Research a Prerequisite for Development: Challenges in Nigeria and Possible Solutions

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Authors’ contributions

This work was carried out in collaboration between the two authors. Author MAE designed the study, wrote the first draft of the manuscript and managed the literature searches. Both authors read and approved the final manuscript.

ABSTRACT

The world is so dynamic and fast growing, things keep changing on a daily basis and as such, has experienced different phases of industrial revolution. Consequent to this, many countries have had their names listed among the developed countries of the world based on their economic development, while others are listed among the developing countries of the world. The secret of the developed countries no doubt, is rooted in the quality of research being carried out. However, one begins to wonder, are the developing countries not actually involved in research? This paper seeks to identify the challenges of conducting research and to suggest possible solutions in overcoming these challenges with a view to making Nigeria enlisted among the developed countries of the world. Difficulty in Accessing Funds, Absence of a Clear Cut Philosophy of National Development, Frequent disruption of Academic Calendar of our Tertiary Institutions, Reduced Rate of Mentoring Junior Researchers by Experienced and Senior Researchers, Braindrain, Lack of Motivation and Incentives for Researchers, Insecurity, Unsatisfactory Mode of Functioning Libraries.
Keywords: Research; development; challenges and solution.

1. INTRODUCTION

Research implies a careful examination of an object or situation for the purpose of effecting development and improvement. It is a way of acquiring dependable and useful information and data about the particular object of research as well as the analysis of the data collected in order to arrive at a valid conclusion. The prime function of research, therefore, is to proffer answers to meaningful questions aimed at remedying societal challenges. Research comprises creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications. It is used to establish or confirm facts, reaffirm the results of previous work, solve new or existing problems, support theorems, or develop new theories. A research project may also be an expansion on past work in the field. To test the validity of instruments, procedures, or experiments, research may replicate elements of prior projects, or the project as a whole [1].

The research and development (R&D, also called research and technical development or research and technological development, RTD in Europe) is a specific group of activities within a business. The activities that are classified as R&D differ from company to company, but there are two primary models. In one model, the primary function of an R&D group is to develop new products; in the other model, the primary function of a R&D group is to discover and create new knowledge about scientific and technological topics for the purpose of uncovering and enabling development of valuable new products, processes, and services. The first model of R&D is generally staffed by engineers while the second model may be staffed with industrial scientists. R&D activities are carried out by corporate (businesses) or governmental entities [2]. Research, therefore, is a basic tool for development without which the needed improvement, innovation new findings will not be discovered.

2. SOME CHALLENGES OF RESEARCH IN NIGERIA

Though research activities are on going in Nigeria, the output seems not to be too pronounced with few breakthroughs recorded. Some of the challenges that might contribute to this are listed below.

2.1 Difficulty in Accessing Funds

Funding of research is one of the key players than cannot be ignored. Without it, the driving force in the entire process of research will be absent. Delivering a lecture at the 42nd annual graduation ceremony of the Air force Institute of Technology (AFIT), Kaduna, titled: “Tertiary Institutions, Research And Innovation, And National Development: The Changing Dynamics For Sub-Saharan Africa”, [3], identified lack of funding as largely responsible for underdevelopment of critical infrastructure in Nigeria and the West African sub region. He said, despite the large manpower and structure in place in the country capable of placing the country among the top economies in the world, the innovations recorded by indigenous scientists and academics, have not been transformed into reality due to lack of funds and poor policy framework.

The huge expenditure of developed countries such as the United States, Canada and European countries on R&D explains their enhanced enviable level of industrialisation, economic prosperity and self-reliance [4]. Though government in the time past has tried to support research through funding, the funds provided are just not enough for everybody to access and in most cases, if accessible, it may not meet the huge task involved. The entire process involved before these funds are accessed is discouraging, at times owing to corruption, such funds that was meant to support research will be embezzled by those in the position of authority.

2.2 Absence of a Clear Cut Philosophy of National Development

With the frequent changes of political power in Nigeria and the attendant instability, inconsistency and incoherence in governmental policies and programmes, the practitioner in the education industry, including the researcher, is left confused. Before the researcher concludes an evaluative study of a particular programme or policy, it is either discarded or replaced with a different, sometimes completely divergent policy or programme. Political instability has also taken its toll on the educational and research institutes.
in Nigeria. The former secretary National Universities Commission (NUC) in a lecture tagged, “Saving Nigeria from itself: Towards a Redemption Plan for Education” to celebrate the 50th anniversary of the Faculty of Education, [5] noted that it is the responsibility of government to lay down concrete policies for the smooth running of the educational system adding that beyond policy formulation, standard setting and policy implementation were other roles which are lacking in the sector. He blamed the falling standard of education in Nigeria on the policy inconsistencies and deficiency in policy implementation by its administrators. We are most are times faced with the absence of a clear cut philosophy of national development, a philosophy which should spell out the direction in which Nigeria wants to channel its development efforts, a philosophy that should not change no matter how frequently political power changes hands.

2.3 Frequent Disruption of Academic Calendar of our Tertiary Institutions

The incessant strikes embarked upon by our various tertiary institution is a big blow to research and development in Nigeria, though there may be genuine and pressing demands by the striking parties, a more decent approach could have been adopted knowing the enormous effect it has on the lecturers, students and the parents. Taking the case of Nigeria for instance, the year 2013 witness a setback as a result of the strike embarked upon by virtually all sectors of the education industry, with the Academic Staff Union of Polytechnic (ASUP) first going on strike and the Academic Staff Union of University (ASUU) following and even the non-Academic staff was not left out. The results of the strike however are: disruption of the academic calendar, students requiring their transcript for further studies elsewhere are forced to wait because some of the people involved in the processing of the transcript are nowhere to be found, those still carrying out laboratory analysis and any other research requiring the use of the laboratory or workshop have to suspend them because nobody will be there to open the doors for them, likewise the supervisors that are supposed to guild or mentor the students will not be available.

Also, student's protest to express their dissatisfaction on some issues bordering them usually go out of hand leading to severe damages and at times loss of life, on the long run the result of such protest is the closure of such schools.

2.4 Reduced Rate of Mentoring Junior Researchers by Experienced and Senior Researchers

Mentoring as a means of sustainability and continuity in the research thrusts in the profession has been underexplored. Despite the fact that mentoring field affords the opportunity for transfer of skills which protégés can apply in diverse professional circumstances, promotes productive use of knowledge, clarity of goals and roles, career growth and success, job satisfaction [6].

Executive Secretary of NUC, Professor Julius Okojie, lamented that mentorship and mentoring, which used to be the hallmark of academics had disappeared with the new breed of lecturers unwilling to mentor those behind them, insisting that there was no pride in bearing the toga of a professor, when as an academic, one failed to replicate himself in supervising PhD projects. Perhaps a more serious problem is that out of a total of 1.5 million students in 61 public universities in Nigeria, according to the report by the Committee on Needs Assessment of Nigerian Universities, only two percent are PhD students, this suggests that a critical mass of academics needed to do research is highly lacking [7].

The unresponsive attitude of junior academics/researchers, the pressure of administrative duties on the senior experienced researchers, formal mentor/protégé structures are common barriers to mentoring which has bear negatively on sustainable and productive research endeavour that proffers cutting edge technological solutions [6].

According to Akilagpa [8], the continuation of research and graduate study programs during the difficult years of the 1970s, 1980s, and early 1990s owes as much to the commitment of these caring survivors as to anything else. Hence, the need for senior and experienced researchers to show more commitment in ensuring that junior researchers are well mentored and guided to ensure greater output.

2.5 Braindrain

The mass departure of Africa’s intellectual and skilled population to Western nations, called the
“Brain-Drain”, has been one of the greatest obstacles to the development of the continent [9]. The number is so large that there is hardly any institution of higher learning that one gets to in the United Kingdom, United States of America, Canada and Southern African Countries especially South Africa that Nigerians don’t occupy prominent positions in the faculties [10].

When a highly qualified professional chooses to leave his own country for another, he does so for one or several legitimate political or economic reasons: peace and security for himself and his family, job satisfaction, education, better pay and conditions, a higher standard of living, etc. [11].

Nevertheless, except one is so driven by one’s love for his country and so determined to stay no matter what, the offer by agencies and other institutions in developed countries are so enticing and tempting to accept.

2.6 Lack of Motivation and Incentives for Researchers

One major factor affecting research output in the fields of science and technology, is the poor reward system for researchers. So many breakthrough research have been nearly swept under the carpet or at best poorly received for policy input; this usually discourages the researchers and may send wrong signals to other aspiring researchers. Even when such researchers are under paid employment as it is in the universities and public research institutes the motivation is merely for promotion and other pecuniary gains. According to Adegun [6], University research seems to be conducted mostly to earn promotions, hence most of the research are for the aspiring and relatively new PhD work, the older professors, unfortunately, seem overwhelmed by the constraints of teaching or are inundated with administrative chores that allow them very little time for research. In his view, [7], said the last time a Nigerian university was in the news regarding a breakthrough in research was in January 2013, when Prof. Isaiah Ibeh of the University of Benin announced the development of a new drug that could possibly cure HIV and AIDS. The story made the front page of some newspapers. But before people could begin taking the claim seriously, the university issued a press statement disassociating itself from Ibeh’s research and almost immediately the National Agency for Food and Drug Administration and Control (NAFDAC) followed.

2.7 Unsatisfactory Mode of Functioning Libraries

Most libraries are not up to date interns of infrastructure and materials, they are still filled up with the old text books with only very few recent ones. Most libraries in developing countries have gone digital where everything is done electronically, with the electronic library, quick access to any topic in any field of study can be made. In a study carried out in Eritrea, [12], said Library management and functioning is not satisfactory at many places in the country and much of the time and energy of researchers are of course spent in tracing out the books, journal and reports, etc., rather than in tracing out relevant material from them. However, the libraries are expected to be research friendly. Another problem according to Woryi [13] is that; the very few operational libraries around the country are also poorly managed, most times, researchers spend most of their time locating the books, journals or reports needed to conduct an acceptable research than actually uncovering relevant evidence, data or information from the materials. There is, therefore, the need for most libraries in Africa to upgrade to electronic library system in order to meet up with the growing demand and quest for knowledge.

2.8 Insecurity

Another worrisome issue faced by researchers is the issue of insecurity. Nigerians over the years have suffered from insecurity arising from terrorism, kidnapping, war, religious crises e.t.c. all of which have a negative effect on the level of development of the country. No development can be achieved in an atmosphere devoid of peace and security as most of its citizens will be seen migrating to safer locations. The few people remaining will have their activities and movements restricted due to fear of attack, or by curfew so declared to enforce law and order. Hence, no meaningful form of research can be do in such volatile areas. The northern part of Nigeria has experienced terrorist attack over the years and most settlers have relocated their businesses and families to a safer place.

2.9 Lack of Confidence in Researchers in Disclosing Data

Often times various agencies with data that will be useful to researchers may lack confidence in researchers in releasing or disclosing such data, and sometimes when they do, they may
eventually supply little detail and keep the larger percentage to themselves. According to Ravinder [12], he said most of the business units in Eritrea, do not have the confidence that the material supplied by them to researchers will not be misused and such as they are often reluctant in supplying the required information to researchers in Eritrea.

2.10 Availability of Standard and Adequate Research Facilities

Research facilities in most of our institutions in Africa are either inadequate or not fit to cope with the modern trend in the area of research. Taking a close look at the equipment or research facilities in Nigeria’s tertiary institution for instance, one will notice that the available equipment are too old and out dated to fit in this generation where everything is going digital, and even the available ones are no longer functional.

The Nigeria Universities Commission (NUC) after an equipment audit it conducted revealed that teaching and research equipment are in the advanced state of decay or are in severe insufficiency in the Universities which are meant to be flagship for research in all the disciplines [6].

2.11 Lack of Research Skills in the Modern Methods

Distance from the trend of methods in use and unavailability of current skills used in research has been a setback in the Nigerian context. This more pronounced as the half-life of cutting edge skills and technology is getting shorter in the recent time [6]. For instance, despite the volume of information that can be gotten from the internet, some of our lecturers are still not conversant with the use of computer and as such depend largely on accessing information through the use of hard copy document via textbooks and as such are kept in the dark on latest happenings in the research world.

3. RECOMMENDATION

Knowing the various challenges faced by researchers in Nigeria as it relates to development, the following recommendations are hereby suggested in order to take research and development to an enviable height:

Any researcher making any headway in any field of study should be motivated by both the government and individual rather than disbelieving or discouraging them. Effort should be made by the government to verify their claims and if proven to be correct, such individual or group should be adequately rewarded. In addition, there should be less emphasis on research as a basis for promotion, rather, the researcher should be encouraged to embark on research based on its importance to nation building.

Government should make more funds readily available and accessible to support researchers. There should be a better condition of service for researchers with more incentives provided, this will go a long way to reduce brain drain in our tertiary institutions.

Government should try to be consistent in its policies formulation and implementation. Irrespective of political party difference, geopolitical zone, or self-interest, there should be continuity in government’s policies and programmes.

Our libraries should be well furnished with up-to-date books with full support from government, non-governmental organisation, and well-to-do individuals and effort should be made to ensure that most libraries are enhanced electronically.

Government should do more in the area of sponsorship and training of our lecturers as this will increase their knowledge, skill and expose them to modern trends in research. Researchers should ensure to study wider and the up-to-date in their field of study.

4. CONCLUSION

For Nigeria to be enlisted among the developed countries of the world, more has to be done in the area of research. The education sector should be given a big boast. The Nigeria education system (Kindergarten, Primary education, Secondary education and Tertiary education) needs to be revamped to enable it to compete with its counterpart elsewhere in other countries. So many problems and solutions has been highlighted by this paper, and if followed, more development is bound to be achieved in the nearest future.

COMPETING INTERESTS

Authors have declared that no competing interests exist.
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