

Research and Development in Policy Formulation and Implementation at Tertiary Level of Education in Nigeria

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Introduction

Tertiary education plays a significant role in national development across the countries of the world. In Nigeria, tertiary education has been performing quite remarkable and noticeable roles, as an important level of education that has given high level of career advancement and professional achievement to many within and outside the country, Tertiary education seems to be a strong pillar behind the good reputation Nigeria is getting from the education industry through highly skilled personnel being produced for the labour market. Specifically, there is a positive feedback that is being received in Nigeria from our trained graduates whose services are being utilized by both the public and private sectors of the economy in different parts of the world.

According to the National Policy on Education, tertiary education is the education given after post basic education in institutions such as universities and inter-university centres the Nigeria French Language Village, Nigeria Arabic Language Village, National Institute of Nigerian Languages, institutions such as Innovation Enterprise Institutions (IEIs), and Colleges of Education, Monotechnics, Polytechnics, and other specialized institutions such as Colleges of Agriculture, Schools of Health and Technology and the National Teachers' Institute (NTI) (Federal Republic of Nigeria, FRN, 2013).

Tertiary education is instrumental fostering growth, reducing poverty, and boosting shared prosperity. A highly skilled workforce, with lifelong access to a solid post-secondary education, is a prerequisite for innovation and growth: well-educated people are more employable and productive, earn higher wages, and cope with economic situations of life. These are done through teaching, research and community service which are the core tasks of tertiary institutions globally (Emunemu and Adeleke, 2022).

Research is the process of arriving at dependable solutions to problems through the planned and systematic collection, analysis and interpretation of data. Research is oriented towards the discovering of the relationships that exist among the phenomena of the world in which we live (Osuala, 2001). To Ajoku (2006), research is the search for knowledge, truth, similarities and relationships, and the process of finding solutions to problems through the systematic collection, analysis and interpretation of data. Okeke

(2004) stated that research is an activity that involves observation and description of the characteristic properties of objects or events for the purpose of discovering relationships between variables and developing generalization that may be used to predict future occurrences. Research involves identification of problems, gathering new data, finding solution to a problem through carefully designed procedures and logical analysis. Research, therefore, is an intensive and extensive search for solutions to problems in a society. The problem could be in education, business, politics, etc.

Research has found applications in many areas of human endeavour. One such area is education where we have educational research. Travers cited in Okeke(2004) defined educational research as an activity directed towards the development of an organized body of scientific knowledge about the events in which educators are concerned. Ahiakwo (2003) sees educational research as a diligent and systematic attempt to provide plausible answers to educational problems through the process of logically designed operations or steps. It is a systematic and scholarly application of the scientific method to the solution of educational problems (Osuala, 2004).

Research and Development (R&D) has been proven to be a crucial factor in moving the world's technological frontiers, while at the same time facilitating new technological and scientific innovations. Investing in research by state and private institutions and industrial enterprises, as well as applications of advanced technology in the various sections of the economy, has been proven to play a significant role in the economic growth and prosperity of a country (Adeleke, Ugbo and Olayinka, 2020). R&D comprises creative work undertaken on a systematic basis to increase the stock of knowledge in various fields of science and technology and advance education, learning and expertise in the country's manpower.

Research is one of the prominent tasks of academic staff in higher educational institutions (HEIs). It is a requisite for staff promotion, institutional effectiveness and global ranking measured through publication visibility in the most recognized and highly rated research site. It helps researchers to develop more research skills and familiarize themselves with the research culture of different countries and helps in solving predominant problems within and outside their institutions and other countries. Research skills bring more

recognition and prestige to any higher institution blessed with highly skilled and effective researchers. So, there is the need for research to be highly developed among the staff of HEIs.

Smith, Fernie and Pilcher (2017) defined research and development (R&D) as 'creative work undertaken on a systematic basis 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. Research and development can therefore be described as the process of bringing advancement to research interest and improving the quality of research being published within and outside the higher institutions of learning.

The quest for knowledge is the fundamental doctrine behind research and development. The promotion of R&D in higher education helps HEIs to transform as knowledge reservoirs on the global stage. It is well acknowledged that academic research has contributed considerably to getting solutions to several problems faced by our industries and society. There have been multiple occurrences when industries and governments have turned to academics for answers to critical matters.

The importance of research in our society is evident, and institutions of higher learning are investing heavily in this field. However, the impact of R&D in HEIs has not been felt, as its role to achieve formidable policy formulation and implementation in HEIs in Nigeria remains unfulfilled optimally. The findings from research are hardly implemented in HEIs. The conservation outlook on the part of the executive and administrative setup in the country accounts for the inability to implement research results in Nigeria. Well-researched works are lying dormant in the library shelves of HEIs and this is not good for our country's development.

An academic often experiences difficulty in applying research results to solving the present situation in an institution of learning. Most of the research results in HEIs are only meant to fulfill academic progress and are requisite for staff promotion. So, access to academic research seems not to be correlated with the level of application of research results in Nigerian higher institutions of learning. Indirectly, it shows that the usefulness of every research result as policy implementation is still negligible and limited. For

example, a faculty in a university can publish approximately 1000 scientific research papers in one year. However, out of these, only little can be implemented into a new policy tertiary institutions in Nigeria. Although the role of academics in the process of formulating policy in HEIs has strategic roles, not all research and development results can be easily implemented. This informed the state of R&D in HEIs in Nigeria.

State of Research and Development in Higher Educational Institutions

The seemingly poor state of research and development in HEIs is a major weak point of our academic system in Nigeria. Most developed countries of the world operate knowledge economies, and in these days of knowledge-driven economy, we must address the central role of education, specifically research, in driving economic development and the overall sustainable development of any nation.

According to Opschoor (2001) and Bouma, (2021), there is a gap between the rich (technologically developed world) and poor countries (technologically and scientifically less developed countries) in terms of access to research and development. The potential to generate seems obscure unless there are solid and effective measures in place to check this trend. With the global changes in science, technology and telecommunication, Nigeria cannot afford to relax and lag behind others in her contribution to R&D, as doing so will be economically and industrially retrogressive. In terms of per capita, industrial countries seem to have 10 times as many R&D scientists as developing countries. In Nigeria, the ratio of scientists and engineers in R&D is 15 per million persons while it is 459 in China and 4,103 in the United States. Opschoor (2001) observed that the developed world spends 2% of its GDP on R&D compared to less than 0.05% that Nigeria devotes to research and development. This indicates that it seems Nigeria's HEIs are not being given adequate research grants and the commitment of researchers would be drastically low.

There is a need to examine the state of tertiary education in Nigeria for a sufficient grasp of what constitutes the state of R&D in Nigerian tertiary institutions. Nigeria appears to have one of the oldest, biggest, and most comprehensive higher education systems in Africa. The Organisation for Economic Cooperation and Development (OECD, 2016) that

despite its established root, Nigeria's educational institutions still lag behind when compared to some European and North American universities in the field of research and development. The few universities that made the list of World Universities Ranking on the Times Higher Education 2021 revealed that on research it was only Covenant University, University of Nigeria, and University of Ibadan that made a meaningful impact while others are far behind as shown in Table 1.

Table 1: The Times Higher Education 2021 World Universities Ranking

S/N	Name Country/Region	Overall	Research	Citations	Industry Income	Internatio nal Outlook
401-500	University of Ibadan	39.8 – 43.5	12.2	88.5	34.0	30.9
501-600	Lagos State University	36.4 – 39.7	7.5	93.7	33.4	31.7
601-800	University of Lagos	30.2 – 36.3	9.6	81.1	34.5	30.4
801-1000	Covenant University	25.1 - 30.1	18.4	51.01	45.7	30.1
1001+	University of Nigeria	25.1 – 30.1	18.4	51.0	34.2	27.2
1001+	ObafemiAwolowo University	10.3 - 25.0	9.3	13.7	36.3	33.3

Table 1 shows that the few universities were ranked between 400-1000. The University of Ibadan was ranked 400-500, Lagos State University ranked 500-600, the University of Lagos ranked between 600-700 while Covenant University was ranked between 700-800, etc. The ranking criteria showcase the research and development level of each university. It was revealed that Covenant University, University of Nigeria and University of Ibadan scored 18.4, 18.4, and 12.2 respectively while other universities scored below 10 points. This is an evidence that research and development in our institutions of learning in Nigeria has not major recognition among other HEIs of the world.

Role of Research and Development in Policy Formulation in Higher Educational Institutions

The role of R&D in HEIs remains a vital source of knowledge, growth, and sustainability for any nation. At present, rapid advancement in information and global technology, the essence of R&D in HEIs would remain irrelevant if it could not be translated into policy formulation and implementation. In HEIs, research that is transited to policy formulation and implementation is capable of providing but not limited to the following:

Increase in productivity, enhanced socio-economic well-being, enhanced income, infrastructural development, employment opportunities, enhanced quality of local produce for both local and foreign markets and the like remains the hallmark of well-thought-out research initiatives and development agenda by the prosperous nations with high capacity, visionary/corrupt-free leadership that implemented the policies developed from meaningful research.

Expected outcomes of functional R&D initiatives include equipping people with the needed capacities with which they need to carry out their activities with an appreciable degree of proficiency leading to the attainment of maximum output in their institutions. These capacities encompass enhancing the people with the skills and competencies needed to effectively harness and utilize the potentials found in one's environment as a result of research conducted. With respect to Nigeria's HEIs, it is evident that there is a whole lot of potentials but with inadequate competencies needed to translate these potentials into socio-economic transformations of the nation.

The existing scientific literature points to R&D as being the ultimate source of technological change. Most studies in this field of research have confirmed that domestic business on R&D and foreign R&D are major drivers of economic growth, also provided evidence about the economic effect of research in state institutions and private enterprises.

Implementation of Policy Formulation through Research and Development

Stone (2009) argued that researchers and policymakers operate with different values, languages, timeframes, reward systems and professional ties to such an extent that they live in separate worlds. Moreover, for some, researchers cannot understand why there is resistance to policy change despite clear and convincing evidence, while policymakers bemoan the inability of many researchers to make their findings accessible and digestible in time for policy decisions (Court and Young, 2006).

According to Grejin (2008), researchers often live in very separate worlds from policymakers, civil society organisations and practitioners. As a result, research-based evidence is often only a minor factor when policies for development are formulated and practices shaped. Too often new public policies are rolled out nationally with little examination or evaluation. In effect, governments experiment on the whole population at once. Even where there is plenty of evidence, there may be a failure to ensure that the evidence being collected and analysed is made relevant to the needs of decision-makers and is acted upon (Mulgan and Puttick, 2013).

In addition as Datta (2012) suggested researchers in any field tend not to speak with one voice, and not all researchers see policy engagement as part of their role. Shanley and López (2009) went further by claiming that strong organisational disincentives dissuade researchers from engaging in outreach beyond the scientific community. It can be observed that researchers working in universities and other publicly funded institutions report structural barriers to engaging in translation research activities, suggesting that a failure to transfer knowledge has been attributed to the problem that points to cultural differences between researchers and users as barriers to such engagement. As a result, policymakers lack confidence in their own researchers and find it difficult to formulate policies from the existing research.

Challenges of Implementing Policy Formulation through Research and Development

There are numerous challenges being faced in the course of implementing policy formulation through research and development. They include the following:

- i. **Funding:** The issue of research funding is a major challenge confronting Nigerian higher educational institutions (HEIs) in exploiting their capabilities and breaking limits. Research activities in Nigerian HEIs have not received the proper attention it deserves due to insufficient funding (Baro, Bosah, and Obi, 2017). Making funding available to lecturers for research in Nigerian universities is grossly inadequate and the conditions for accessing the fund where available are stringent (Akpan, Archibong and Undie, 2010). A look at Nigeria's budgetary allocation to education over the years indicate a consistently low budgetary allocation to universities, which accounts for a major crisis facing these institutions in terms of research and development. Finances of tertiary institutions are mainly through grants, internally generated revenue (IGR), donations and tuition fees. The figures of the levels of funding of higher institution in Nigeria have been rather scanty. Besides, funding is critical to research activities in all universities of the world. Furthermore, Mafenya (2014) observed that funding is one of the challenges facing higher education research in South African universities. The financing of research in Sub-Sahara African universities has been challenging for both government-aided and private universities because of financial constraints (Kyaligonza, Kimoga, and Nabayego, 2015). Research funding in most developed countries and a few developing countries are allocated to universities and individual researchers (Bloch & Sorensen, 2015). Nigeria's commitment to research and development has been abysmally low over the years. Allocation to R&D in Nigeria was \$0.582 billion, which is approximately 0.0004 per cent of the world's expenditure on R&D compared to the United Nations Educational, Scientific and Cultural Organisation (UNESCO) standard of 1 per cent of Gross Domestic Product (GDP) commitment to R&D. The allocation is far below the global average standard (WDIR, 2013).
- ii. **Lack of Equipment, Facilities and Materials:** In Nigeria, the necessary equipment, facilities and materials needed for a meaningful research are either lacking or grossly inadequate. This is particularly the case in the sciences where teachers and lecturers complain seriously of lack of science equipment to carry out their experiments. This has contributed to low human capital development in the

sciences which is the bedrock of any technological advancement of any country. Also, current journals, periodicals and textbooks are difficult to get in the libraries. The available ones seem to be too old.

- iii. **Lack of Awareness:** There seems to be ignorance with regards to the importance of research in a developing country like Nigeria and this seems to be a reflection on the state of R&D in Nigeria's HEIs. This lack of awareness has led to research workers not enjoying the desired maximum co-operation from their respondents during field study and data collection. Observation shows that certain personalities in high positions in public and private sectors, hardly volunteer information to research workers. This situation no doubt, impacts negatively on the research workers and research results as well as human capital development.

- iv. **Communication Gap/Network:** The communication network is still far from being well developed in Nigeria. Language differences between researchers and policymakers obstructed the use of research; scholars have since extended their analysis to research-practice gaps. Communication of research findings may be difficult without a clear understanding of the research terms which forms the gap, however, scholars' efforts to make research more useful and to communicate it more effectively run the risk of missing the useful information from the research. At the most basic level, the language gap begins with how researchers, practitioners, and policymakers define research and evidence. What should qualify as research and evidence for use is a hotly contested topic, and it is not my goal to engage in that debate here. Regardless of what people think "should" qualify as research, it is important to understand what people think it is. Researchers have focused a great deal on how to better push information out, but they have not developed a strong knowledge of how practitioners or policymakers pull information in (Jones, Shaxson, and Walker, 2013). We have sought to better disseminate research by presenting it in clearer terms through written and verbal formats and making it more readily accessible through online sources (Nutley, et al., 2007). The research workers have to cover hundreds of kilometers in search

of relevant research data. This problem is compounded by a lack of effective and efficient transport systems.

- v. **Lack of Legal Provision:** There is a need for the provision of a legal framework in research. The dearth of legal provisions for personal and public considerations constitutes constraints on research in Nigeria. The staff/personnel in educational institutions, field workers and researchers need legal direction and protection.
- vi. **Scarcity of Records:** Nigeria, like other developing countries, lacks adequate statistics due mainly to the very poor process of documentation. As a result of this, many programmes in Nigeria have failed and researchers are confronted with these great challenges.
- vii. **Poor Working Conditions for research workers:** The pitiable conditions under which research workers operate are another problem that militates against research development in Nigeria. Research workers are not well paid and they lack incentives on the job. Those who reside in official government quarters and those that live inside the town are faced with a catalogue of problems ranging from a shortage of water supply, epileptic power supply, and poor transportation system to family problems. All these problems serve as potent sources of distractions to the best brains. Given these problems, the research worker in Nigeria will not be able to perform well like their counterparts in developed countries where the conditions are very conducive to research work. Ukwuije (2003) and Amadi (2003) also identified illiteracy, the attitude of the government, individuals, and significant others toward research findings, the secrecy of information, and the scarcity of records, as problems of research.
- viii. **Poor Data and Information Accessibility:** Information these days is not cheap. With the ineffective educational and library system, getting access to data and information poses a barrier to researchers in Nigeria when conducting research. Nigeria also barely has a database that is built to take stock of data and

information which can easily be retrieved by authorised researchers like in Western countries. The access to journals, reports and statistics needed by researchers in conducting research whether on the Internet or in print is outrageously expensive hence encouraging the researcher in Nigeria to abandon the research before starting.

- ix. **Insecurity:** Security generally is a problem in Nigeria. There is no part of the country that is entirely safe and secured. The improvised availability of published data from academic institutes, government agencies and other corporate agencies operating in Nigeria is a huge problem of research in Nigeria. There seems to be a restriction on the extent to which researchers can go to obtain data for the conduct of research. There are lots of attacks on educational institutions in Nigeria. Kidnapping, banditry, *Bokoharam*, etc. are some pronounced threats against higher institution researchers.

- x. **Poor Internet Facilities:** Internet connectivity and limited access to Internet facilities pose many challenges to scientific researchers. In some HEIs, researchers have no access to an internet connection in the country, and some institutions with Internet also could not boast of a stable network. Many HEIs cannot provide Internet facilities to researchers which affects research productivity in Nigeria's HEIs.

Possible Solutions to the Challenges

Below are some possible solutions to the challenges highlighted above:

- i. **Adequate Funding:** Government should provide adequate and accountable funding to support education, particular R&D. With this in place, the government will then increase its budget and allocations to all tiers of tertiary institutions with an emphasis on research grants. Government should also encourage international collaborations and provide incentives to encourage the private sector to fund research in universities and endow academic or entrepreneurial chairs.

- ii. **Improvement of research environment:** A conducive environment is needed for the growth and utilization of research results. For this to happen, many things have to be considered. These include adequate infrastructure, trained manpower, institutional capacity, and adequate financial support. It also involves motivating the entire population to adopt a science culture as a pattern of life. These and other matters call for the urgent attention of practitioners and policymakers in Nigeria.
- iii. **Bridging the communication gap:** The communication gap between the researcher and the user of the research information should be closed with a deep understanding of how the intended users typically acquire research and other types of information needed for the implementation of educational policy. Shifting our vantage point to the user side causes us to ask different questions 'what are their main sources of information, how do they come to trust certain sources over others, how do they seek out new information, and how does it routinely come into their hands?'
- iv. The Government in collaboration with other corporate organizations operating in Nigeria can provide a helping hand by aiding scientists and researchers to gain subsidised access to any information needed for conducting research in Nigeria.

Conclusion

In conclusion, the formulation and implementation of research results and findings in HEIs determine the quality of R&D in Nigerian institutions. There are challenges to the implementation of research results in HEIs that is why a lot of useful research findings lies on the shelf of school libraries unattended to and these led to backwardness among developing countries including Nigeria. For research to have any impact, the results must inform and shape policies and programmes and be adopted into practice. Researchers wishing to maximise the impact of their work have to attract the interest of policymakers and practitioners and then convince them that a new policy or different approach is

valuable and then foster the behavioural changes that are necessary to put them into practice

Recommendations

Below are some recommendations at ensuring that R&D becomes a key instrument in policy formulation and implementation at the tertiary level of education in Nigeria:

- i. Researchers in Nigerian higher educational institutions should focus more on conducting quality research rather than on the quantity.
- ii. Researchers are advised to communicate research results in a clear and understandable language so that the user or implementer will be able to use the information as communicated by the researcher to solve the problems in our institutions, society and the world at large.
- iii. Researchers should ensure that the information they are providing is true and reliable to a great extent for the user of the results of research to have confidence in the output of the research and be able to use them as bases for policy formulation in their organisations or institutions of learning.
- iv. Researchers should endeavour to communicate the useful research results to the appropriate quarters and ensure that those that will benefit from the result of the research have access to useful information that could assist in formulating policy about their institutions or organisation without any form of restriction from the researchers.
- v. Adequate funds should be allocated by the government, private individuals and corporate organisations to fund research in Nigeria's HEIs to bring about quality and relevant research that will be timely and meet the demand of the society to boost Nigeria's economy and increase innovation and technological advancement.

- vi. Security of lives and property should be ensured by government and security agencies so that researchers would be able to access necessary information anywhere in the country and carry out meaningful research without fear and intimidation from any quarters.

References

- Adeleke, T. E., Ugbode, P. N. and Olayinka, O. B. (2020) Perception of corrupt Practices and Quality of postgraduate Students Research in University of Ibadan, Nigeria. *Journal of Educational Review* 11 (2), 51-56
- Ahiakwo, M.J. (2003). *Foundations of educational research*. Port Harcourt: Minson publisher.
- Ajoku, L. I. (2006). *Foundations of educational research and statistics*. Port Harcourt: Pearl publishers
- Akpan, C. P., Archibong, I. A., and Undie, J. A. (2010). Lecturers' access to research fund in Nigerian universities: Challenges and strategies for improvement.
- Baro, E. E., Bosah, G. B., and Obi, I. C. (2017). Research funding opportunities and challenges: A survey of academic staff members in Nigerian tertiary institutions. *The Bottom Line*, 30(1), 47-64.
- Bouma, A. (2021). Higher education R and D and productivity growth: an empirical study on high- income OECD countries. *Applied Economics* (online).
- Court, J., and Young, J. (2006). Bridging research and policy in international development: An analytical and practical framework. *Development in Practice*, 16(1), 85–90.
- Datta, A. (2012). Deliberation, dialogue and debate: Why researchers need to engage with others to address complex issues. *IDS Bulletin*, 43(5), 9–16.
- Emunemu B. O. and Adeleke, T. E. (2022) *Information and Communication Technology and the Transformation of Higher Education in the New Normal in Nigeria*. Higher Education Research and Policy Network (HERPNET)
- Federal Republic of Nigeria (2013). *National Policy on Education* (6th Edition). Lagos: Nigerian Educational Research and Development Council.
- Grejin, I. (2008). *Making a difference: M and E of policy research*. London: Overseas Development Institute.
- Jones, H., Jones, N., Shaxson, L., and Walker, D. (2013, January). *Knowledge, policy and power in international development: A practical framework for improving policy*. London: ODI Background Note.
- Kyaligonza, R., Kimoga, J., and Nabayego, C. (2015). Funding of academic staff's research in public universities in Uganda: Challenges and opportunities. *Makerere Journal of Higher Education*, 7(2), 147 – 162.

- Mafenya, P. N. (2014). Challenges faced by higher education institutions in research skills development: A South African open and distance learning case study. *Mediterranean Journal of Social Sciences*,
- Mulgan, G., and Puttick, R. (2013). *Making evidence useful. The case for new institutions. The Economic and Social Research Council and NESTA Foundation.*
- Nutley, S., Walter, I., and Davies, H. (2007). *Using evidence: How research can inform public services.* Bristol: Policy Press.
- Okeke, B.S. (2004). *Qualitative research in education: Supervisors' perspective.* Port Harcourt: Pam unique publishers.
- Opschoor, G. (2001). The role of research in higher education: Implications and challenges for an active future contribution to human and social development.
- Organization for Economic Co-operation and Development (OECD), 2016, % of Gross domestic spending (GDS) on Research and Development (R and D) for selected developed countries 46. BestColleges.com: Highest Research and Development Funding
- Osuala, E.C. (2001). *Introduction to Research Methodology.* Onitsha: African-Fep Publishing Ltd.
- Shanley, P. and López, C. (2009). Out of the loop: Why research rarely reaches policy makers and the public and what can be done. *Biotropica*, 41(5), 535–544.
- Smith, K., Fernie, S., and Pilcher, N. (2017). What role does (or should) higher education research play in higher education policy? An exploratory study
- Stone, D. (2009). RAPID knowledge: Bridging research and policy at the overseas development institute. *Public Administration and Development*, 29, 303–315.