

BRIDGING THE GAP BETWEEN THE ACADEMIA AND INDUSTRY – NCC COLLABORATIONS WITH THE ACADEMIA.

**Prof. Umar Garba Danbatta, FNSE, FRAES
Executive Vice Chairman/Chief Executive Officer
Nigerian Communications Commission.**

ABSTRACT

The Academia in the developing countries are faced with the upheld task of investment. Sufficient and sustained investment is required in the Academia that can be realized by bridging the gap between the Academia and Industry. The paper identifies mechanisms of bridging this divide, which is through the Academia promoting multi-disciplinary approach to research & learning, and developing a vision framework and strategies (plans) that will attract the Industry. Also, relevant government agencies are to set mechanisms to attract and enhance Academia Research & Development (R&D) and Transfer of Technology (ToT) respectively. The Nigerian Communications Commission (NCC) on its own part has collaborated with the Nigerian Academia's in the field of Infrastructure, Research and Development (R&D), and Capacity Development as part of it Corporate Social Responsibilities (CSR). The effective sequences of NCC CSR are assisting in bridging the divide between the Academia and Industry.

Key words: Academia, CSR, Industry, NCC, R&D and ToT

1. INTRODUCTION

The Academia provide the essential and high-level skills necessary for every labour market world-wide, which includes engineers, doctors, entrepreneurs, lawyers, scientist, civil and public servants among others. Furthermore, the Academia has facilitated the transfer of research results in health, telecommunications, security, energy, transportation, governance, judiciary, etc., but the transfer of knowledge-skills requires sufficient and sustained investment.

Currently, the Nigerian Academia are faced with the upheld task of investment to enable them access to sustainable resources; Infrastructures, laboratories equipment's, training & professional development, Research & Development (R&D) of prototypes, etc. The Industry, which is profit-driven can offer a natural route to maximize the use of innovative ideas of the Academia via Transfer of Technology (ToT) and to also provides or augments the required investment support of the Academia.

1.1 GAP BETWEEN THE ACADEMIA & INDUSTRY

In developing countries, the approach from the Academia and the Industry has different perspectives and expectations, which create the gap between the two and these include the Academia:

- a.** Strives for maximum solution to maximize their recognition, whereas industry seeks the minimum solution to minimize their risk.

- b. Is interested in creating new solutions having high innovation rate, whereas industry prefers proven solutions having low risk.
- c. Has a long range perspective, whereas industry thinks in terms of short range goals.
- d. Is striving for peer's recognition, whereas the industry is striving to survive.

1.2 BRIDGING THE ACADEMIA – INDUSTRY DIVIDE

Fundamentally, the Academia should promote multi-disciplinary approach to research and learning within its communities. Furthermore the Academia should develop a vision framework and strategies (plans) that:

- a. Identify promising opportunities for collaboration with the Industries.
- b. Cater for long-term and short-term strategic partnership with built-in flexibility work best that will attract fertile collaboration for both parties.
- c. Address the broad arching framework agreement on Intellectual Property (IP) to avoid the acrimony on who owns the patent.
- d. Provide for regular dialogues, in the form of seminars, lectures, etc. that will bring both sides together for cordial relationships.

Also, Relevant Government Agencies and Institutions should strive to stimulate collaboration between Academia and Industries by putting mechanism to:

- a. Attract the Academia R&D activities.
- b. Enhance local learning and technology transfer.

This is achieved by putting in place appropriate innovation-friendly regulatory regimes to stimulate the human capital in our Universities, Polytechnics, Colleges of Educations, Research Institutes, etc. This will attract our local industries and multinational companies that are ready to expand their global innovation networks.

1.3 A NEED FOR ACTION

Nigerian Academia and Industries are finding it mutually beneficial to collaborate, but generally in Nigeria collaborations between Academia's and Industries are not sufficient. The Industries collaborating with the Academia are adopting open innovation strategies to increase access to sources of knowledge, leading to interest in collaboration with the Academia to foster proprietary research. Furthermore, the **strategic mission** of the aforementioned **Academia** has **moved beyond the tradition of teaching** and research (open) **towards addressing** the need of industries (**proprietary research**) that will contribute directly to social and economic transformation. Therefore, the need for Nigerian Academia to adjust their system and give **credence to proprietary research** so as to attract investment of the Industries cannot be over-emphasized.

It should be noted that for the Academia it is no longer simply providing our communities with graduates, but the Academia found themselves competing for the global scale of students, researchers and Industry partnerships. In order to remain attractive, the Academia will have to offer world-class research to attract students, researchers and funding. To actualize this, the Nigerian Academia has to further establish collaboration with the Industries, which in the long run will boost both quantum and quality of researches by maximizing the use of research results, capacity of students and equally benefits to the Industries.

1.4 SOLUTIONS TO UTILISATION OF RESEARCH RESULTS

- a.** The Academia must continue to develop enduring networks and relationship that are based on mutual trust with the Industry.
- b.** Leaders within Academia must identify the importance of collaboration with the Industry as an important strategy to developing a competitive and standard academic environment.
- c.** Supporting systems must be developed for resource-efficient utilisation of results, so that researchers can continue to focus on their research activities.
- d.** External funding sources demand for up-to-date relevant research topics, which through close collaboration between the Academia and Industry can be realised.

1.5 BENEFITS OF COLLABORATION

The benefits of Collaborations between the Academy and Industry include:

- a.** Enhancing research collaboration between the Academia and Industry will offer an effective platform for mixing industrial problem solving with academic knowledge production, and thus facilitating the co-production of new knowledge that has commercial applications.
- b.** Industries that engage in collaborative research with the Academia will overcome:
 - i.** Limitations of their internal Research and Development (R&D)
 - ii.** Keep at the cutting edge of scientific development.
- c.** Academy degree courses are exposed to competition through the increased mobility of students. Courses involving prospective employers are attractive, since they improve the opportunities to get jobs after graduation.
- d.** A well-developed network and effective dialogue with actors within the industry and other sectors of society will contribute to research concept that the Academia must prioritise in order to keep pace with the changing world.

The collaboration between the Academia and the Industry should be for mutual benefits, i.e. win-win situation as outlined in Table 1.

Table 1: Benefits of Academy – Industry collaboration

ACADEMIA	INDUSTRY
Enriching teaching and research	Sourcing latest technological advances from new ideas
Funding/Financial resources	Laboratory usage
Source of knowledge and empirical data	Personnel resources/ cost savings
Competing favorably well	Personnel resources/ cost savings
Building on excellence & reputation	Risk sharing for basic research
Job offers for graduates	Stabilizing long term research projects
Complementing their resource base	Recruitments made easy

2. NCC COLLABORATIONS WITH NIGERIAN ACADEMIA

2.1 ENGAGEMENT WITH NIGERIAN ACADEMIA

The NCC has collaborated with the Nigerian Academia as part of our Corporate Social Responsibilities (CSR) in many ways and consistent with the Nigerian Communications Act (NCA) 2003, in:

- a.** Infrastructure
- b.** Research and Development
- c.** Capacity development

a. INFRASTRUCTURE

- i.** Data Sharing, e-learning Platforms and Information and Communication Technology (ICT) Infrastructures to selected Universities across the country, which includes UNN, FUTA, ABU, BUK, NDU, UDUS, FUA and FUTY.
- ii.** The University Inter-Campus Connectivity (UnICC) project initiative to provide seamless connection between the Universities and their Medical Colleges and Teaching Hospitals using Optical Fiber Cable (OFC). This is a support project to deliver broadband infrastructure to Universities to facilitate research and learning. At the moment deployment of OFC is ongoing in 9 (nine) Universities
- iii.** The UnICC-Electronics Project which involves interconnecting end-user Electronics within the University Campus. Currently, provision of connectivity is on-going in five (5) Universities across the country.
- iv.** Data Sharing, e-Health Platforms & ICT Infrastructures to selected University teaching hospitals across the country, which includes UNNTH, OAUTH, ABUTH, BUKTH, BSUTH and UDUTH.
- v.** Tertiary Institution Knowledge Centers, to equip students and their neighboring communities with ICT Learning tools. The beneficiary Universities include FUBK, FUS, FUG and NUK.
- vi.** Provision of ICT/CBT (Information and Communications Technology/Computer Base Test) Centre's in various institutions and locations across the country. Currently, twelve

(12) ICT/CBT Centre's are ongoing under SIP (Stakeholder initiated Project) initiative and additional 4 skills acquisition Centre's are also scheduled for completion.

b. RESEARCH & DEVELOPMENT

The NCC has sponsored Research & Development (R&D) projects in order to bridge the gap between the academia and the industry in terms of indigenous technological innovations. The sponsored R&Ds are:

- i.** Implementation of a Software Based Nomadic Base Station.
- ii.** Fabrication and Production of GSM Battery.
- iii.** Design and Development of Low Cost Adaptive GSM Signal Booster.
- iv.** Seamless Data and Voice Connection using Multiple Operators SIM (MOES) Card.
- v.** Fabrication of GSM Communication Based Walking Cane Robot (GWCR) for ambulation.
- vi.** Development and Implementation of Multiple Noise Attenuation Device for Mobile Telephony End Users' Noise using Hybrid Algorithm.

c. CAPACITY DEVELOPMENT

The Commission has enhance staff capacity of the Academia in the areas of training and engagement, these include:

- i.** Advanced Digital Appreciation for Tertiary Institutions (ADAPTI) training. so as to:
 - a.** Promote universal access to ICT.
 - b.** Enhance the quality of teaching, research and administration in tertiary institution via the training of staff of the institutions in relevant ICT skills.
- ii.** Presently, we are on course to finalize the involvement of twelve (12) Nigerian University researchers from the six (6) geo-political zones at the International Telecommunications Union (ITU) Study Groups at Geneva, Switzerland. The ITU Study Groups will further improve on the competence of the researchers especially in multi-disciplinary and propriety researches, as they connect with their global counterparts to provide intellectual support to the Study Groups work.

2.2 CONCLUSIONS

Effective collaboration between the Academia and industry would help mitigate the encumbrance of investment in the Academia through improvising the needed sustainable resources, which will ease the Academia reliance on Government funding. As a matter of necessity, the Academia should encourage multi-disciplinary researches/projects in order to attract proprietary research investors. Furthermore, there is the need for them to develop a cohesive vision framework and strategies (plans) that addresses collaboration barriers, which in the long run will attract various Industries.

The NCC has collaborated with the Nigerian Academia in the field of Infrastructure, Research and Development (R&D), and Capacity Development as part of our Corporate Social Responsibilities (CSR).The effective sequences of NCC CSR are assisting in bridging the divide between the Academia and Industry.

Finally, I will like to use this platform to call on relevant stakeholders to support the Nigerian Academia by engaging them in collaboration, so as to foster economic growth and national development of our dear Country.

REFERENCES

1. The Innovation Policy Platform (2013), “Promoting University – Industry Collaboration in Developing Countries”. *National Policy to attract R&D – intensive FDI in Developing Countries*. Policy Brief: 1 – 9.
2. Rohrbeck, R. and Arnold, M.H. (2006), “Making University – Industry Collaboration Work: A Case Study of Deutsche Telecom Laboratories”. *ISPIM Conference, Athens, Greece, 11th – 14th June 2006*: 1 – 8.
3. European Commission (2007), “Improving knowledge transfer between research institutions and industry across Europe: embracing open innovation”. *Implementing the Lisbon agenda*: 7 – 16.
4. Aniekwu N. and C. A. Ozochi A. C. (2010), “Restructuring education, training and human-resource development in the Nigerian construction industry”. *Journal of Science and Technology Education Research, October 2010*, 1(5):92 – 98.
5. Schroeder H. (nd), “Collaboration between the university and the industry- strategies for a Win-Win concept”. *Swedish University of Agricultural Sciences, Sweden*, Hakan.schroeder@slu.se.
6. Ibidapo-Obe O. (2014), “Improving IT Education, Research and Development in Nigeria”. *Speech Delivered at the CPN 2014 Information Technology Professionals Assembly and Induction of New Members at Abuja, 18th June, 2014*.
7. Science/Business Innovation Board (2012), “Making Industry – University Partnership Work: Lessons from Successful Collaborations”. *The Leadership forum to help Europe Innovate © 2012 AISBL*: 3 – 27.
8. Pecas P. and Henriques E. (2006), “Best practices of collaboration between university and industrial SMEs”. *Emerald International Journal © Emerald Group Publishing Limited*, 2006, 13 (1/2.):54-67
9. Smith D. and Katz S.J. (2000), “HEFCE Fundamental Review of Research Policy and Funding Collaborative Approaches to Research”. *A joint project with the Higher Education Policy Unit (HEPU), University of Leeds and the Science Policy Research Unit (SPRU) University of Sussex*, 2000: 8 – 37.
10. <http://www.ncc.gov.ng/>
11. <http://www.uspf.gov.ng/>
12. Afuwoqi A. And Wu H. (nd), “Promoting Industry-university Partnership in Information Technology”, A white paper: 1 – 6.