impact of internal and external forces necessitate constant re-assessment of the performance and transformation of universities. Through the ages, universities as human institutions have been

characterized by changes induced by the demands of the societies, which they serve. Universities have undergone transformations in structure and processes in response to forces prevalent at different times during the course of their history. The national government through its policies and programmes can intervene in the operations of the university. Global forces such as those induced by the market, developments in ICT and the demands of a global knowledge economy also bear on university functions.

In addition, strident demand for value-for money accountability concerning the return on investment in university education (what do we get from universities after such huge expenditures) is a factor that cannot be ignored, also the impact global ranking of universities mounts untold pressure on governments, Proprietors and critical stakeholders to demand for explanation whenever their universities are either not well ranked or do not show up at all on ranking league tables

All these forces and many more have been known to instigate reforms in the university.

In the light of the fore-going and cognizant of the challenges facing the NUS and the imperative of re-vitalizing the system for greater efficiency, particularly drawing inspiration from the Ministerial Strategic Plan 2016-2019 articulated by the then Honourable Minister of Education, Mallam Adamu Adamu, the National Universities Commission began the process of developing a Blueprint for the rapid revitalisation of university education in Nigeria.

By January 2018, the National Universities Commission under the able leadership of Professor Abubakar Rasheed inaugurated the NUC Strategy

Advisory Committee (STRADVCOM) to provide the necessary guidance in the reform process.

The NUC STRADVCOM which is composed of some of the most distinguished intellectuals Nigeria has ever produced namely Distinguished Professor Peter Okebukola (chairman), Professor Atahiru Jega, Professor Nimi Briggs, Professor Ruqqayatu Ahmed Rufai, Professor Michael Faborode and Professor Gambo Laraba Abdullahi ably supported by some NUC Directors as internal members, has been the engine room of our efforts at rapid re-vitalization of University education in Nigeria.

The development of the draft Blueprint by the Strategy Advisory Committee was propped on an extensive multi-stakeholder base. Inputs were sought from students, parents, teaching and non-teaching staff, Vice-Chancellors, Chairpersons of Council and a miscellany of other stakeholders. A three-pronged approach was used for data gathering. First, was to determine and rank the challenges facing the system at this time. Second was to seek practical and sustainable solutions to the challenges. Third was to put costs to the solutions and propose how such monies will be sourced and prudently utilized to ensure cost-effectiveness and value-for-money.

SCANNING THE NUS

A thorough scan of the Nigerian university terrain by these multi-stakeholder groups unveiled some key challenges facing the system which necessitated urgent reforms including:

- i. Inadequacies in facilities for teaching, learning and research.
- ii. Inadequate funding.
- iii. Deficits in teacher quality and quantity (including quality of professors).
- iv. Governance deficits (including stemming the tide of strikes).
- v. Depressed quality of graduates.
- vi. Inadequacies in access.
- vii. Deficiencies in research and postgraduate training.
- viii. Academic corruption and other social vices.
- ix. Regulation by NUC and professional bodies.

- x. Promoting ICT-driven universities.
- xi. Fostering Skills Development and Entrepreneurship.
- xii. Gender issues.

On the basis of the foregoing challenges and within the framework of the Ministerial Strategic Plan, 2016-2019, the Strategy Advisory Committee consensually agreed with stakeholders on the following strategic goals for 2019-2023:

- i. By 2023, access to university education should have increased by a factor of 20% over 2018 figures.
- ii. By 2018, the curriculum of Nigerian universities should be rated among the best three in Africa in terms of its relevance to producing nationally and regionally relevant graduates who are high-level human resources for delivering on Africa's Vision 2063 and addressing global SDGs.
- iii. By 2023, at least 30% of facilities for teaching, learning and research should have been upgraded to meet international standards and maintained thereafter.
- iv. By 2023, the gap in the number of teachers needed in the Nigerian university system and those in post should have been reduced from 30% to 20%.
- v. By 2023, the quality of graduates from Nigerian universities should be improved by at least 20% as captured in feedback from employers and users of products of the system.
- vi. By 2023, scholars in Nigerian universities should be among the top three in productivity as measured by national and global productivity standards and reflected in relevance to solving Nigeria's socio-economic challenges.

- vii. By 2018, NUC should introduce enforceable minimum standards in governance that will ensure at least 10% efficiency in the university system.
- viii. By 2018, the incidence of academic corruption in Nigerian universities should have reduced by at least 10% and remain on the decline up to 2025 and beyond.
- ix. By 2020, a sustainable funding model should have been approved at all levels and implemented via appropriate instruments of federal and state governments.
- x. By 2018, NUC should have been re-structured and empowered to deliver better on its regulatory functions.

As ambitious as these goals may be perceived in some quarters, we must remain focused and resolute in our quest to bridging the gap between the state of university education in Nigeria and the World-Class status.

STEPS TAKEN TOWARDS REVITALISING UNIVERSITY EDUCATION IN NIGERIA

After serious institutional self-analysis and introspection on its regulatory and quality assurance mandates, with a view to identifying areas requiring improvements so as to inch further towards imbibing global best practices in its operations as a platform for university education revitalization, NUC has the following measures towards re-vitalizing the NUS:

i. Curriculum Review and Re-engineering

The distinguishing element for any university, the world over, is the quality of its graduates and this is influenced by a number of factors within the input, process and output domains. A major element within the input and process fields in

particular is the curriculum. The curriculum is a major quality index for higher education, which gives definition to the content of the knowledge being imparted on the students. The National Universities Commission develops the Benchmark Minimum Academic Standards (BMAS) with the active participation of subject matter experts in Nigerian Universities. The Commission believes that Universities should be innovative in their approach to curriculum development and delivery. A review of the BMAS is currently ongoing and it is the intention of the Commission to ensure the regularity of the process in line with international best practices in order to ensure responsiveness and pro-activeness in tandem with constantly changing national needs and global demands.

Curriculum review by itself is incomplete if the personnel that will deliver the content are not adequately trained. Universities are therefore expected to embark on strategic capacity building to bring academics up-to-date with new trends in their respective subject areas in order to achieve the desired impact.

Another area of emphasis with respect to on-going curriculum reform process in the Nigerian University System is the unprecedented flexibility pertaining to the proportion of the content of the BMAS in each academic discipline, to be prescribed by NUC and the proportion to be determined by the universities. The Commission believes that while universities may have commonalities in the basic fundamental epistemological principles of a subject area, each university should be free to carve a niche for itself by slanting towards particular areas of emphasis based on its cultural context and local circumstances. At the 2018 annual retreat of Vice-Chancellors of Nigerian universities with the Management of NUC, the ES made this offer of “liberalization “ or “contextualization “ of curricular content to Vice-Chancellors to the effect that in the spirit of flexibility, NUC could prescribe national minimum curricular content amounting to 40%, while Universities should provide 60% of the prescribed content of the curricula. The preponderance of opinion among Vice-Chancellors at the retreat, was that the implementation of the proposal should be gradual and consensus on 70: 30 content stipulation ratio in favour of NUC was reached.

The curriculum re-engineering effort of the Commission has other ramifications including the creation of a fourteenth discipline in the NUS with the recognition of Computing as a separate and distinct discipline in the Nigerian University System, which used to be classified under the Science discipline. Efforts are afoot to unbundle Mass Communication and create a distinct discipline of Communication comprising degree programmes in Traditional media, Social media, broadcast journalism, print journalism, film production, Advertising and communication and media studies. By the same token, the Architecture programme is also to be unbundled into distinct degree programmes such as Architecture, Landscape Architecture, Urban Design, Enterprise Architecture and Naval Architecture.

ii. Teaching and Learning

One of the tripartite mandates of the university is teaching undergraduate and graduate students. Through teaching and training activities, universities can train individuals for jobs in different areas of human endeavor; thus equipping them with the requisite knowledge and skills in the area of study. The students are thus enabled to understand the critical and complex connections, which underpin different subject areas, including linkages amongst the subjects and social well-being. The critical, analytical and systemic thinking that is needed to conceptualize, understand and address these linkages and issues are indeed the mandate of every higher education institution.

A major challenge we are grappling with in the Nigerian University System now is that of teaching. Apart from the fact that many universities employ old methods of teaching, majority of teaching staff are engaged in part-time teaching beyond what they can cope with resulting in inadequate time for proper teaching in their primary university of employment as well as in the Universities where they hold visiting appointments. There is therefore the need for new attitudes towards teaching, so that old ways of teaching, which perpetuate the status quo and unproductive university system, do not prevail. Universities, then, can shape and inculcate these new ways of thinking through effective teaching.

As part of effort to improve outcomes of teaching and leaning in the NUS so that we may succeed in our efforts to produce graduates with the requisite skills and competences such as critical thinking, creative thinking, problem-solving skills, NUC in collaboration with the University of Sussex, has been organizing intensive pedagogical training workshops.

The Commission is committed to ensuring the sustenance of the momentum in the transformation of HE pedagogy and practice through a systematic, train-the-trainer approach with nation-wide cascade training workshops at regional and sub-regional levels as a pathway to achieving the development of a critical mass of academics with the skills and competences in higher education pedagogies and practice which are inclusive and supportive.

Critical skills such as pedagogic approaches to teaching large groups; integrating new technologies; assessment and feedback; reflective practice; supporting individual student needs; and creating inclusive teaching environments for diverse students including those with disabilities are considered as important areas of focus.

Our over-arching objective is the production of a critical mass of this category of pedagogically competent and up-to-date academics across the NUS with the sustainability strategy of ultimately establishing a national pedagogical academy to cater for the continuous professional development of the Nigerian academia.

iii. Research, Development and Innovation

The tripartite function of universities revolves round teaching, research and community service. Of these, research is arguably the most crucial since research is the source of new knowledge and innovation. Research is not only required to inform meaningful teaching and learning, it is also the source of new knowledge for innovation which is the route through which Universities all over the world distinguish themselves and are known to be relevant when innovations, patents and new knowledge from university research endeavours lead to tangible improvements by impacting positively on the living conditions of ordinary

citizens or when research output lead to wealth creation, poverty alleviation, cure for diseases and overall socio-economic and technological development of a nation.

The Commission is poised to promote and encourage the formation of “University consortia” to tackle national developmental challenges on a sectoral basis predicated on the comparative advantage of member universities. It is envisaged that such a consortia approach will be deployed to mitigate the increasingly poor quality and unacceptably protracted duration of especially PhD degrees which in some cases could be for upwards of 10years.

1st Industrial Revolution driven by Steam’2nd Industrial Revolution (1860-1900s) driven by manufacturing technologies powered by electricity
3rd IR (1980s - 1990s) driven by computerization and web interconnectivity. One of the largest ripples of the 4IR on HE is the development of massive Open Online Courses (MOOCS) culminating in 2012 in the year of the MOOCs”

RE-FOCUSING UNIVERSITIES FOR CREATIVITY AND NATION-BUILDING

PRACTCAL STEPS

To prepare the NUS for productivity and innovation requires a seismic shift in the delivery modality and a massive expansion of the research mission of Nigerian universities underpinned by massive investment in research and innovation to bolster the provision of resources for university researchers and a major shift in incentive structures and the curricula with profound emphasis on STEM.

The urgent need to shift to active learning pedagogies that place appropriate premium on collaboration within diverse teams in a project-based peer-learning context, cannot be overemphasized.

There is need to ensure injection of liberal arts concepts and content in STEM curricula with ample doses of interpersonal skills and interdisciplinary curriculum { to build student capacity for collaboration and social interaction within STEM curriculum}.

The 4IR is often described as the integration and compounding effects of multiple “exponential technologies” such as artificial intelligence(AI), biotechnologies and nanomaterials. An example of the effect of 4IR is the development of synthetic organisms (life from DNA created within computers and bioprinted) manufactured using robotic assembly lines where nanomaterials provide immense improvement in efficiency of production.

Any meaningful attempt at refocusing university education for creativity and nation-building should have as its backdrop the skills and competence requirement dictated by the future of jobs as technologies can drive business growth, job creation and demand for specialists skills but they can also displace entire roles when certain tasks become obsolete or automated .

The 4IR is upon us therefore, curriculum reforms or reviews should also take this into account. The exact impact of 4IR technologies upon HE and the society at large is not well know however it is not in doubt that they will bring dramatic and rapid changes with irreversible loss of control over networks of powerful AI agents with increasing autonomy within financial sector and urban infrastructure.

In preparing for the 4IR, substantial change in the science and technology curriculum is required to allow for students to develop capacity in the rapidly emerging field of genomics, data science, AI, robotics and nanomaterials.

Such a 4IR STEM curriculum should reconsider the curriculum within the “traditional “primary” sciences of biology, chemistry, physics with greater emphasis for training in computer science subjects as a form of 4IR literacy. For instance, within Biology training might include introductory courses with concepts in synthetic biology and molecular design.

Universities might also consider institutional restructuring to provide new science programmes and departments in emerging interdisciplinary fields to more efficiently provide trained workers to help advance and accelerate the development of ever more sophisticated biotechnology, nanotechnology materials and AI

INNOVATIVE CURRICULUM: WHO WILL DELIVER?

Pedagogy is key:

Up-to-date knowledge; continuous professional development

Competence?

Does Teaching matter in the NUS?

NUC-University of Sussex transformative HE pedagogy training

NUC-University of London ODL delivery of quality at scale

THE ISSUE OF SKILLS GAP AND GRADUATE EMPLOYABILITY

- What skills?
- What Industry?
- What Industrial Attachment ?

NUC Leveraging on the instrumentality of the triple helix model:

According to Mark Spinoglio, in knowledge-based societies, academia, government and industry together, are generating knowledge infrastructure in terms of overlapping institutional spheres with each taking the role of the other and with hybrid organizations emerging at the interfaces. Spinoglio further asserts” The triple helix III is comprised of three elements:

1. A prominent role for the university in innovation on par with industry and government in a knowledge-based society
2. A movement towards collaborative relationships among the three major institutional spheres in which innovation policy is increasingly an outcome of interactions rather than a prescription from government
3. Each institutional sphere also takes the role of one another.

Spinoglio concludes that academia-industry-government partnership is a win-win for all parties.

According to the OECD, the Triple Helix brings to collaboration three stakeholders that hold the keys to unlocking national competitiveness and development:

- a) Academia holds the key of **knowledge-driven by teaching, training, research and development;**
- b) The Government holds the **key of stable Interactions driven by political options and policy innovation;** and
- c) The industry holds the **production key driven by human and creative capital.**

NUC/ NESG: No more blame game(Us Vs Them)

Linked by collaborative frameworks that facilitate partnerships, support, and cooperation, it is envisaged that the Triple Helix can drive investments, employment rate, business sophistication towards economic growth and competitiveness.

To give fillip to this collaboration, NUC and NESG jointly organized an Academia-Industry Dialogue and Retreat as a platform to bring national stakeholders,

leaders of academia and captains of industry together with an overarching objective of making higher education, particularly, university education work effectively in Nigeria. The 2-day retreat and dialogue addressed many issues including:

- How industry can support the training of students to make them employable;
- Exploring a collaborative framework for Knowledge and skill transfer; and
- The support by industry for entrepreneurship education in Nigerian universities and policy frameworks to encourage entrepreneurship education, among others.

Going forward, the NESG has proposed seven elements that will be central to the transformation envisaged in the NUS within the framework of the triple helix partnership:

- 1) Transforming the University-Business/External Relationship for knowledge exchange;
- 2) Transforming the University-Business/External Relationship for funding and resourcing;
- 3) Entrepreneurship Development in teaching and learning by creating the innovation and industry practice bias;
- 4) Pivoting Universities to compete as international institutions based on international benchmarks, but deeply rooted in the national/local demand-side requirements;
- 5) Reengineering of university system to drive Incentives for research-to-innovation and teaching-to-industry practice;
- 6) Pivoting the university system from merely intellectual havens to becoming innovation havens, where the impact is measured by the capacity to transform society, economy, and environment;
- 7) Upgrade the leadership and governance architecture to create a talent pipeline in the university system of the country's most competent, integrated, entrepreneurial academics and leaders.

8) Re-Engineering the Entrepreneurship Curriculum:

- a. The NUC as a matter of urgency must correct the wrong understanding of the Entrepreneurship Concept and Entrepreneurial University by Nigerian Universities.
- b. It will be important to review the curriculum with an emphasis on behavioural science (*problem-solving rather than skill acquisition*) as against the current practice of business science. Such re-orientation would incorporate several components of the industry competency framework as required by the private sector.
- c. To this end, the NUC will collaborate with the private sector, through the NESG, in the review of the curriculum. There must be strong emphasis / drive on capacity building for the university staff members (academic and non-academic) in order to equip them for the delivery of the much-desired change of orientation.

9) Improvement in pedagogy, teaching and learning environment:

- a. There is a need to re-focus the learning and teaching methods to promote logical reasoning and creative thinking, which will promote problem-solving orientation;
- b. Expand and deepen capacity building amongst the academic, technical, administrative and other support staff in the universities.
- c. The NUC in partnership with TETFUND, NESG, and other relevant stakeholders should consider very strongly, the establishment of a Higher Education Institute that will focus on the capacity building including pedagogy improvement for university staff. The institute should offer professional certification.
- d. University management and administration should prioritise equipping relevant departments with appropriate laboratories to ensure hands-on training for students in Nigerian higher education institutions.

10) Collaborative framework between Academia, Industry and Government:

- a. There was a consensus that stakeholders must midwife and advance a collaborative framework for useful partnership between

- the Academia, Industry, and Government within the structure of commonality of interests (sector-specific clusters was suggested);
- b. The private sector should be involved in the curriculum review in universities to ensure that graduates are fit for purpose, instead of standing aloof and condemning the products of universities;
 - c. Within the framework to be developed, there should be an appropriate window for universities (under the coordination of TETFUND) to address industry-focused research (based on specific sector requirements) that would promote the competitiveness of the Nigeria industry. Also, universities and industries should collaborate in creating new products and advancing new frontiers of innovation;
 - d. NUC and NESG are to collaborate on enabling knowledge exchange engagements between academia and industry, to allow industry leaders serve as adjunct lecturers in the universities, while university lecturers can utilize their sabbatical to work in the industry.
 - e. The Student Industrial Work Experience Scheme (SIWES) should be revamped and strengthened, as this may create a good avenue to contribute to the training of university students;
 - f. Academia should be well represented in all Nigerian Economic Summits and other National High-Level Policy Fora, so they can be at the forefront of dialogues that set the national agenda;
 - g. The government, working with the National Assembly should enact enabling laws that would institutionalise any agreed Academia, Industry and Government collaboration framework.

11) Proper national planning with data: The role of national planning in strategic workforce readiness for industry growth was emphasised as necessary to ensure that Nigeria does not miss opportunities for job creation and local content development.

- a. The stakeholders explored the business case of the Dangote Refinery construction, in which the shortfall in the skilled

workforce was compensated for by the sourcing of foreign technical workers. The relevant agencies and parastatals of government (e.g. Federal Ministry of Budget and National Planning, Ministry of Labour and Employment, Federal Ministry of Education etc.) should work together to develop a comprehensive national manpower development plan that would estimate the current workforce demand and make projections into the future based on input and feedback from the private sector. Such a plan would be sectoral and define necessary competencies and skill set, which will in turn assist in the development of priorities and strategic national plans on education, human resources planning, and employment.

- b. Stakeholders agreed that triple helix groups should conduct regular reviews and scenario planning for optimal response to changing industry dynamics. Such reviews could be the foundation of demand-led tertiary education both for the local and export labour market.

12) Improve Funding for Research and Development

- a. The Federal Government must prioritise research funding as it will provide the drive for the economy;
- b. The Federal Government must depoliticise, professionalise and operationalise the National Research Foundation to meet national strategic research agenda, informed by the education demand-side (government long-term agenda and the industry competency requirements). Stakeholders noted that a case where the President is the chairman of the fund suggests, that the fund may be susceptible to political risk, similar to what the country has witnessed with other statutory development funds;
- c. Universities should endeavour to explore additional sources of funding for research and work on areas of competitive advantage with the possible contribution to the economic development of the society;

- d. Within the framework of national research priorities, funding for postgraduate research (MS, Ph.D., and Post-Doctoral) must be competitive, focused on national priorities and structured to reward the use of research for the advancement of the industry, business, and government innovation;
- e. A restructured funding framework should provide the incentive and motivation of funded Ph.Ds to directly impact the national innovation architecture.

CONCLUSION

University education in Nigeria will be successfully re-focused for creativity and nation-building, if all critical stakeholders come together in sincere partnership within the framework of the triple helix model comprising Academia-Industry and Government to fill all identified gaps in the input-process-output of the university quality paradigm of analysis.

As a consequence, the discharge of the tripartite mandates of universities, namely teaching-learning, Research and community engagement, will be bolstered and the nation will be truly on its way towards technological and socio-economic development, self-sufficiency, poverty reduction, wealth creation and global competitiveness.

Chairman and members of the BOT,

Chairman and members of the University Governing Council

Distinguished Ladies and Gentlemen,

I thank you for your kind attention