

Importance of Capacity Building Programme for Science Academic in Tertiary Institutions in Nigeria

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Abstract: The paper examined the importance of providing effective capacity building programme for science academic in the tertiary institutions in Nigeria. The study concluded these capacity building programs play a crucial role in enhancing the knowledge, skills, improvement in job performance, quality education delivery, collaboration, research and innovation development, attraction of top academic, innovation and innovative teaching methods and research development and ultimately contributing to the overall quality of education in the country. Based on this finding, the paper recommends that TETFUND an agency of federal government of Nigeria in charging of facility development, research and staff training in tertiary institutions should increase the allocation for staff development in tertiary institutions especially for science academic. Private institutions and international organizations should support the tertiary institutions in Nigeria in the rea of provision of capacity building programme to enhance the job performance of the academic staff.

Keywords: Science programme, Science academic, Tertiary Education, Teaching and learning.

1.0 Introduction

Tertiary education is defined by National policy on Education (2013) as the education given after Post Basic Education in institutions such as Universities and Inter-University Centres such as 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' Institutes (NTI). Tertiary education or higher education is a set that constitutes the university, which is a subset of higher education. However, in some contexts, higher education and university are used interchangeably (Assié-Lumumba, 2005). Tertiary education or higher education covers a wider range of higher learning institutions including the university. These higher learning institutions could be organized in different ways, commonly within a university and in a separate institution as university and other tertiary learning institutions (Alemu 2018).

Ogunode, Edinoh & Okolie (2023) defined tertiary education as a planned and organized educational system designed for the total development of man/woman and for the total transformation of the society through the utilization of teaching, research and provision of community service. Tertiary education, any of various types of education given in postsecondary institutions of learning and usually affording, at the end of a course of study, a named degree, diploma, or certificate of higher studies.

The goals of Tertiary Education shall be to: Contribute to national development through high level manpower training; provide accessible and affordable quality learning opportunities in formal and informal education in response to the needs and interests of all Nigerians; provide

high quality career counseling and lifelong learning programmes that prepare students with the knowledge and skills for self-reliance and the world of work; reduce skill shortages through the production of skilled manpower relevant to the needs of the labour market; promote and encourage scholarship, entrepreneurship and community service; forge and cement national unity; and promote national and international understanding and interaction (FRN, 2013; Ajemba, Ahmed, Ogunode & Olatunde-Aiyedun, 2021). The other goals or objectives of tertiary education includes; to aid production of manpower; to ensure national unity; to ensure technological development; to foster national unity and international peace; to increase production through research; to provide post-secondary school education; to prepare students with quality knowledge and reliable skills for independent living and the world of work (Ogunode, et al 2023).

Tertiary institutions in Nigeria offered science academic programme. These science programme are handled by science inclined lecturers, teachers or academic. Science Academics are those professional lecturers with specialization in the field of sciences. Science Academics are science teachers that specialized in programmes like Biology, Chemistry, Physics, Mathematics, Environmental science, Biochemistry, Biotechnology, Zoology, Botany, agricultural science, Geology, physic, statistics, computer science and so on. A science academic is an individual that has been trained and certified by various tertiary institutions to practice in the field of sciences (Somadina, Ndayebom & Ogunode, (2023).

Okwelogu, Ogunode & Abayomi (2021) and Emmanuel & Daniel (2017) noted that science lecturers are vital to the development of science education. Science lecturers are implementers of science curricula in higher institutions. The place of science teachers in the development of science education cannot be underestimated. An effective science teacher should be a master of his subject, as well as grounded in methods of teaching and be able to relate the science concepts to real-life experience. Science academic job performance is the degree of implementation of official functions within a timeframe. It is based on this that this paper discuss the importance of providing effective capacity building programme for science academic in the tertiary institutions in Nigeria.

2.0 Literature Review

2.1 Concept of Capacity Building Programme

Capacity is the ability to understand or do something and building is an increase in the amount of something over a period of time. Building capacity of teacher in education process therefore, is the conscious attempt at upgrading, renovating, and acquiring skills, abilities and strategies that must increase consistently over time and enable teachers react appropriately to academic dynamics including professional training, lesson delivery, effective use of instructional materials, teachers communication skills, provision of effective role model, effective discipline and students' control, improved conditions of service and most importantly, quality of classroom assessment to determine the needs of his/her learners in the learning process (Gimba, 2010).

Capacity building involves enhancing an individual's, an organisation's, or a system's knowledge, skills, and capacities to carry out their tasks efficiently. In education, it transforms into a calculated strategy to augment the capacities of instructors, enabling them to adjust to shifts, introduce novel pedagogical approaches, and consistently elevate their professional proficiency (National Accreditation Board for Education and Training (NABET) 2024). Capacity building is the process of enhancing an individual or organization's capacity to improve their performance. It basically involves providing the necessary resources and training to individuals or organizations so that they can increase their efficiency and effectiveness. Capacity building is the process of enhancing an individual or organization's capacity to improve their performance to achieve a certain outcome. It basically involves providing the necessary resources and training to individuals or organizations so that they can increase their efficiency and effectiveness. The benefits of investing in basic education and capacity building includes; it helps to create a more educated and skilled workforce (Ibrahim, et al 2023).

Capacity building programmes have been adjudged to be critical factors in educational institutions, culminating in their positions as major determinants of Principals' and teachers' s' professional advancement. Apart from gaining pedagogical and content knowledge, principals' participation in the programmes enhances capacity building effectiveness in the schools. Capacity building. Capacity building, according to United Nations Environment Programme (2006), is building abilities, relationships and values that will enable organisations, groups and individuals to improve their performance and achieve their developmental objectives. It often refers to strengthening the skills, competences and abilities of people and communities in developing societies so they can overcome the causes of their exclusion and suffering. It includes human resource development which is the process of equipping individuals with the understanding, skills and access to information, knowledge and training that enables them to perform effectively (Wikipedia, 2011).

Capacity building takes place on an individual level, institutional level and societal level. On an individual level, it requires the development of conditions that allow individual participants to build and enhance existing knowledge and skills. It also calls for the establishment of conditions that will allow individuals to engage in the process of learning and adapting to change. On an institutional level, it involves aiding pre-existing institutions and supporting them in forming sound policies, organisational structures and effective method of management (United Nations Committee of Experts on Public Administration 2006). Capacity building is a process of developing and strengthening the skills, instincts, abilities, processes and resources that individuals, organisations and communities need to survive, adapt and thrive in the fast changing world (Philbin 1996). It focuses on understanding the obstacles that inhibit people, institutions, governments, international organisations and non-governmental organisations from realizing their developmental goals while enhancing the abilities that will allow them to achieve measurable and sustainable results.

3.0 Method

This paper examined the importance of proving capacity building programme for science academic in tertiary institutions in Nigeria. Data from different secondary sources were employed for the paper. The paper used content analysis to analyze all the literature collected. Only those relevant to the topic were systematically selected. The exploratory method was adopted in the analysis. To ensure the reliability and validity of the study, multiple secondary sources were used to minimize the risk of error. The secondary data were collected directly from textbooks, journals, articles, newspapers and other local and international publications on sexual harassment in tertiary institutions (adapted from Ogunode & Ukozo, 2023).

4.0 Result and Discussion on Importance of capacity building programme for science academic in tertiary institutions in Nigeria

The capacity building programme for science academic in tertiary institutions in Nigeria offers numerous benefits for both students and institutions. Some of these benefits includes;

Improvement in Job performance

The capacity building program aims to improve the knowledge and skills of the science academic staff in tertiary institutions in Nigeria. Balyer, Özcan, and Yildiz (2017) discloses that academic training programmes allow academics to reach their full potential, helps them discover their academic limitations, and address them through the impartation of knowledge gained from training developmental programmes offered by the institution. Peretomode and Peretomode (2001) and Musa, (2022) have identified the benefits of training and development of lecturers to include increase in knowledge, skills and the development of positive attitude to work, increased personal and organizational productivity, and quality services. It can bring about improvement in morale, inculcate sense of belongingness, reduce absenteeism and turnover rate among lecturers, and importantly lead to better coordination of both human and material resources within institutions of higher learning. Ogunode, Ukozor, and Agbo, (2024) it can lead to an increase in

the overall academic standards of the institutions. As the academic staff become more knowledgeable and skilled, they can pass on this expertise to their students, resulting in a more educated and qualified workforce in the country.

Ensure Quality education

First and foremost, it aims to improve the quality of education in science-related fields by providing additional resources and training for academic staff. This not only enhances the learning experience for students, but also ensures that graduates are well-prepared for the workforce (Yemi, 2020). Additionally, not only do these programs benefit individual academics, but they also have a positive impact on the overall quality of education in Nigeria. As academics continue to improve their knowledge and skills through capacity building programs, they can provide their students with a more comprehensive and up-to-date education, ultimately contributing to the country's development and progress (Muhammed, 2023). Capacity building programme according to Yemi, (2020) helps to bridge the gap between theory and practical application by incorporating hands-on training and industry partnerships. This allows academic to gain valuable real-world experience and prepares them for the demands of the job market.

Support Collaboration

Capacity building programs also promote collaboration and networking among academics. Through these programs, academics from different institutions can come together and exchange ideas, leading to the creation of new knowledge and advancements in their respective fields (Muhammed, 2023). Resaerch.life (2023) maintains that training also creates opportunities for researchers to connect and collaborate with peers, experts, and mentors. Through workshops, conferences, and online platforms, you get to exchange ideas, gain valuable insights, and forge connections with peers around the world. Being seen as an expert, who focuses on learning in research, makes you more sought after for research collaborations than those who lag behind in their understanding of current developments.

Promotion of research and innovation

The capacity building programme according to Yemi, (2020) also promotes research and innovation in science fields, leading to the development of new technologies and solutions to local and global issues. This can have a significant impact on the economic and social development of the country. By participating in these programs, academics can enhance their teaching methods and keep up with advancements in their field. Basil, Felix. Nwi-ue and Eno Etudor-Eyo (2013) opined that capacity building allows for the continuous improvement of the quality of education being provided by these institutions via the lecturer output. This is achieved through the enhancement of the knowledge and skills of the academic staff, leading to a more effective teaching and learning process.

Attract top academic

Effective capacity building programme as noted by Yemi, (2020) can also attract top faculty and students to tertiary institutions in Nigeria, enhancing their reputation and ultimately leading to improved rankings and increased funding opportunities. Overall, the impact of the capacity building programme for science academic in tertiary institutions in Nigeria are vast and contribute to the overall growth and development of the education sector in the country.

Lead to Innovation and Innovative teaching methods

Capacity building programmes have a positive effect on the knowledge and skills of academics, leading to improved teaching and research outcomes. These programmes provide opportunities for academics to gain new insights, learn new techniques, and collaborate with other experts in the field (Abubakar, 2022; Salah, 2016). Capacity building programmes and community service also contribute to the overall development of the institution. By participating in these activities, academic staff can bring new ideas and methods to the table, leading to innovation and

improvement in teaching methods and research outcomes (Ogunode, & Jegede, 2020; Elnaga and Imran 2013).

Research Development

Capacity building programmes often focus on specific areas of science, allowing academics to develop specialized knowledge and bring new ideas and approaches to their teaching and research. In Nigeria, these programmes have been implemented in various universities and have shown positive results in terms of improving the quality of education and research in the science field. Overall, the impact of capacity building programmes on science academics in tertiary institutions in Nigeria is significant and should continue to be supported and implemented (Abubakar, 2022). Capacity building programs are crucial for science academics in tertiary institutions in Nigeria. These programs aim to enhance the knowledge and skills of academics, allowing them to better educate their students. These programs not only focus on providing academic knowledge, but also on developing essential skills such as research skills, critical thinking, problem-solving, and research abilities (Muhammed, 2023). Capacity building programs play a vital role in promoting research and innovation in the academic community. By equipping academics with the necessary skills and resources, these programs encourage and enable them to conduct high-quality research that can contribute to the development of Nigeria's science industry (Muhammed, 2023; Ogunode, Kasimu, & Sambo, 2023).

4.1 Findings

The study discovered that the impact of capacity building programme for science academic can lead to improvement in job performance, quality education delivery, collaboration, research and innovation development, attraction of top academic, innovation and innovative teaching methods and research development in the tertiary institutions in Nigeria.

4.2 Conclusion and Recommendations

In conclusion, the importance of capacity building programs for science academics in tertiary institutions in Nigeria cannot be overstated. These programs play a crucial role in enhancing the knowledge, skills, improvement in job performance, quality education delivery, collaboration, research and innovation development, attraction of top academic, innovation and innovative teaching methods and research development and ultimately contributing to the overall quality of education in the country. It is essential for both academics and the academic community as a whole to actively participate in and support these programs to continue driving progress and development in the field of science in Nigeria.

Based on this finding, the paper recommends that TETFUND an agency of federal government of Nigeria in charging of facility development, research and staff training in tertiary institutions should increase the allocation for staff development in tertiary institutions especially for science academic. Private institutions and international organizations should support the tertiary institutions in Nigeria in the rea of provision of capacity building programme to enhance the job performance of the academic staff.

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