

Teaching and Learning of Environmental Education in the Tertiary Education in Nigeria: Problems and Prospects

Daniels Adebayo Adeniyi

Department of Environmental Science, Federal Polytechnic, Ugep, Cross River State, Nigeria.

Email: danade4luv@gmail.com

Abstract

The Environmental Education programme is one of the academic programmes offered in the Nigerian tertiary institutions. It is a programme designed to produce professionals in the field of Environmental Education. The Environmental Education programme is a programme in the faculties and department of education. This paper aims to examine some problems facing the teaching and learning of Environmental Education programmes in Nigerian tertiary institutions. Depending on secondary data that were sorted from print and online publications, the paper concluded that poor funding, inadequate academic staff, shortage of infrastructure facilities, poor supervision, inadequate research funds, Brain-drain, strike actions and insecurity are some of the major problems facing the teaching and learning of Environmental Education programme in the Nigerian tertiary institutions. The paper also identified improvement in funding and availability of professional bodies as prospects of Environmental Education programmes in tertiary institutions across the country. Based on the identified problems, the paper hereby recommended the following; increment in the funding of the Environmental Education programme and its research programme, employment of more academic staff, provision of modern infrastructure facilities, improvement in the supervision of the Environmental Education programme and implementation of agreement reached with unions and provision of adequate security in all tertiary institutions across the country.

Keywords: Environmental Education, Tertiary education

Introduction:

Tertiary education has been defined in different ways by different scholars. For instance, tertiary education is viewed by Akin-Ibidiran et al. (2022) as the final stage of education that handles the production of manpower for the social, economic and technological development of a country. Tertiary education is an organized education that deals with intensive teaching, research and provision of community services. Tertiary education is defined by the Federal Republic of Nigeria 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).

Ogunode et al. (2023b) conceptualized tertiary education as a planned and organized educational system designed for the total development of man/woman and the total transformation of society through the utilization of teaching, research and provision of community service.

Tertiary education according to Ogunode & Odo (2023) is the third tier of education that is designed for the production of skilled professionals for socio-economic and technological advancement. Tertiary institutions are a micro section of the larger society. Tertiary institutions are an organized fraction of the whole society carved out for teaching programmes, research and provision of community service. Tertiary institutions can also be seen as a subset of the general society that is made of a collection of different people, different cultures, different lifestyles and different values.

The goals of tertiary education according to the Federal Republic of Nigeria National Policy on Education (2013) shall be to:

- i. contribute to national development through high-level manpower training;
- ii. provide accessible and affordable quality learning opportunities in formal and informal education in response to the needs and interests of all Nigerians;
- iii. provide high-quality career counselling and lifelong learning program that prepare students with the knowledge and skills for self-reliance and the world of work;
- iv. reduce skill shortages through the production of skilled manpower relevant to the needs of the labour market;
- v. promote and encourage scholarship, entrepreneurship and community service; forge and cement national unity; and
- vi. Promote national and international understanding and interaction.

Also, Ogunode et al. (2023b) stated that the goals or objectives of tertiary education include;

- i. aiding the production of manpower; ensuring national unity;
- ii. ensuring technological development;
- iii. fostering national unity and international peace; increasing production through research;
- iv. providing post-secondary school education;
- v. to prepare students with quality knowledge and reliable skills for independent living and the world of work.

The cardinal programmes of tertiary institutions globally include teaching programmes, research and the provision of community service. The realization of a Tertiary education programme depends on the quality of leadership.

Nigerian tertiary education offers many academic programs such as Environmental Education. Environmental Education is one of the educational programmes that is science-inclined. Environmental Education is offered in the faculty of education. It is an education-related programme. Environmental Education is critical to the development of the individual and society in general. NOUN (2012) stated that the Bachelor's degree in Environmental Education shares the philosophy of the National Policy on Education geared towards self-realization, better human relationships, self and national economic efficiency, effective citizenship, national consciousness, national unity, social and political progress, scientific and technological progress and national reconstruction. The programme philosophy therefore seeks to produce graduates who are worthy in character and learning, as well as being policy makers who are committed to ensuring sustainable management of the environment in Nigeria.

The B.Ed. Environmental Education degree seeks to achieve the following objectives:

- i. Produce a crop of manpower that will assist in Environmental Education research, policy formulation and implementation on environmental matters.
- ii. Develop professionals who will take curriculum initiatives and assist in the teaching and learning of environmental education in Nigeria’s education system.
- iii. Provide the personnel that will educate urban and rural dwellers on the subject of environmental conservation and management through established channels.
- iv. Ensure the availability of resource personnel that will develop materials for the advancement of environmental education and awareness.

The teaching and learning of Environmental Education in Nigerian tertiary institutions appear to be facing a lot of problems. It is important to identify and examine some of these problems to find lasting solutions for the sustainable development of Environmental Education programmes in Nigerian tertiary institutions.

Problems facing teaching and learning of Environmental Education in the Tertiary Education in Nigeria:

There are many problems facing the teaching and learning of Environmental Education in tertiary education in Nigeria. Some of these problems include the following:

- i. **Poor funding:** Poor funding of faculties and departments in Nigerian tertiary institutions is a problem that has affected the smooth implementation of the teaching and learning of environmental education in Nigeria. Nigerian tertiary institutions are designed to depend on the institutions for funding. The funding that Ogunode & Zailani (2023) and Ogunode (2020) noted is not adequate for the implementation of tertiary institutions’ programmes. Udida et al., (2009) submitted that the major issue in educational development is shortage of funds. One of the most serious problems threatening the survival of the educational system is that of dwindling level of public funding in the face of rising demands and hence rising cost of higher education. This shortage of funds affects job performance and the growth of the institution. Higher educational institutions cannot perform optimally without funding. This situation calls for increased funding initiatives from both the government and educational stakeholders to sustain the tempo and growth of the education industry. The inability of the Nigerian government to objectively accept and implement the 15%-20% funding formula for education recommended by UNESCO impact negatively on the performance and sustainability of higher education. A study by Macrotrend (2021) and Ogunode et al. (2023a) in the table below reviews federal education funding allocation for one decade.

Table 1: Nigeria Education Spending - Historical Data

Year	Education Spending (% of GDP)	Annual Change
2021	5.14%	0.01%
2020	5.13%	-0.72%
2019	5.86%	-0.09%
2018	5.94%	-0.18%
2017	6.12%	-0.53%
2016	6.65%	-2.60%

2015	9.26%	0.22%
2014	9.04%	0.36%
2013	8.68%	0.13%
2012	8.55%	0.67%
2011	7.88%	1.71%
2010	6.17%	1.71%

Table 1 of Nigerian education spending revealed that in 2021, 2022, 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012, 2011 and 2010, the education spending in GDP percentage had 5.14%, 5.13%, 5.86%, 5.94%, 6.12%, 6.65%, 9.26%, 9.04%, 8.68%, 8.55%, 7.88% and 6.17%. Thus, it has become obvious that Nigeria’s neglect of the funding formula is detrimental to higher educational institution performance and development aspiration as quality performance is the veritable instrument for the sustenance of the education system. This neglect has further precipitated crises in the entire higher educational system as effective teaching, research and service are no longer taking place seriously (Udida, et al, 2009; Sarkinfada, 2016; Ololube, 2016; Sarkinfada, 2020). This poor funding has negatively affected the implementation of teaching and learning programmes in Environmental Education.

- ii. **Inadequate academic staff:** Inadequate academic staff in the department of most environmental education is another challenge facing the teaching and learning of the programme in some of the tertiary institutions spread across the country. Recently National Universities Commission data as quoted by Punch (2022) indicated that federal universities in Nigeria suffer a shortage of full-time professors and academic staff. According to the data, no federal university scored up to 50 per cent in the ranking of full professors. This implies that no federal university has the required number of full professors. Some of the federal universities ranked in the top 10 are the Usmanu Dan-Fodiyo University, Sokoto, with 36.44 per cent; Obafemi Awolowo University, Ile Ife, 35.80 per cent; Federal University of Technology, Akure, 27.28 per cent; Federal University of Agriculture, Abeokuta, 27.25 per cent; the University of Abuja, 25.33 per cent; the University of Benin, 23.26 per cent; University of Port Harcourt, 21.26 per cent; the University of Calabar, 21.20 per cent; and the University of Ilorin, 21.12 per cent. Specifically, in many departments of environmental education, there is a lack of professors of environmental education. The shortage of academic staff has affected the teaching and learning of environmental education in tertiary institutions in Nigeria.
- iii. **Shortage of infrastructure facilities:** Infrastructural facilities are essential in the administration of economic education. Adequate infrastructural facilities are social capital that every higher education institution must have to implement science programmes effectively. Ogunode (2020) postulates that infrastructural facilities should include classrooms, offices, exam halls, laboratories, tables, chairs, desks, power supply, water, and a good road network within the schools. NOUN (2012) observed that physical facilities are required for teaching, learning and research. They include classrooms, laboratories, workshops, staff offices and libraries. Others include hostels (in residential institutions), staff quarters, student and staff recreational facilities, and sports and games facilities. They also include roads, electricity and water supplies. Sarkinfada (2013), Sarkinfada et al. (2017) and

Ebehikhalu & Dawam (2017) lamented the inadequacy of physical facilities like universities is very. Most of the science-based programmes have one lecture room and one laboratory allocated to all levels of study. For example, the physics, chemistry, Biology, Mathematics etc programmes have one lecture room each for students from level one to final year. No programme has a lecture theatre assigned to it. The number of lecture rooms, laboratories and lecture offices is still grossly inadequate to meet the needs of the school. The library is still not adequate to meet the needs of the growing population of the university community. There is a significant deficit of basic learning resources which include multimedia systems, magnetic boards, computers, printers, plotters etc. In terms of aesthetics, the institution's main access is not indicative of a university despite the signpost. The entire environment was filthy and the physical infrastructure provided did not have a water supply thereby making the sanitary situation deplorable. Electricity supply on campuses is irregular and inadequate. The access road to the permanent site is in bad shape. The water supply and reticulation in the university have completely failed. The university now relies on water tankers for water distribution.

- iv. **Poor Supervision:** Supervision is key to the actualization of quality education at all levels of the educational system. Supervision is the process that involves providing professional advice and assistance to an individual or institution to improve the quality of the system. One major objective of supervision in educational institutions is to improve quality and ensure quality standards are maintained with the view of producing qualified products for the socio-economic and technological advancement of the country (Ogunode & Ahaotu, 2021). Unfortunately, agencies saddled with the responsibilities of supervision of tertiary institutions in Nigeria appear to be ineffective in the supervision of academic programmes including Environmental Education programmes in the higher institutions. Ogunode (2020) and Victor (2014) noted that the lack of proper regulation and supervision is part of the problems bedeviling Nigeria's educational system. Poor supervision is a major problem affecting university education in Nigeria. The supervision of university education in Nigeria is poor and ineffective. The poor supervision is responsible for the poor quality of education in the system (Ogunode, 2020). Supervisory agencies of higher institutions have not been effective in the supervision of teaching programmes at the various higher institutions due to many challenges that include underfunding, shortage of staffers, weak leadership and internal problems (Ehichoya & Ogunode, 2020). The inability of these supervisory agencies to effectively supervise the environmental education programme affected the teaching and learning of environmental education.
- v. **Inadequate fund Research:** Research can be sum to involve the identification of problems, gathering new data, and finding solutions 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 (Ogunode et al., 2021b). Paul (2015) maintained that the conduct of research is one of the basic functions of tertiary institutions, which comprise Universities, Polytechnics, Monothechnics and Colleges of Education. The academic staff of these institutions are compulsorily required to carry out research activities as their promotions are primarily based on their research outputs. Apart from the academic staff being

promoted through research publications, research activities enhance their credibility, and status, and also add value both to their immediate community and the larger global community. Ogunode & Abubakar (2020) noted that research is the second cardinal programme of higher institutions. Research is very important to the development of the society. Research is conducted mostly in the higher institutions' environment to solve problems affecting society. The academic staff is saddled with the responsibility of carrying out research in the universities. Conducting research is one criterion for measuring their performance. Both lecturers and students in environmental education are involved in the conduct of research. Yusuf (2012) noted that the role of higher education research in national development cannot be overemphasized. However, research in Nigeria's institutions of higher learning comprising the universities, polytechnics and colleges of education has yet to make a real impact on the technological advancement of the country and the socioeconomic well-being of its citizenry. Unfortunately, funding of research programmes in Nigerian tertiary institutions is poor and inadequate for the implementation of research programmes in all departments and faculties. Donwa (2006), Charles et al. (2009), Chikwe et al. (2015) and Ogunode & Ade (2023) observed that inadequate research funds are a major problem facing research programmes in Nigerian public universities. The budgetary allocation for the administration of the research programme is not adequate.

- vi. **Brain-drain:** Brain-drain is a major problem that is affecting tertiary institutions by slowing their programme in Nigeria. Ogunode & Abubakar (2020) defined brain drain as the massive movement of professionals from developing countries to developed countries to work because of a better working condition. The brain-drain problem has affected many higher institutions in the country, losing many of their professors to foreign universities. The massive movement of these lecturers is causing major lecturer gaps in the faculties and the Department of Environmental Education. Ogunode & Babatunde (2021), Okebukola (2002) and Oni (2000) remarked that many experienced and young lecturers are fleeing from the frustration of university life into more rewarding and more challenging sectors of the economy. The result of the faculty exodus in the quality of teaching and research in public universities today is obvious. Odetunde (2004) and Akindutire (2004) concluded that there was a mass exodus of many brilliant lecturers to the business world and others left Nigeria for better services including lecturers and researchers in departments and faculties of environment education. The brain drain has affected the teaching and learning of environmental education in tertiary institutions in Nigeria.
- vii. **Strike actions:** Strike action by different union groups in the tertiary institutions in Nigeria is a very enormous challenge facing teaching and learning environmental education. Murtala et al. (2022) observed that Nigerian universities are famous for strike actions. The strike actions have led to an unstable academic calendar in many higher institutions, delayed students' graduation and prolonged teaching, research and community services. Lawan & Ogunode (2021) identified poor funding as the cause of strike actions while Edinyang & Ubi (2013) noted that the work environment is poor. Sarkinfada & Hussaini (2019) and Ogunode et al. (2022)

concluded that strike actions in Nigerian higher institutions have affected teaching, research and provision of community services in all academic programmes.

- viii. **Insecurity:** Insecurity is a major problem affecting the implementation of teaching and research programmes in Nigerian tertiary institutions. Insecurity has led to school closures in many parts of Nigerian states. Ogunode & Abubakar (2020) noted that the insecurity challenge facing the country is a very big challenge that has prevented effective administration and management of higher institutions in Nigeria. Insecurity has contributed to poor quality of teaching, research and provision of community service. Implementation of teaching and research in Environmental Education programmes in many tertiary institutions in Nigeria has been put on hold because of insecurity. The insurgents in the Northern and bandits across the country have attacked many higher institutions leading to disruption of their academic programmes, killing students and destroying infrastructural facilities meant for teaching and learning. Insecurity in Nigeria and the Northeast has done more damage to the educational infrastructural facilities. The insurgency has destroyed many school facilities from basic to higher education (Ogunode et al., 2024b).

Prospects of teaching and learning of Environmental Education in the Tertiary Education in Nigeria:

- i. **Improvement in Funding:** The federal and state governments have promised to improve funding of tertiary institutions in Nigeria. If this is done as promised, it will aid the development of Environmental Education programmes in many tertiary institutions in Nigeria. It will ensure the provision of adequate facilities, employment of qualified lecturers and development of research programmes in Environmental Education departments.
- ii. **Professional bodies:** The presence of international and national professional bodies in the Environmental Education programme in Nigeria is a great prospect for the development of the Environmental Education programme in Nigerian higher institutions. Professional institutions in Environmental Education are saddled with the responsibility of carrying out the programme for the sustainable development of the Environmental Education programme in Nigeria. They are to regulate the profession and come out with laws and ethics for the profession.

Conclusion:

The Environmental Education programme is one of the academic programmes offered in Nigerian tertiary institutions. It is a programme designed to produce professionals in the field of Environmental Education. The Environmental Education programme is a programme in the faculties and department of education.

In Nigerian tertiary institutions, poor funding, inadequate academic staff, shortage of infrastructure facilities, poor supervision, inadequate research funds, Brain-drain, strike actions and insecurity were identified as major problems facing the teaching and learning of Environmental Education programmes in the Nigerian tertiary institutions. The paper also identified improvement in funding and availability of professional bodies as prospects of Environmental Education programmes in tertiary institutions across the country.

Recommendations:

Based on the identified problems, the paper hereby recommended the following; increment in the funding of the Environmental Education programme and its research programme, employment of more academic staff, provision of modern infrastructure facilities, improvement in the supervision of the Environmental Education programme and implementation of agreement reached with unions and provision of adequate security in all tertiary institutions across the country.

References

- Akindutire, I. O. (2004). *Administration of higher education*. Lagos: Sunray Press.
- Akin-Ibidiran T. Y., Ogunode, N. J., & Ibidiran, A. (2022). Analysis of Factors Responsible for Poor Curriculum Implementation in Tertiary Institutions in Nigeria. *Electronic Research Journal of Social Sciences and Humanities*, 4 (5), 1-11
- Charles, P. A, Ijeoma A. A., & John, A. U. (2009). Lecturers' access to research fund in Nigerian universities: Challenges and strategies for improvement, 3(6), 126-161
- Chikwe, C. K., Ogidi, R. C., Nwachukwu, K. (2015). Challenges of research and human capital development in Nigeria. *Journal of Education and Practice*, 6(28).
- Donwa, P. A. (2006). *Funding of academic research in Nigerian universities*. A paper presented at the UNESCO forum on higher education research and knowledge creation. November 29–December 1, 2006. <http://portal.unesco.org/education/fr/files>.
- Ebehikhalu, N. O., & Dawam, P. (2016). Inadequacy of teaching and learning infrastructure: reason Nigerian universities cannot drive innovations. *Australian Journal of Education and Learning Research*, 44(2), 200-224.
- Edinyang, S. D., & Ubi, I. E. (2013). Effect of strike action on human development among social studies secondary school students in Uyo local government area of Akwa Ibom State, Nigeria. *Global Journal of Human Resource Management*, 1(2), 1-8.
- Federal Republic of Nigeria National Policy on Education. (2013). *National policy on education*. 6th ed. Lagos: Nigerian Educational Research and Development Council.
- Lawan, A., & Ogunode, N. J. (2021). Strike actions in Nigerian higher institutions: Meaning, causes, effects, achievement and way forward. *Scholarly Publishing Discourse*, 1(1), 1-30.
- Macrotrend. (2021). *Nigeria education spending*. <https://www.macrotrends.net/countries/NGA/nigeria/education-spending>
- Murtala, O. M., Nelly, A. F., & Ogunode, N. J. (2022). Psychological effects of strike actions on academic staff of public universities in Nigeria. *Electronic Research Journal of Social Sciences and Humanities*, 4(4), 29-40.

- NOUN. (2012). *School administration in Nigeria*. Lagos, Nigeria
- Odetunde, C. (2004). The state of higher education in Nigeria. <http://www.Nigeria-deltacongress.com/sarticle/state-of-higher-education>
- Odim, O. O., Annastashia, I. A., & Solomon, A. A. (2018). Effect of Strikes on Management and planning of educational activities in Nigerian Universities. *Global Journal of Educational Research*, 17, 1-8.
- Ogunode, N. J. & Ade, T. I. (2023). Research Programme in Public Universities in Nigeria. *Best Journal of Innovation in Science, Research and Development*, 2(3), 1-13.
- Ogunode, N. J. & Ahaotu, G. N. (2021). Supervision of universities in Nigeria: Problems and suggestions. *American Journal of Social and Humanitarian Research*, 2(4), 82-91.
- Ogunode, N. J. & Zailani, U. (2023). Deployment of educational management information system (EMIS) in administration of public secondary schools in Nigeria. *Modern Journal of Social Sciences and Humanities*, 12, 1-13.
- Ogunode, N. J. (2020). Challenges confronting the administration of English Language program: Secondary school context in Nigeria. *Journal of Research and Innovation in Language*, 2(2), 59-69.
- Ogunode, N. J., & Abubakar. (2020). Higher education in Nigeria: Challenges and the ways forward. *Electronic Research Journal of Behavioural Sciences*, 3.
- Ogunode, N. J., & Babatunde, A. F. (2021). Challenges facing teaching and learning of educational administration and planning programmes in Nigerian higher institutions and way forward. *International Journal of Culture and Modernity*, 7, 76-87.
- Ogunode, N. J., & Odo, R. C. (2023). Social problems in tertiary institutions. *Web of Semantic: Universal Journal on Innovative Education*, 2(7), 112-124.
- Ogunode, N. J., Attah, G. E., & Ebute, J. (2023a). Investment in education in Nigeria: barriers and way forward. *European Journal of Higher Education and Academic Advancement*, 1(2), 61-71.
- Ogunode, N. J., Ayeni, E. O., & Olorundare, A. S. (2024b). Roles of tertiary institutions in curbing banditry, kidnapping and terrorism in Nigeria. *International Journal of Sharia Economics and Financial Literacy*, 1(1), 19-28.
- Ogunode, N. J., Edinoh, K., & Okolie, R. C. (2023b). Public-private partnership model and implementation of tertiary education programme in Nigeria. *American Journal of Science on Integration and Human Development*, 1(6), 1-12.
- Ogunode, N. J., Jegede, D., Adah, S. Audu, E. I., & Ajape, T. S. (2021). Administration of research programme in Nigerian public universities: problems and way forward. *Riwayat: Educational Journal of History and Humanities*, 3(2), 21-32.

- Ogunode, N. J., Ugochukwu, U. C., & Jegede, D. (2022). Effects of strike actions on Nigerian higher education goals and programme. *European Multidisciplinary Journal of Modern Science*, 7(6), 1-9.
- Ololube, N. P. (2016). Education fund misappropriation and mismanagement and the provision of quality higher education in Nigeria. *International Journal of Scientific Research in Education*, 9(4), 333-349.
- Oni, B. (2000). *Capacity building effort and brain drain in Nigerian Universities*, Ibadan: NISER.
- Paul, N. (2015). Research in tertiary institutions in Nigeria: Issues, challenges and prospects: implication for educational managers, *Journal of Humanities and Social Science* 20(6), 45-49.
- Punch. (2022). Employment embargo: Shortage of professors hits federal varsities. <https://punchng.com/employment-embargo-shortage-of-professors-hits-federal-varsities/>
- Sarkinfa, H & Hussaini, M. (2019). Women's participation in organizational activities in a democratic society as perceived by stakeholders in Northwest, Nigeria. *International Journal for Scientific Research and Management*, 7(12).
- Sarkinfa, H. (2013). Infrastructural challenges in Nigeria secondary schools as hindrance to quality education. *African Journal of Academic Excellence*, 2(1) 1-5.
- Sarkinfa, H. (2016). Participants' perception of learning involvement and challenges of adult continuing education programmes in Kwara State. *International Journal of Contemporary Education and Management*, 11(2), 126-143.
- Sarkinfa, H. (2020). Perception of stakeholders on empowering women for socio-economic development in an enduring democracy in Northwest Nigeria. *European Journal for Training and Development Studies*, 7(2), 1-14.
- Sarkinfa, H., Amali, I. O. O., Okafor, I. P., & Hussaini, M. (2017). Cultural awareness and religious tolerance a vital tool for sustainable development. *Card International Journal for Social Sciences and Conflict Management*, 2(3), 95-197.
- Udida, I. A., Bassey, U. U., Udofia, I. U. & Egbona, E. A. (2009). *System performance and sustainability of higher education in Nigeria*. Being a paper presented at the 11th International Conference of Educational Management Association of South Africa (EMASA) 7th – 9th August 2009.
- Victor, E. D. (2007). Beyond the NUC Accreditation Exercise. <http://www.gamji.com/article4000/NEWS4524.htm>
- Yusuf. A. K. (2012). An appraisal of research in Nigeria's university sector. *JORIND*, 10 (2), 98-119.