INTERROGATING ISSUES AND PERSPECTIVES ON RESEARCH AND DEVELOPMENT IN SELECTED NIGERIAN PUBLIC UNIVERSITIES

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Abstract

One of the cardinal roles of the university system besides teaching and community service is research. Research plays a vital role towards institutional and national development. Development of research culture has remained an imagination in Nigeria due to mirids of challenges. The paper discoursed the challenges of research in Nigerian university system. The paper identified inadequate funding, lack of equipment, facilities and materials, lack of awareness, lack of implementation of research results, low rating in human capital indices, brain-drain, underemployment, etc, as challenges of research and human capital development in Nigeria. The paper concludes with some recommendations that will help meet these challenges.

Keywords: Human, capital, development, research, and indices

Introduction

According to Osualla (2001), the process of arriving at dependable solutions through the planned and systematic collection, analysis and interpretation of data is the entire gamut of what research is. For Ajoku (2006), the exploration for knowledge, truth, similarities and relationships, and the process of finding solutions to problems through the systematic collection, analysis and interpretation of data is research. Research is the strategy adopted to answer questions raised about the world and the processes going on in it (Imo, 2015). In furtherance to these Eric (2009), sees research to be the process of systematic inquiry by which humankind increase knowledge of how things are, why things are the way they are and how they could be improved. Research seeks todiscover the truth about the world. It is goal – oriented, systematic and logical. It is becoming increasingly

evident that research is extremely critical and important, if tertiary institutions are to serve as engines of development. Research is necessary fordirect contribution of the universities for sustainable development and knowledge creation, (Michaela 2012). Charles-Zalankoro and Efere (2016) posited that a good researcher is one who develops new ideas in the minds of the students. Secondly, what makes a university unique is the special service it provides for itsimmediate community, such specialized serves are derived from results of researches conducted by universities. Odia and Omofonmwan (2014) brought a another perspective on research by analyzing providing a link between research and national or social growth and development he stated that advancement inresearch has given rise to the growth of science and technology which in turn, has ledto industrialization through the creation of job opportunities, increased income,production of goods and services, creation of wealth, improved quality of life,transportation/communication system, networking regions of the world, clustering ofpeople and integrating nations of the world both socially, economically and politically.

In the wind of global changes across national boundaries, Rugai (2005) maintains that research is a system of worldwidecollaboration which accounts for the spread of modern learning which could result in transforming man's life. In this regard, the university provides the avenue of innovation and the desired changes of life.

Innovative ideas emerge as a result of research findings from researchinstitutes. Innovation is defined as incremental, radical and revolutionary changes inthinking, products, processes or organization, (Akomolafe 2011). In the view of Otehand Akuma (2011), innovation is a decisive operation carried out with a view tointroduce a given change to be accepted and used. It is the process whereby, a newproduct is made available, spread through the system and infused into other operatingpractices. Innovation is therefore, a change that is deliberate, purposeful and can be ona small or large scale. It is a departure from an existing practice that can be sustainedfor some time, and is situational and relevant to a group in time or place. Oyeweso (2020), was of the view that since recent global and national development shave facilitated severalstructural changes, tertiary institutions are faced with the urgent demand in terms of extending the frontiers of knowledge and responding adequately to the changing needs of the society and economy in which they operate. There are emerging studies on the role of

universities in research and development, especiallyin developing countries around the world (Felix, 2017).

Research has found application in many areas of human endeavor. One of such areas is education where we have educational research. Travers cited in (Okeke, 2004) defined educational research as an activitydirected toward the development of an organized body of scientific knowledge about the events which educatorsare concerned. Ahiakwo (2003) see educational research as adiligent and systematic attempt to provide plausibleanswers to educational problems by the process of logically designed operations or steps. It is a systematic andscholarly application of the scientific method, to the solution of educational problems (Osuala, 2004). Research in education has contributed in no small measure to educational progress, solution of educational problems, development of human capital in education, promotion of social progress, developmentand national survival. Hence the role of research in general and education in particular cannot beoveremphasized.

Furthermore Oyeweso (2020), developed three perspectives by which Nigerian tertiary institutions, particularly universities, can be viewed. One, the role of higher education and universities was recognized as anintegral part of national development strategies. The Nigerian National Policy on Education emphasized this perspective when it declared that "University Education shall make anoptimum contribution to national development, intensifying and diversifying its programsfor the development of high-level manpower within the context of the need of the nation." Two, there has been an increasing surge in the number of federal, state, and privateuniversities across the country. According to the National Universities Commission (NUC)2019 statistics, there are 174 universities, made up of 43 federal-owned, 52 state-owned and79 licensed private universities in Nigeria (National Universities Commission Monday Bulletin, 2020)

The same trend is evident in the frame of polytechnics and colleges of education in Nigeria.Among these universities are specialized institutions of agriculture, education, military, and petroleum, among others, established to undertake parallel research towards intensive industrialization, innovations and development.However, the increasing number of universitiesin Nigeria has practically not matched their expectations because of the scientific andtechnological challenges and development crisis faced by Nigeria. Three, Nigeria's commitment to research and development

has been abysmal over the years. Nigeria's Research and Development (R&D) allocation is $0.582billion, which is approximately 0.0004 per cent of the world's expenditure on R&D compared to the UNESCO standard of 1 per cent of gross domestic product (GDP) commitment to R&D. The allocation is far below the global average standard (World Development Indicators Report 2013). Lastly, it has been asserted that tertiary institutions are recognized as centers of knowledge generation and dissemination. Such institutions maintain triple mission of teaching, research and community service. The roles of these component aspects of tertiary education are all meant to develop the human society, be it at individual, national or international level. In all aspect evidence abound to suggest that research occupies the main center stage in the mission of tertiary institutions (Charles-Zalakoro and Efere,2016).

Challenges of Research in Nigeria

There exists a relationship between research and development in every society. Research enables social development while research itself is an act of development with some challenges and prospects. Charles-Zalakoro and Efere, (2016) stated that Nigerian universities has not achieved the desired goals of research and innovation due to several teething issues, also to be mentioned lack of funding, absence of unified educational research guideline, etc.

Inadequate Funding

Prime among the factors militating against research development in Nigeria remains inadequate or non -existence research grant. This has led some scholars to assert that in doing research in Nigeria, Nigerian researchers tends to break stones with their bare hands. Fadokun (2000) expresses the fact that, the bulk of university based researchhas been self-funded by graduate students, staff-in-training, and academic staff, in factover 80 percent has been from salaries and parents, less than 10 percent of the university-based research is funded extremely by foreign bodies and the same percentage by the university research boards. Virtually, no improvement can be made in any segment of the tertiary education institution without adequate funding. Research and innovation require huge financial investment which is often lacking in Nigeria. Barikor (2005) lamented that educational research in Nigeria often suffers from meager financial and material support. Quite worrisome is the lack of access by Nigerian researchers especially the academia to benefit maximally from funding agencies like the Tertiary Education Trust Fund (TETFUND). Sometimes, interested

researchers who apply for funding for research activities are frustrated on account of disbursement lag and bureaucratic bottlenecks thereby making financing procedures for research development a frustrating reality. Despite the increasing value of research in the world economy based on the supremacy of knowledge and constant innovative change, budgetary constraints and the belief that research is costly have resulted in the virtual underutilization of research centers in Niger Delta University. The setting up of Niger Delta University was an attempt to provide needed high-level manpower, encourage, promote and conduct research in all fields of learning and human endeavor. The university was established through a law on 15 May, 2000. The law stated that "the mission of the university shall be to create a center of excellence directed towards the design of well-articulated research that could produce creative and innovative human resources, among others, (Ikporukpo, 2012).

Absence of Unified Educational Research Guideline: Research is supported by guidelines by which all researchers must be guided upon. Research guidelines are developed to guide and support educational researchers, in conducting research to the highest ethical standards in whatever context it is needed. Research guidelines are offered as set of principles, and advice that will be subject to continuing review as knowledge, understanding and practice of educational research continue to evolve, (British Educational Research Association, 2011). The conduct of educational researchers and the writing of publishable articles in education are aimed at unifying educational research across the different research interest in education. For example, the BritainEducational Research Association (BERA), is a member-led charity which exists to encourage educational research and its application for the improvement of practice and public benefit. It is dedicated to promoting a research culture within the academic field, and shape guidance on policy and practice within the educational research field. It seeks to encourage educational research and its application for the improvement of practice and public benefit. It strives to ensure that the best quality evidence from educational research informs policy makers, practitioners and the general public and contributes to economic prosperity, cultural understanding, social cohesion and personal flourishing, (British Educational Research Association, 2011).

Educational research aims to extend knowledge and understanding in all areas of educational activity and from all perspective including learners, educators, policymakers and the public. The Association recognizes that the community of educational researchers is multi-disciplinary and that within the paradigms and methodologies espoused by the various disciplines, and often variously by their sub-disciplines, a variety of concepts may be problematic. Example, among these are the concepts of 'data', 'reliability', 'validity', 'subjectivity and 'objectivity',(British Educational Research Association, 2011).

Hamilton (2013) identified the fact that thereis no unified educational research guideline or association to guide the conduct ofresearchers in Nigerian educational research as research methods especially mixedmethods and quantitative methods using questionnaire are used by most researchers inour educational research process, irrespective of the array of research methods andinstrument available for research. The absence of an association research guideline hasbeen a challenge because most research materials does not abide by the guidelines and principles of research ethics.

Accessibility of Statistical Package (SPSS – Statistical Package for Social Science):

SPSS is an entirely new innovation that is a challenge to most researchers. SPSS is a professional statistical analysis software package. Is involves the analysis of statistical methods like linear regression, t-test and ANOVA, involves complex formulas and calculations, (Steve 2013). The company that developed SPSS as a new innovation employs high level statisticians that work with software developers to implement these complex formulas and calculations. SPSS software has been in existence for many years and has a very good reputation for the integrity of the calculations. Although SPSS is a graphical user interface (i.e it is easy to point and click your way through the software), specifying the correct options is essential to performing the right analysis, (Steve 2003). Beyond that, the other challenge is in learning how to properly interpret and report the results of the SPSS output. Many researchers wish they had avoided the lost time and frustration they encountered trying to learn how to use SPSS to analyze the data by themselves.

Partnership: University-industry partnership is a very crucial logical strategy for building technological capacity and promoting economic development of our dear country. There are numerous national policies related to university-industry partnerships in the country and the role for the university in the society, including its contribution to national development. It is envisaged that if there is an effective policy on university-industry partnerships, backed up with legislation, but there are no indication that this partnership is yielding much dividend in research and innovation, (Suleiman 2015). University –industry partnerships are constrained by a number of factors, among whichis cultural difference between academia and the industry. Also, there is lack of confidence of the population in general and industry in particular, in the ability of universities to contribute to economic development. This lack of confidence seems to have been exacerbated by weak investments in research infrastructure, as well as the prevalence of poor governance practices. In addition, the lack of strong leadership capabilities of university administrators serves as a major hindrance to effective partnership. On the part of the industry, it appears to have limited financial capacity to partner with university, mainly because of the size and nature of the economy, (Suleiman 2015).

Lack of Equipment, Facilities and Materials

In Nigeria, the necessary equipment, facilities and materials needed for meaningful research are either lacking or grossly inadequate. This is particularly the casein sciences where teachers and lecturers complain seriously of lack of science equipment's to carry out theirexperiments. This has contributed to low human capital development in the sciences which is the bedrock of anytechnological advancement of any country. Also, current journals, periodicals and textbooks are difficult to get inthe libraries.

Lack of Awareness

There is general ignorance with regard to the importance of research in adeveloping country like Nigeria. This lack of awareness has led to research workers not enjoy the desired maximum co-operation from their respondents during field study and data collection. Observation shows thatcertain personalities in high positions in public and private sectors, hardly volunteer information to researchworkers. This situation no doubt impacts negatively on the research workers and research results as well ashuman capital development.

Poor communication Network

The communication network is still far from being well developed. The researcher has to cover hundreds of kilometers in search of relevant research data. This problem iscompounded by lack of effective and efficient transport systems.

Implementation of Research Results

The findings of research are hardly implemented. Theconservation outlook on the part of the executive and administrative set up in the country account for theinability to implement research results in Nigeria. Well-researched works are lying dormant at the University library shelves. This is not good for our country's development.

Unattractive Working Conditions for Research workers

The pitiable conditions under whichresearch workers operate is another problem that militates against research development in Nigeria. Researchworkers are not well paid and they lack incentives on the job. Both those who reside in official governmentquarters and those that live inside the town are faced with catalogue of problems ranging from shortage of watersupply, epileptic power supply, poor transportation system to family problems. All these problems serve aspotent sources of distractions to the best brains. Given these problems the research worker in Nigeria will not beable to perform as well as their counterparts in the developed countries where the conditions are very conducive to research work. Ukwuije (2003), and Amadi (2003) also identified illiteracy, attitude of government, individuals andsignificant others towards research findings, secrecy of information, scarcity of records, as problems of researchin Nigeria.

Prospects of Research in Nigerian Universities

The 21st century is marked with challenges brought about by globalization and advancement in technology in all aspects of human development, including tertiary education. Globalization has brought with it the growth of “transnational,” cross border or borderless education and the development of new international partnerships and new networks, (Nateinyin, Moses and Arikawei, 2014). Therefore, Nigerian Universities needs to be repositioned to cope with the pressures brought about by globalization and commercialization of education in a knowledge driven economy and new challenges in information and communication technology. The most competitive nations of the world have centralized research in

driving their ambition for economic strength, sustainabilityand renewability of resources and innovation.

The world has changed. Innovation isbecoming the most important engine of growth and jobs in an emergingknowledge-based economy. For that reason, challenges inhibiting effective researchand innovation need radical improvement, and better long-term planning. Nigerian University defines and limits their roles in the developmentprocess to teaching and production of manpower at the total exclusion of research inorder to advance and improve society. Though man-power production is central tomodern development, as it facilitates the decolonization and Nigerianisation of the Nigerian state, economy and even the universities (Olukojo 2004).

The whole consciousness, policy, conduct and business of making research in the Niger DeltaUniversity and research centers is essentially an indispensable academic component ofthe institution and also the necessary tool for development in the country. At thenational level, the school should be able to develop its own research priority, agendaand strategic plan which all researchers must abide to and execute. This should lead tocreating research institutional framework within the Nigerian University anddedicated research centers. There should be an undertaken in the conduct and functionsof research itself. Research as it exists should not simply be as exercise in acquiring ofdegrees and career development for teachers, but should be subordinated and dictatedby the national research priorities and goals.

Nations all over the world have recognized that for, national growth andcompetitiveness (in the context of a globalized economy) depends very much oncontinuous technological improvement and innovation, driven by a well-organizedvibrant research and development system, which integrates the research and trainingcapacities of higher education with the needs of industry and larger society which canbe ensured through a vibrant research center, (Okebukola 2004). Nigerian Universityresearch centers should be dedicated to enhancing the Nigeria's research capacity andoutput to harness, domesticate and utilize global knowledge as well as explore anddevelop the indigenous knowledge systems for the rapid socio-economic development, independence, integration and prosperity of Bayelsa state, Nigeria and Africa.

Nations that fund higher education institutions adequately benefit immensely from theirintellectual products. Industry can also be a supportive partner in the creation, support, and staffing of research

laboratories through gifts, donations, and research funding. Through these kinds of practices, industry can be a stronger partner in the process ofstrengthening the academic quality and relevance of the institution, (Teshome 2008).Industry participation in Nigerian University research efforts is limited, though thereare very few industries in the nation that looks at academic. But out of these few, if the institution cancollaborate and partner with the industry, an industry can decide to dedicate a measureof its investment to enhance the institution's research and innovative base and thedividend will be experienced by that industry. If Nigerian Universities are to contribute more actively to research andinnovation, there is a need to support closer interactions among governments,universities, the industry, and other relevant actors. The various national policyframeworks are not in themselves sufficient, but provide a start as well as incentivesand help clarify the role of each stakeholder in advancing innovation. There is noshortcut to promoting strong university-industry linkages without strengthening theacademic and managerial capacity of universities. Nigerian universities need a larger base of continuing, long-range academicresearch programs in areas that interface with national, regional, local economic andsocial contexts, (Teshome 2008). University research cannot be expected to deliverprompt solutions to immediate problems. Rather, it is through sustained research andinnovative efforts that expertise is built in disciplinary and interdisciplinary fields. Suchexpertise, if aligned with the knowledge needs and demands of national and localindustry, can have a meaningful impact in economic activity.

Conclusion

For tertiary education institutions to remain vibrant, competitive and justify their enormous costs, there is an urgent need of a reform package, which should have components dealing with funding and strategy. The products of higher education institutions need to be creators of knowledge and innovation; it is simply impossible for Niger Delta University to thrive with the present funding arrangements and too much emphasis on teaching and less of research. Already quality has been declining largely because of underfunding of the institution.

An effective and mutually beneficial linkage between the institution and industry can go a long way in ensuring robust academic activities, innovative practices and increased inflow of financial resources to the institution, and only then can Niger Delta University compete favorably with sister institutions across the world. Higher investment in Education, research development in particular are the

key factors that will spin off the benefits to the country especially with the convergence of innovation and creativity with requirements of the industry and economy which compliment themselves naturally for national development and sustainable growth.

Recommendations

The following recommendations are made towards a prospective research and innovation advances in Niger Delta University.

1. There should be a decisive shift at the funding of research and innovation, in which public and private contribution should be clearly designated and earmarked in terms of volume and investment capital.

2. More research and innovative centers should be developed and the already existing ones should dedicate their efforts towards an efficient and vibrant research and innovative activities.

3. The Educational Trust Fund should return to its original idea of being solely a research fund and be dedicated to their functions.

4. A committee of experts in education could be set up to draft a guideline that will unify educational research across the different research interests in education; it will go a long way to harmonize the conduct of research in tertiary education institutions.

5. All researchers need to learn how to use properly interpret and report the results of the SPSS output, this learning/training can be organized by consultants inform of workshop and conferences within the institutions environment.

6. An effective policy on university-industry partnerships, backed up with legislation, should be invoked.

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