



Covenant University

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Fourth Convocation
Distinguished Lecture Series

RECONSTRUCTING THE NIGERIAN EDUCATION LANDSCAPE: ROAD MAPS FOR DRIVING INNOVATIONS AND DEVELOPMENT.

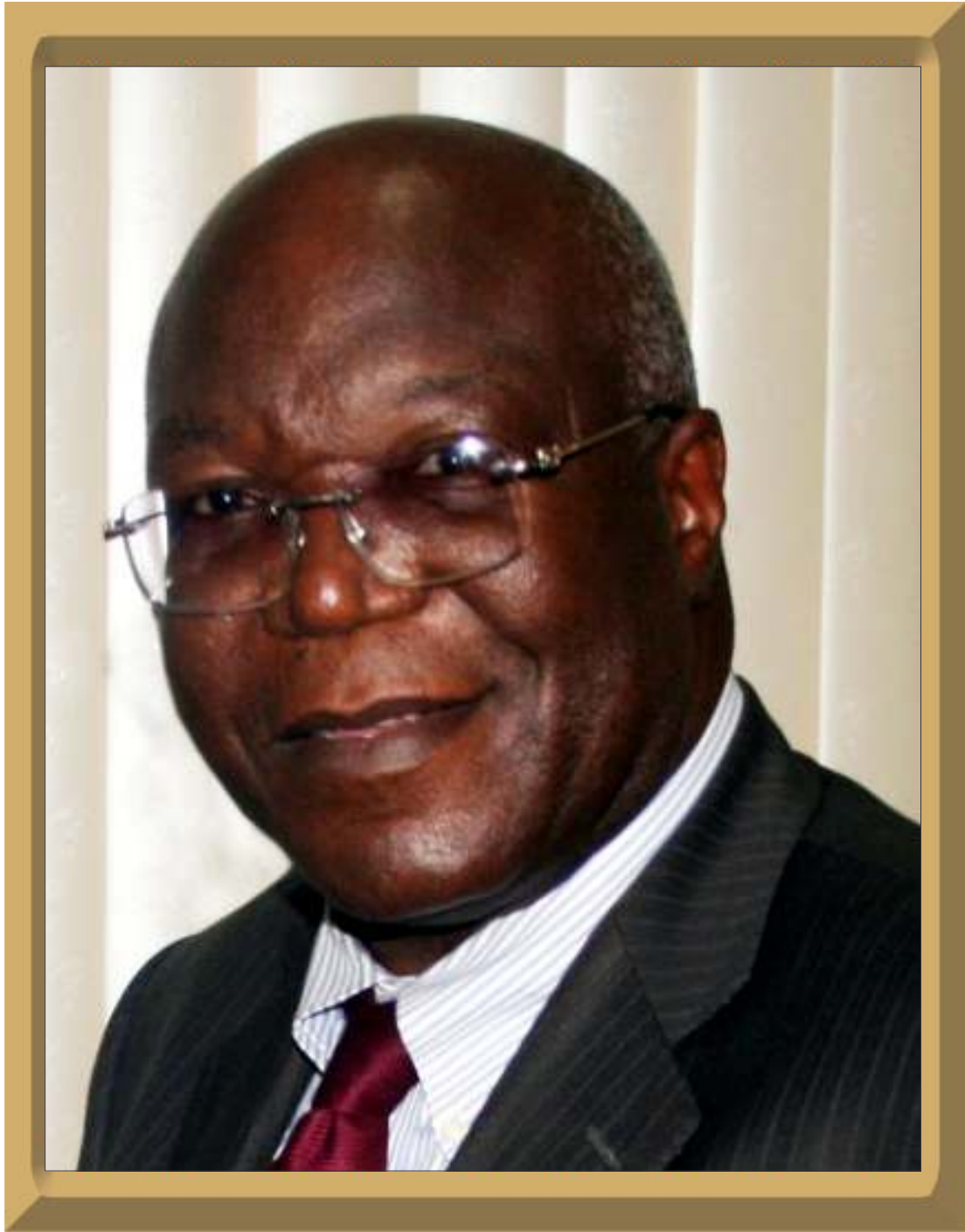
By

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President, The Nigerian Academy of Science & Immediate

Past Vice Chancellor University of Lagos.

Tuesday 16th June, 2009



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Profile of Professor Oye Ibidapo-Obe FAS,FAEng,OFR

Professor Oyewusi Ibidapo-Obe the President of the Nigerian Academy of Science attended both Ilesa Grammar School and Igbobi College from 1962-1968 and the University of Lagos from 1968-1971. He was awarded a Bachelor of Science [B.Sc. (Hons)] degree in Mathematics in the 1st Class Division by the University of Lagos, Nigeria in 1971; a Master of Mathematics [M. Maths] degree in Applied Mathematics with a minor in Computer Science in 1973 and a Doctor of Philosophy [PhD] in Civil Engineering with specialisation in Applied Mechanics/Systems in 1976 both from the University of Waterloo, Ontario, Canada. He was born on July 5 1949; married to Olusola and has 4 children.

Professor Ibidapo-Obe was a Western Nigeria Government Scholar at the University of Lagos from 1968-1971 and was the overall best graduating student of the University in 1971.

Professor Ibidapo-Obe was also a Commonwealth Scholar (Canada) (1972-1976); an NSERC/CIDA (Natural Sciences and Engineering Research Council/Canadian International Development Agency and a Senior Fulbright Research Scholar (1980-1981).

He served the University of Lagos from October 1, 1972 as a Graduate Assistant through 1976 as Lecturer Grade II till 1983 as Professor.

Professor Ibidapo-Obe has served as Head of the Engineering Analysis Unit (1991-1995) and the Dean of the Faculty of Engineering at the University of Lagos, (1995- 1999).

He was subsequently the Deputy Vice-Chancellor in April 2000 and acted as Vice-Chancellor between September 2000 and April 2002. He was appointed substantive Vice-Chancellor on 1st May, 2002 and successfully served until the end of his tenure on 30th April 2007. He was the Chairman of the Committee of Vice Chancellors of Nigerian Universities. He was 2-times awarded the Best Vice Chancellor's Prize (2004,2005) for the Nigerian University System(NUS).The tenure witnessed a phenomenal

development of the University through massive re-assessment/alignment and focussed endowment/funds mobilisation.

He has published extensively in reputable international journals with some 60 papers after the appointment as Professor. The focus of his research is on Control and Information Systems in a Stochastic Environment. He currently serve as an International Scholar-in-Residence at The Pennsylvania State University and a Visiting Research Professor at Texas Southern University both in the United States.

*Professor Oye Ibidapo-Obe was invested with the prestigious Fellowship of the Academy of Science and Academy of Engineering, Nigerian Computer Society and Mathematical Association of Nigeria and a receipt of the ICOBA Merit Award .He was conferred with the national honour as **Officer of the Federal Republic (OFR) by the Federal Republic of Nigeria .***

COVENANT UNIVERSITY ANTHEM

We're a Covenant Generation
Pursuing excellence
Redeemed to reign
Learning to lead

We are bound by an oath
Obeying rules to rule
Making Kings of youth
Flying high on covenant wings

Wisdom's call for change Inspired on fire
With courage
Marching on in grace

God's own arrow Shot for glory.

Covenant generation arise
Light and knowledge to shine
Glorious foundation stone
Leadership skills to show

Departing from knowledge
To empowerment Legalism
To realism

Wisdom's call for change
Inspired, on fire
With Courage Marching on in grace

God's own arrow
Shot for glory.



OUTLINE OF DISCOURSE

1. Introduction.
2. The Education Sector, Visions and National Development.
3. Science, Technology and Innovation.
4. Some Best Practices/BenchMarks for Universities.
5. Conclusions

1. Introduction

It is an accepted norm that knowledge is a sine-qua-non to National Development –since it is knowledge that underpins human capacity resource generation that enables development in both spiritual and physical realms. In fact, human capacity development is primal to the functions, and perhaps the major *raison de ter* for the establishment of educational systems.

The current revolution in our world, which is the concurrence of information and communications technology, is the soul of the current evolution of 'knowledge' societies or 'knowledge' economy. A look at the plethora of new terms prefixed by “e-“ indicates the necessary move to be IT or “e-“compliant (e-mail, e-learning, e-payment, e-government et. al.).

Knowledge societies driven by mass quality assured education are ruling our world under several guises, associations and nomenclature(s) viz: G7, G8, G8+5, G20, BRIC, World Economic Forum, etc.

Nigeria's global ranking on the Knowledge Index is 66th position out of polled 75 countries and classified in the group of lagging followers. We are ranked 95th out of 129 on Global Competitiveness just ahead of the poorest of the poor countries including Dominican Republic, Kenya, Gambia, Tanzania, Mali, Benin, Cameroun and Zimbabwe. The point of emphasis here is that we have no business in that class of 'lagging followers' given our human and natural resources. We therefore need to synergize our individual capacities with the soul purpose to achieve international prominence.

In order to be a knowledge society and achieve the Vision 20:2020 objectives, the 8 no. Millennium Development Goals by 2015, and the 'shrinking' 7-point Agenda by 2011/2015, there

must be fundamental changes in the way and manner we think and act! We need to transform our dreams through a visioning process to reality. We can only rebrand on best practices.

This lecture discussed the Nigerian Education Landscape –providing the strategies for reconstructing or rediscovering our pathways. It will attempt to map the road with sign posts or milestones and thereafter provide a 'Road Map' for driving innovations and development in universities, keeping in mind that universities and other specialized higher educational institutions are 'lamps' that light the pathways in societies –more so, in developing economies with attendant additional cyclical challenges of poverty, hunger and corruption.

Coming back home to the subject of our discourse today-which of course is about Covenant University and the release of the 4th set of the Eagles; the pertinent question to ask is as follows:

Within a restricted space of 95 universities in Nigeria, with 34 private universities, what is Covenant University's performance so far?

The performance so far is truly amazing that even those skeptics who are permanently psychologically conditioned to a negative Nigerian factor, 80 months ago, and who doubted the ability of our people to put this truly aspiring world class university together, are now marveled to witness the significant progress the university has made in these short period of existence. I say to God be the Glory.

In spite of all our dashed hopes and aspirations as a nation as well as the nagging everyday frustrations in modern Nigeria-we must be fiercely nationalist!

2. The Education Sector, Visions and National Development

The Education sector today is in a particularly difficult situation in Nigeria where poverty and its consequences (hunger, illiteracy, uncontrolled population growth, deteriorating environment, and pandemics) confound the majority of the population daily especially the rural and urban poor. It is a systemic malady and corrections must be made from the primary through the secondary to the tertiary levels.

The usual excuse of Governments for the poor attention and low priority accorded to Education has been to express fiscal inability to satisfy the demands of the sector vis-à-vis other competing interests such as health, infrastructure (including power, roads, water, security etc; however, this is not tenable since education underpins the progress within those secondary sectors.

Nigeria, with a population of 146.3 million has an annual growth rate of 2.1%-a reduction of 1% over the last 4 years or so. A good target in terms of population growth rate should not exceed 1% per annum. The G7 countries that we target in 2020 have 0% growth rate or less and in fact have to supplement their work force with encouraging migration from less developed countries(a new wave of brain drain).The current Gross Domestic Product (GDP) is \$180.3 billion with a GDP per capita of \$1,233; the growth rate is put at about 6% even though the financial meltdown has further depressed this growth to about 4%.However,in order to achieve the objectives of Vision 20:2020 the economy GDP must grow at 12.5% annually.

Individually, Nigerians are respected all over the world in terms of

intellectual ability and resourcefulness –what apparently is lacking is a renewed positive (YES! WE CAN.) Attitude and the ability to work together as a system to achieve specific well-defined roles.

At the primary education level, enrolment, completion and progression rate are low and below 60% with over 10 million potential students out of primary and junior secondary schools on the streets hawking or begging for alms. The senior secondary schools have 2.8 million enrolments with an enrolment rate of 18.4% as at the end of 2007.

As far as quality of education is concerned, the inadequate mastery of education programmers, application of rigid and obsolete teaching practices, lack of teaching materials and insufficient teaching time are some of the factors hindering achievement of quality. Secondary and tertiary education are failing to prepare students for the world of work and hence unable to contribute to national regeneration.

The Education Sector Analysis (ESA) proposes, amongst others, the development of a 10-year Education Sector Plan, and a Federal Education Framework, as well as a well-defined Vision 2020 for ESR (Education Sector Reforms).

The above scenario provided the background that must have propelled the Honorable Minister of Education, H.E.Dr. Sam Egwu, to develop a 'Road map' based upon four focal areas: **Access and Equity; Standards and Quality Assurance; Technical, Vocational Education and Training; and Funding and Resource Utilization.** The new road map is designed in sum, with practical and achievable implementation efforts within the next two years, to transform educational institutions in

Nigeria into high performing schools that would produce high achieving, functional and self-reliant students.

Education is critical to the development of nations, it is an antidote to poverty and 'leveler' in the emerging knowledge society –Nigeria's prosperity depends solely on a well-educated citizenry.

A key and perhaps central element in the National Vision and Goals strategy, be it Vision 2010; Millennium Development Goals, NEEDS, Vision 2020 and the 7-Point Agenda, is the need to strengthen Education as a public good and that perhaps explains why Education is on the concurrent legislative list of Federal, State and Local Governments.

The Vision 2010 document provides a clear direction for the Education sector through the improvement of science, engineering and technology education training; it sought specifically to make education at primary and secondary levels compulsory and free by 2003 and 2009 respectively; to allocate not less than 26% of the national (Federal, State and Local Governments) budget to education; to charge supplementary fees in university to partially recover costs etc. Currently, work is going on the Vision 2020 document and I doubt if it would be radically different from that of Vision 2010.

What all these point to is that we are not lacking in visions, but our resolve to implement the strategies are almost totally lacking! For the health of our education system –can we really divorce or separate education from politics? For example, we need the will to establish the proposed National Research Foundation (NSF) so that it can create innovation cluster(s) for research and development in universities and research institutions. Do we have the political will to proceed? –it is important to start NOW!

The import of the above treatise is to understand the essential gap that Covenant University, and most especially the 'Eagles' seeks to cover at inception and are happily dynamically providing from the point of new of quality and needs-based education necessary for national development.

3. Science, Technology and Innovation (STI)

It is important to reiterate that STI is beyond the traditional science disciplines of Physics, Chemistry, Biology and Mathematics, but incorporates the appreciation and understanding of nature (humanities) as well. It is the innovation aspect of Science and Technology that makes our life more abundant. It is S&T that generates innovative products for the market place.

Sound scientific knowledge is fundamental to addressing the critical issues of economic transformation and globalization; reduction of unemployment, underemployment, poverty, hunger and disease, and the sustainable use of natural resources facing the world today. The world is changing at a rapid pace driven by science and technology, and the challenge of integrating science and technology into development is getting increasingly complex. Let us for example, reflect on the controversies over the development of bio-fuels, embryonic stem-cells, nuclear fuels, GM seedlings and in the use of nanoscience /nano-technologies for remote dispensing of antidotes and similar drugs to patients remotely.

As for the case of bio-fuels, the question is whether the benefits of such fuels will be able to compensate for decreased food production as the farmlands will now be largely devoted to

production of crops for biodiesel with subsequent food shortages and thus increasing food prices. The new search is to use farm wastes, *jatropha curcas* for bio-fuels. Each of the of above situation can be similarly analyzed with the attendant difficult economic and moral issues.

In the 21st Century; the accumulation of scientific knowledge and its technological applications are accelerating at a dizzying rate, enabled in large part by ever more powerful computers and lightening-fast communications such that product life span is less than 12 months before obsolescence. The internet has revolutionized the meaning of time and space such that we have conquered space and working hard to redefine time. A great leap in medical science enabled by IT is the decoding and manipulations of DNA.

The above discoveries were facilitated mainly by Universities, at the apex of learning institutions that have an essential role to play in building the necessary S & T capacities. The universities in Nigeria must therefore be the focus for the modernizing of forces of the society, for the promotion of the “values of science” and for mediating between the political and industrial spheres of national life.

Developing economies, such as ours, can only fast-track and/or leap frog their growth through targeted research and development. A practical way to do this is to do what is generically referred to as reversed engineering. It is the universities that must provide the road map to circumvent these road blocks to indigenous technology enhancement necessary for driving innovation and development of the nation. The nation must be prepared to invest heavily in the Universities cutting

across both public and private- The research facilities must orchestrate the brain power of the faculty, take responsibility for training new generation of talents and participate in the transformation of the nation's S&T base.

Science brings imagination on theoretical speculations as well as on practical problems and critical decisions –allowing people to analyze the present (and future) situations, make sounder choices, and invest their resources more wisely.

We need a coherent national S&T strategy with framework developed in consultation with the national science academy to specify the national priorities for research and development with the appropriate funding commitment (at about 1.5% of the GDP annually), and include merit-based support for basic science and recognize the need for higher level training to develop, as much as possible, natural competence in selected frontier areas of science and technology that are most suitable for sustainable economic development and social well being. This is the path that China took some 50 years ago.

Universities educate and train new generation of S&T talent, and perform research and development; therefore strong universities are critical for expanding natural S&T capacities. Using science to address the challenges of the development means carrying out relevant research, putting the results into practice through technological innovation and generally using them to inform public policy.

We must gradually move away from a consumer to a producer nation. The obstacles(including the WTO GATT Agreements, the WMO Montreal Protocols and others which we have been committed to without our clear understanding of the implications must be reviewed and possibly abrogated.

What is the stake of Covenant University and other universities in this quest for excellence in STI?

It is in the production in learning and character of young scientists that will improve the capacities of S&T human pool.

4. Some Best Practices/Benchmarks for Universities

Universities are set up essentially for the 'public good' in respective of ownership –be it public or private. The key attributes of universities are: Research (R), Knowledge propagation/teaching (K), and Community service/ innovation (I).

Research is the process of creating new knowledge or new insights on knowledge, or unlocking knowledge. Knowledge is generally defined as the high quality, preferably policy relevant information, both in codified and tacit forms often location-specific. Innovations are new and renewed products and processes outcomes through the use of knowledge.

It is important therefore to understand that universities are not set up simply as degree mills to produce students in learning centres, but primarily to do research, and disseminate findings and propagate innovation through the society.

The core values of universities must include excellence, transparency, integrity, merit, and relevance.

Some best practices are evolving in Nigerian universities as a result of the renewed vigour of the National Universities Commission to revitalize the quality of outcomes of universities in view of several system shortcomings and vices including admitting beyond the carrying the capacity ,sorting,

racketeering, masquerading, settlement, sorting, impersonation etc. through accreditation of programmes and institutions as well as the determination to make our Universities globally competitive through ranking.

I must quickly state here that in a recent 2008 NUC study and workshop on Accreditation and Ranking: it was noted that the poor Webometric ranking of Nigerian Universities is due in part to the inability of the universities to populate their websites with quality materials and information about their academic activities especially peer reviewed publications in international merit based journals.

These emerging best practices are now classified under the broad core responsibilities of universities that are research, teaching and community service.

Research:

1. Every University should have a research policy to be backed up with local grants and supported by funds from the proposed National Research Foundation as well as bilateral and international organizations.
2. Make research relevant to society and community needs.
3. Develop innovative funding ideas through partnering with industries and organized private sector.
4. Invite annually as a policy a well-known academic/scholar as an external examiner from one of the identified best 200 ranked universities in the world.
5. Advertise for and recruit globally academic positions.

Teaching:

1. Leverage on e-learning facilities to update the learning system and access to the various e-teacher activities. There are in fact several free coursewares in MIT and other Universities.
2. Update and re-align the curriculum to reflect the requirements of employers through the introduction of entrepreneurial programs for all students of the university.
3. Ensure that the Boards of Studies and Senate of the University knowledgeable and enthusiastic include the community leaders.
4. Deliberate strategy to recruit and retain world class scholars. Academic staff salaries need not be uniform even within and between staff grades.
5. Establish a university-wide committee of Senate to oversee quality and standards of instruction.
6. Introduce co-operative education system for all professional disciplines.

Community Service:

1. Enthroned accountability and transparency in the university management including fund raising and endowment activities.
2. Sustain peace on campus through constant dialogue with the various unions and cordial relationship with the host communities by meeting their expectations. (University's Corporate Social Responsibility –CSR, to community schools hospitals and other public projects must annually be provided for in the budget).
3. Networking on special thematic areas within and outside the country and interface with other non-educational institutions and organizations.

4. Establishment of a veritable consulting service.
5. Establishment of Research, Development and Technology Parks to showcase continuously academic staff enduring works.

Every university must engender its own unique character in sustaining the academic culture of universities, in terms of inquisitions and dogged search for the truth; it is important to encourage students to organize themselves in Science and Nature Clubs, Literary Societies, Volunteer Groups etc.

It is also important to mention here that the need to encourage our elected members of the Senate, House of Representatives, and the State Assemblies to mentor/engage students individually (from the constituency or other funds) during vacation.

5. Conclusions

It is clear that there is an urgent need to revitalize higher education in Nigeria through policies and reforms, programmes, pedagogy, and teaching tools, training of teachers as well as research in education.

This presentation describes the critical role of Education in Development and especially the need to inculcate Science, Technology and Innovation as the nucleus of national re-orientation and advancement,

At this juncture, we must congratulate the Honourable Minister of Education, Dr. Sam Egwu, for the new 'Education Road Map,' whose major innovative content is the urge to increase budgetary allocation to education at all levels to 25%, rather short of UNESCO's 26% but close enough!

The challenges of our development, epitomizes largely by

corruption, poverty, disease, and poor implementation of good policies can be surmounted if the citizenry is educated. It is our universities that are expected to be at the vanguard of the national moral rebirth and exit us from the 'poverty cycle' as **'when poverty increases, honesty decreases.'**

What needs to be done, on funding, really is to re-invent the past –whereby the government involves the private sector in funding education. I still cannot see the basis of discrimination against private universities by the Federal Government as to why for example private universities cannot benefit from the Education Trust Fund (ETF) or CBN capacity grants? as the rational and sources for ETF and similar funds are from the common wealth of the nation, mostly from the private sector. The Federal, States and Local Government are better advised to set up educational financing system that involves the principles of matching grants under rigorous screening procedure, emphasizing the responsibility of government at all levels.

We need to expand education expenditure to above 5% of GDP by 2020.

The wealth of nations is now measured by the content and quality of knowledge inherent and latent in that society. The world has moved from commodity-based and military power ranking to knowledge economies/societies. Inherent in this paradigm shift is Science, Technology and Innovation –Science must be at the heart of development!

In enthroning science as the key to inventing a better society; universities have an essential role to play in building the capacity for high quality education and training in agriculture/ food security, engineering and health.

We have also provided a shortlist of best practices universities need to adopt, in order to attain world-class standard and be appropriately ranked. All universities must develop a **Research Policy with an Agenda** with the same vigour and elaboration that attended the erstwhile articulation of Universities Strategic Plan. The Research Agenda should be derived from a National Vision on Higher Education, Science, Technology and Innovation.

Perhaps, it is apt at this point to mention the matter of accreditation (both of programmes and institutions) and the National Universities Commission (NUC). The truth of the matter is that by law, the NUC has the onerous responsibility that as we strive for Access, we do not compromise quality.

A good start has been made with the accreditation procedures and there is a need to review, strengthen and make the criteria more measurable and the creditors/ evaluators themselves more auditable. Universities and other Higher Education Institutions that do not meet accreditation standards, which must be dynamic, do not deserve to exist. In fact, these institutions constitute dangerous cancer(s) that need to be surgically removed immediately.

If we were to model mathematically in a feedback control system, the Nigerian University System (NUS), the input to the system is JAMB/UME; the process (brain box) is NUC and the output is the society. In this case the feedback from the society goes to the NUC that subsequently updates the JAMB and other stakeholders.

We have carefully watched the progress of Covenant University,

with a vision of “Raising a New Generation of Leaders” since 21st October 2002 at the inception of the charter students –first as a 'new kid on the block' who may soon relocate?. However, we are pleased with the transformation of Covenant U. into an autonomous Centre of Excellence in Civility, Culture and Learning that meets both the local and universal challenges within this short 7 years.

Let me congratulate the university and, in particular, the Chancellor Dr David Oyedepo, the Pro Chancellor, the Vice-Chancellor Professor Aize Obayan, the principal officers, provosts, deans and heads of departments for evolving a governance structure that works –that is best practice! And should be emulated by other private institutions.

Finally, I thank you all for listening to me and I wish the University and the **Eagles** God-speed in the achievement of their individual and collective goals and aspirations.

O Ibidapo-Obe
June 16, 2009

