

**Product Evaluation of Environmental Education Programme in
University of Calabar, Calabar Cross River State, Nigeria**

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Abstract

This study focused on product evaluation of environmental education programme in the University of Calabar, Nigeria. To achieve the purpose identified for the study, two purposes, formulated into two research questions and two hypotheses were designed to guide this study. The research design adopted for the study was correlational research design meant to assess the phenomena under investigation as they took place in the study area. The population of the study consisted 2111 respondents for first degree graduands and post graduates (PGDEE, M.Ed/M. Env.Ed). The sampling techniques adopted for the study were the simple random sampling and proportional simple random sampling techniques upon which 634 samples were drawn from the population and used for the study. Questionnaire tagged Product Evaluation of Environmental Education Programme (PEEEPQ) was the most suitable instrument used for data collection. The instrument contained 16 items; each variable having eight items. The instrument was constructed by the researcher and validated by the supervisors and three lecturers in Test, Measurement and Evaluation. Some items were dropped while others were modified and used in the study. The validity of the instrument was done by the student supervisors covering contents and construct using face validity; the reliability of the instrument was done with the use of Cronbach Alpha reliability test. The result revealed that, the instrument is reliable enough to measure what it was designed to measure. Data obtained from the respondents of the study were analyzed using simple percentage analysis. Results obtained from testing of research question revealed that students' awareness of environmental issues and acquisition of basic knowledge related to environmental problems is significant. Based on the results of the findings conclusion and recommendations were raised. Among the recommendations is that, there is need to improve Environmental Education programme to increase products' level of awareness on environmental issues and that, adequate effort should be put in place to assist products of Environmental Education programme in the acquisition of basic knowledge related to environmental problems.

Keywords: Product evaluation, Environmental Education Programme, Environmental awareness, Knowledge of environmental problems, Awareness of environmental issues.

Introduction/ literature review

Education plays a crucial role in both global and national development. On a global scale, education stands as a foundational pillar for development and progress. Its impact extends across various dimensions, transcending individual benefits to encompass entire societies and

economies. Education serves as a catalyst for human capital development, equipping individuals with essential knowledge, skills and abilities crucial for work force engagement and for contribution to societal development. Moreover, it plays a pivotal role in poverty reduction, offering pathways for individuals to secure better job prospects and elevate living standards. In the context of Nigeria, education is seen as a vital tool for economic growth, poverty reduction and social progress. Investing in education is essential for transforming Nigeria's economy and reducing poverty rates.

From an economic perspective, education contributes to the development of human capital, enabling individuals to acquire the skills and knowledge necessary for employment and entrepreneurship. A well-educated workforce enhances productivity, innovation and competitiveness, which are crucial for driving economic growth. In Nigeria, education has been identified as a key driver of economic diversification and reducing dependency on oil revenues (World Bank, 2018). Furthermore, education plays a vital role in poverty reduction and social development. Like in other parts of the world, education has been seen in Nigeria as a means to empower individuals, particularly women and marginalized groups, by providing them with equal opportunities for socio-economic advancement.

By improving access to quality education, Nigeria aims to address the inequalities that hinder social progress and promote inclusive development. Education also has implications for health and well-being. According to the World Health Organization (2019), education is linked to better health outcomes and behaviours. Educated individuals in Nigeria are more likely to adopt healthy practices, seek proper medical care and make informed decisions about their well-being. It contributes to reducing mortality rates, improving maternal and child health and increasing life expectancy.

Environmental Education is the process of teaching individuals and communities about the natural environment and the importance of preserving and protecting it. It involves raising awareness about environmental issues, developing critical thinking and problem-solving skills

and promoting responsible attitudes and behaviours towards the environment. Environmental Education can take place in a variety of settings, including schools, non-formal education institutions and community organizations. It is an essential tool for promoting sustainable development. It equips individuals with the knowledge, skills and attitudes necessary for understanding and addressing environmental issues and for promoting responsible environmental behaviour. Universities are recognized as key players in the provision of Environmental Education, due to their roles in educating future leaders, decision-makers and innovators in environmental sustainability (UNESCO, 2019).

In response to the growing recognition of the importance of sustainable development, Environmental Education programmes have been integrated into the curricula of Nigeria Universities for several decades, (Adeleke, 2017). The University of Calabar, Nigeria, is one of the few Universities that offers Environmental Education programme.. The programmes aim to equip students with the knowledge, skills and attitudes necessary for promoting sustainable development and addressing environmental challenges (Schaefer & Tilbury, 2015). The University of Calabar offers the Environmental Education programme with focus on developing Professionals who can effectively address environmental challenges and promote sustainable development.

The programme provides students with a comprehensive understanding of environmental issues, including climate change, pollution, natural resource management and conservation. Students learn about environmental policies, laws and regulations, as well as strategies for implementing effective environmental programme and initiatives. The curriculum includes courses in Agriculture, Forestry and Wildlife Resources, Biology, Chemistry, Physics, Geology, Geography and Ecology among others, as well as courses in Social Sciences such as Sociology and Economics. Students also have opportunities for hands-on experience through field trips/fieldworks, internships and research projects (University of Calabar, 2023).

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It is expected that the graduates of Environmental Education programme should be well-equipped to pursue careers in a variety of fields, including Environmental Policy, Education, Research and Advocacy and Consulting. They should also be prepared to continue their education at the graduate level in Environmental Science, Environmental Management, or other related fields. Overall, the Environmental Education programme should provide students with a strong foundation in environmental knowledge and skills, preparing them to become leaders in promoting sustainable development and protecting the environment. Research has shown that Environmental Education can have a positive impact on individuals' knowledge, attitudes and behaviours towards the environment (Ojedokun & Owolabi, 2021). Therefore, there is a need for product evaluation studies to assess the outcomes and impacts of this programme on the environment in particular and society at large.

Product evaluation is a type of evaluation that focuses on assessing the outcomes and impacts of any designed and implemented programme. It involves determining whether the programme has achieved its intended objectives, identifying its strengths and weaknesses and making recommendations for improvement. Product evaluation is essential for ensuring that Environmental Education programmes are effective in promoting sustainable development and addressing environmental challenges (UNESCO, 2019). Product evaluation can explore various aspects related to environmental awareness, including students' understanding of key environmental challenges, their knowledge of environmental concepts and processes and their recognition of the importance of sustainable practices. Additionally, it can investigate whether the programme effectively promotes critical thinking and problem-solving skills related to environmental issues. Understanding the relationship between an Environmental Education programme and students' awareness of environmental issues is vital for fostering a generation of environmentally conscious individuals who are equipped to tackle pressing environmental challenges.

Attitude towards environmental sustainability plays a crucial role in shaping individual behaviours and actions concerning environmental conservation and sustainable practices. Positive attitudes are essential for driving behavioural changes that contribute to mitigating environmental issues, promoting conservation efforts and achieving sustainable development goals. Therefore, understanding students' attitudes towards environmental sustainability is of great importance, as they represent the future leaders and agents of change in environment management and decision-making. A country like Nigeria, grappling with various environmental challenges, including deforestation, pollution and climate change, fostering positive attitudes towards environmental sustainability is crucial for addressing these issues effectively. Educational sustainability is crucial for addressing these issues effectively. Educational institutions have a significant role to play in shaping students' attitudes towards the environment through comprehensive Environmental Education programmes (Yesilyurt, Balakoglu, & Erol, 2020).

A change in attitude, behaviour and perception is a fundamental indicator of students' educational progress and success. The relationship between an Environmental Education programme and students' change in attitude, behaviour and perception is a topic of significant interest, as it explores the impact of Environmental Education on students' overall educational outcomes. Environmental Education programme aim to develop students' knowledge, skills and competencies related to environmental issues, sustainability and conservation. These programmes often integrate interdisciplinary approaches and hands-on learning experiences to foster critical thinking, problem-solving and scientific literacy. As such, they have the potential to positively influence students' academic achievement in various subject areas.

The role of Environmental Education in shaping the career prospects of graduates is an area of increasing interest, as society recognizes the importance of environmental sustainability and the need for professionals with expertise in this field. Environmental Education programme has the potential to equip graduates with the knowledge, skills and attitude necessary to pursue

careers in various environmental sectors. The Nigerian job market is evolving, with increasing demand for professionals in environmental sectors such as environmental consulting, renewable energy, conservation experts, environmental planning and policy development among others (Akinwumi & Olufunmilayo, 2018).

Ultimately, the goal of this study is to ensure that the Environmental Education programme not only equips graduates with the necessary skills and knowledge for successful careers but also instills a lifelong commitment to environmental sustainability and a drive to make a positive impact on the environment through their professional achievements and continued engagement in environmental issues. However, to the best of the researcher's knowledge, only one study by Eneji, et al. (2023) has been carried out on this same topic in the University of Calabar, a part from this study, no other study has been conducted on Environmental Education programme in the University of Calabar. Therefore, there is a need for a study that evaluates the product of Environmental Education programme in order to identify its strengths and weaknesses and recommends ways to improve the programme in the University of Calabar. This therefore, is the thrust of this study.

Abenu, Datti and Sahabo (2023) carried out a study on environmental awareness among senior secondary school students in Kano Municipality, Kano State, Nigeria. Environmental Education across all levels of education is being promoted to help stem the decline in the quality of the environment. This study examines the level of environmental awareness among senior secondary school students in Kano Municipality, their perceptions and their responsibility towards improving the environment. The study adopted a descriptive research design, where a questionnaire was administered to students in six senior secondary schools. Results show that 75% of the respondents have been exposed to subjects that have environmental topics and 72.2%, have heard environmental talks at school assemblies.

In another study by Norris (2016) who worked on actualizing the goals of Environmental Education in Nigeria. With the ultimate aim of aiding citizens of Nigeria in becoming

environmentally aware, knowledgeable and above all skilled and dedicated citizens who are willing to work individually and collectively towards achieving or maintaining a dynamic equilibrium between quality of life and that of the environment, this raises the pertinent role of Environmental Education (EE) in actualizing such goal. Thus, this research work revealed the evolution of EE in Nigeria starting from the British colonial era; described the place of EE in the Nigeria curriculum; the infusion strategy in blending Environmental Education into the curriculum and the pathway in achieving the goals of EE in the country. Therefore, the researcher reiterated and reignited the focus of EE in the country among the key stakeholders in order to ensure the goals and objectives of EE are effectively achieved.

Igwe and Akinnubi (2023) carried out a study on awareness and effectiveness of Environmental Education among undergraduate students. The study examined the level of awareness and effectiveness of Environmental Education among tertiary students in Adeyemi College of Education, Ondo. A self-designed, structured questionnaire was used on a sample of one hundred (100) students to elicit information from them on their knowledge of Environmental Education. Mean, standard deviation and t-test were employed to analyze the data obtained. The findings revealed that most students were aware of the key environmental issues and they also understood the causes of some of these environmental issues.

The findings further show that students had ideas about the problems facing the effectiveness of Environmental Education. This data was used as a springboard for exploring ways by which Environmental Education (EE) in tertiary institutions might capitalize on student knowledge and hence progress towards environmental action taking; and how this might occur through tertiary students being nurtured into the role of informed decision-makers and action-takers. Furthermore, it is therefore recommended that interactive teaching methodologies should be adopted in enhancing active teaching and learning of Environmental Education. The study finally concluded that Environmental Education in tertiary schools must be given equal

importance like other conventional courses so that students who are the future citizens must be encouraged in eco- friendly activities for solving environmental problems.

Similarly, Banjo and Obun-Andy (2023) carried out a study on Environmental Education and Media Role in Creating Awareness in Ogun State, Nigeria. Media is said to be the fourth pillar of democracy. The media's power to stimulate the minds of millions of people is its key function. One of the important roles of media is that of raising awareness on some of the burning issues of the world. Environmental issues are numerous and affect all aspects of life. Or to put it another way, nobody is immune to the effects of environmental problems. This paper examined media's role in creating awareness with regard to Environmental Education. Three objectives were stated to guide the study and the survey design was adopted. Population of this study were residents of Ogun State which span through three Senatorial Districts, (Ogun Central East and West) Ogun State, Nigeria.

Babalola and Olawuyi (2021) carried out a study on advancing Environmental Education for sustainable development in higher education in Nigeria: Current challenges and future directions. The important roles of Environmental Education (EE) as a tool for advancing the United Nations Sustainable Development Goals (SDGs) have been clearly identified in national policy visions and guidelines in Nigeria. Despite this increasing recognition however, the implementation and delivery of EE programmes remain adversely impacted by a wide range of practical implementation challenges. While a number of existing studies have compiled the importance of EE for advancing the SDGs, a detailed examination of the law and governance challenges that limit the implementation of EE programmes in Nigeria has remained absent.

This study fills a gap in this regard because various legal and institutional challenges that arise with the design and implementation of EE programmes in Nigeria are examined in order to identify the ways in which an integrative governance framework on EE can help close these gaps. The study suggests that an elaboration of coherent national strategy on EE; a dedicated budgetary allocation for EE programmes; reform of the existing laws to ensure coherent implementation of

EE programmes; and the designation of focal EE units at higher education institution are significant steps towards improving the development and implementation of EE programmes in Nigeria.

Ofodum and Okere (2016) carried out a study on Environmental Education: a sine-qua-non for building a sustainable future through general studies in tertiary institutions. An education that is devoid of knowledge which spurs and stimulates character capital for sustainable globe is bridged. General studies (GS) in tertiary education stands in, as should equip and prepare students with general principles of culture, philosophy and science so as to be well rounded to sustainably function in the society on graduation. Study probes knowledge base of randomly selected students of tertiary institutions in South East Nigeria on key environmental aspects and concerns. Several related literature showed limited quantitative works that highlighted strategies and necessary Environmental Education (EE) components to meet sustainable development goals

Statement of the problem

The global climate has significantly changed. The earth has experienced changes in different perspectives; with ripple effects on human, land, water, forest and atmosphere. Man's activities in agriculture, development, exploration, science and technology coupled with the production and consumption of goods and services have contributed to threaten the serenity of the earth. The major challenge facing man is to reverse the harmful effect of human activities on the environment. This has taken the front burner of local, national and international debates.

The introduction of Environmental Education programme in the University of Calabar was a deliberate attempt to educate and enlighten young minds; a programme that is otherwise described as "catch them young" training programme that would champion the campaign that is targeted at influencing peoples' attitude, behaviour and perception towards the environment and its resources. The Department of Environmental Education is housed in the Faculty of Science Education in the University of Calabar, in the College of Education with programmes meant to inculcate environmental ethics and norms in the learners. Notably, the Department of

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Environmental Education accommodates two streams of students; the regular programme recognized by the National University Commission (NUC) and the University of Calabar's non-regular or part-time programmes.

The NUC approved programme centres on teaching subjects as areas of specializations, with recent adjustment due to the integration of Tourism Education in secondary schools. As a result, all Environmental Education students within the NUC regular programme now focus on tourism education. Conversely, the non-NUC programme, commonly referred to as the Centre for Educational Services (CES) programme, offers a diverse array of specializations. This encompasses- Tourism and Eco-Management (ETE), Pollution and Waste Management (EPW), Forestry and Wildlife Resources Management (EFW), Gender Studies (EWE), Community Environmental Service (CES) and Population and Resource Management (EPR) (Eneji, *et al.*, 2023).

The Lecturers in the Department have not relented in teaching and research to realize the goals and objectives of Environmental Education programme. Unfortunately, the behaviour of the students (undergraduates and post-graduates) still falls below expectation. The central objective of this study is to assess the programme's success in producing graduates capable of addressing environmental challenges and promoting sustainable development. The fundamental question guiding this research is, "To what extent has the Environmental Education programme at the University of Calabar achieved its intended outcome of equipping graduates with the requisite knowledge, skills and attitudes to tackle environmental issues and advance sustainable development?"

Except for the work of Eneji, *et al.* (2023), the crux of the issue is that no previous investigations have been undertaken to evaluate the outcomes of the Environmental Education programme, a matter that aligns with the growing global concern for environmental sustainability. This research therefore becomes indispensable in filling this gap by probing into the programme's effectiveness and its contribution to nurturing environmentally-conscious

professionals poised to champion sustainable development. It is against this backdrop that this study was conceived to consider the evaluation of the products of Environmental Education programme in University of Calabar, Calabar - Cross River State, Nigeria.

Purpose of the study

This study focused on product Evaluation of Environmental Education programme in the University of Calabar, Cross River State, Nigeria. Specifically, this study seeks to;

1. Assess how the study of Environmental Education improved the products' level of awareness on environmental issues.
2. Determine how the study of Environmental Education has assisted the products in the acquisition of basic knowledge related to environmental problems.

Research questions

The following research questions are posed to guide the study

1. How has studying Environmental Education improved graduates' level of environmental awareness?
2. How has studying Environmental Education assisted the products of EE in the acquisition of basic knowledge related to environmental problems?

Research methodology

The research design adopted for the study was correlational research design. The research area is the Department of Environmental Education, University of Calabar, Cross River State, Nigeria which is located in Cross River State, to be precise, Calabar Municipality and Calabar South Local Government Areas. The study population consisted of all the graduates in the Department of Environmental Education from inception of the programme till date (2023). The research subjects include both undergraduate and post graduates graduands. The population comprised of the current sets of postgraduate students in the Department, because most of these Post Graduate students graduated from the Department. Records from the graduation list in the Department of Environmental Education suggest that so far, the Department has graduated about 1689

undergraduate students and about 422 PGDEE and Master's degree students. The Department is yet to graduate their first sets of PhD. It currently has 38 academic staff; most of these Lecturers did some degrees programmes in this Department, so automatically they are also part of the research subjects.

The purposive sampling technique was adopted to select all the programmes (first degree, PGDEE and Master's degree) that have graduated students in the Department. The second stage was the use of proportional sampling technique used to select 30% of the graduates from first-degree, PGDEE and Master's degree programmes. This way, the researcher selected the six hundred and thirty-four respondents across the various programmes needed for this study. The researcher selected 30% of the entire population of the research subjects; in this case, Bachelor's Degree graduates with a population of 1689 persons produced 507 respondents (30%), while for Master's degree graduates with a population of 422 persons produced 127 respondents. In all, the total number of sample for this study was six hundred and thirty-four (634) respondents. The instrument used for data collection for this study is the researcher designed structured questionnaire. The questionnaire was tagged "Product Evaluation of Environmental Education Programme Questionnaire" (PEEEPQ). The instrument was designed using a 4-point Likert scale response options of strongly agree (SA), agree (A), disagree (D) and strongly disagreed (SD). There were 64 items in the questionnaire.

To ensure that the items selected for inclusion in the questionnaire are capable of eliciting relevant responses from the respondents, the researcher presented the designed instrument to the supervisors who are lecturers in Environmental Education and three lecturers in Measurement and Evaluation for content and face validity respectively. To ascertain the reliability of the instrument, 30 copies of the instrument were administered once to the current students of the department of in Environmental Education in the University of Calabar. Data generated from the trial instrument administered were coded and analyzed using the Cronbach Alpha reliability

estimate to determine the internal consistency of the questionnaire. The result of the Cronbach Alpha reliability test ranged between .75 to .87.

Since after graduation, most of the respondents had moved out of Calabar and Cross River State, they are domiciled in different parts of the country, so reaching most of the respondents personally was a herculean task, but with the world of information and communication technology (ICT), Google form was created with the questionnaire and dropped on the Alumni platform. Members on the platform were requested to help download and fill the questionnaire and same submitted by hitting the submit button on the Google page. Those who are within the Department and Calabar, were issued the physical copy of the instruments, fill and same was collected directly at the spot by the researcher and the trained research assistants. To answer the research questions, simple percentage analysis with bar charts were used to present the results

Results and discussions

Research question 1: How does studying environmental education improved graduates' level of environmental awareness in their locality? The question was to evaluate graduates' level of awareness of environmental education in their locality. To answer this research question, item 1-8 of section B of the instrument were analyzed. Frequency counts and bar charts were used to simplify the result. The summary of the result obtained is presented in Table 1.

Results obtained from respondents revealed that, 300 (47.8%) respondents strongly agreed that enough environmental awareness was created during their days as students in the department, 206 which is equivalent to 32.8% said they agreed; while 82 (13.0%) and 40 respondents representing 6.4% said they disagreed and strongly disagreed respective. Responses on the acquisition of environmental awareness knowledge to help advice and solve some environmental problems in the community shows that 218 respondent representing 34.7% said they strongly agreed 302 (48.1%) respondents agreed while 50 (7.9%) and 58 (9.2%) respondents respectively said they disagreed and strongly disagreed.

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Item 3 states; since I left school I have engaged in a lot of environmental awareness campaign individually and with some organizations. On this items, 408 respondents which is equivalent to 64.9% and 200 respondents representing while 15 respondents representing 2.4% and 5 (0.8%) said otherwise. Item 4 which states; in my place of work I carry out different forms of environmental awareness revealed that, 240 respondent representing 38.2% said they have strongly agreed 300 (47.8%) accepted while 60(9.6%) and 28 (4.5%) accepted otherwise.

Table 1: Simple percentage analysis showing responses on studying environmental education to improve environmental awareness (n=628)

S/N	Items	SA (%)	A (%)	D (%)	SD (%)	Total (%)
1.	Enough environmental awareness was created during our days as students in the department	300 (47.8)	206 (32.8)	82 (13.0)	40 (6.4)	628 (100)
2.	I have been using the environmental awareness knowledge/acquired from the department to help advice and solve some environmental problems in my community	218 (34.7)	302 (48.1)	50 (7.9)	58 (9.2)	628 (100)
3.	Since I left school, I have engaged in a lot of environmental awareness campaign individually and with some organization	408 (64.9)	200 (31.8)	15 (2.4)	5 (0.8)	628 (100)
4.	In my place of work I carry our different forms of environmental awareness	240 (38.2)	300 (47.8)	60 (9.6)	28 (4.5)	628 (100)
5.	When I notice environmental issue I draw the attention of the people around including the relevant authorities to act in order to solve such problems	220 (35.0)	208 (33.1)	100 (15.9)	100 (15.9)	628 (100)
6.	Since the government and the people around are not concerned, I ignore any environmental issue I notice around	106 (16.9)	100 (15.9)	300 (47.8)	128 (20.4)	628 (100)
7.	I do my best to checks erosion around my community	295 (46.9)	205 (32.6)	106 (16.9)	22 (3.5)	628 (100)
8.	I have enlightened the youths in my community about the danger of setting bushes ablaze as a form of hunting	400 (63.7)	52 (8.3)	100 (15.9)	76 (12.1)	628 (100)

Item 5 which states; when I notice environmental issues, I draw the attention of the people around, including the relevant authorities to act in order to solve such problems shows that 220 and 208 respondents that is 35.0 % and 33.1% respondents strongly agreed and agreed to the item. On the contrary, 100 respondents representing 15.9% each disagreed and strongly disagreed. In item 6 which states; since the government and the people around are not concerned, I ignore any environmental issue I notice around. On the item, 106 respondents representing 16.9% admitted that they agree; 100 respondent which is equivalent to 15.9% agreed, 300 (47.8%) and 128 (20.4%) of the respondents respectively disagreed and strongly disagreed with this submission.

Item 7 states; I do my best to check erosion around my community. On this item, 295 respondent representing 46.9% strongly agreed. 205 (32.6%) respondents accepted that agree and 106 (16.9%) said they disagree with the item while 22 respondents representing 3.5% strongly disagreed. Item 8 which states; I have enlightened the youths in my community about the danger of setting bushes ablaze as a form of hunting shows that 400 respondents representing 63.7% said they strongly agreed; 52 of the respondents 8.3% said they strongly agreed; 52 of the respondents representing 8.3% said they have agreed while 100 (15.9%) of the respondents disagreed and 76 other respondents representing 12.1% said they strongly disagreed. From the above result, it implies that studying environmental education has significantly improved graduates' level of environmental awareness in their localities. The result was further simplified with the use of bar chart. The above information is represented with bar chart in Figure 1.

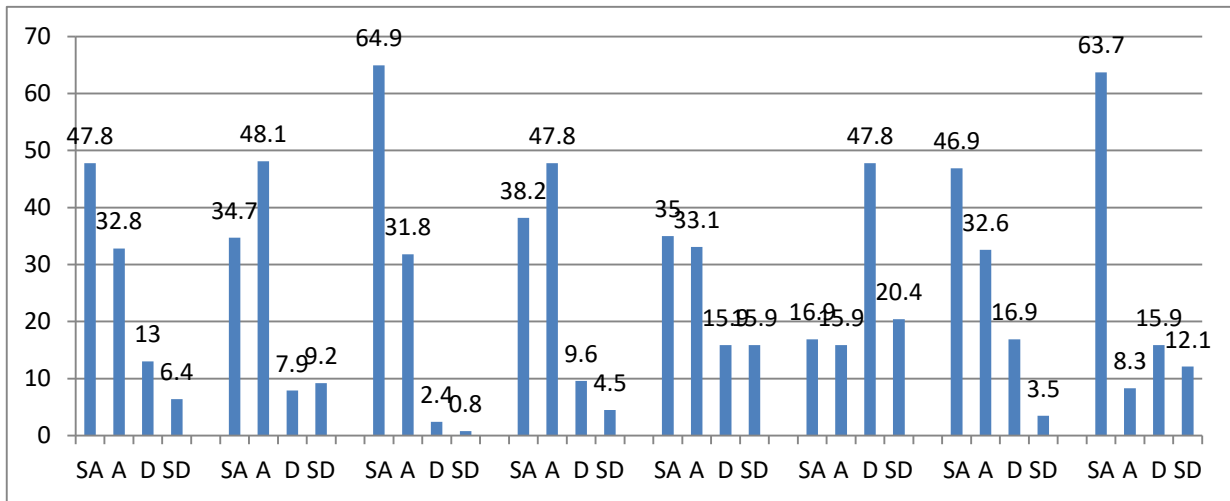


Figure 1: Bar chart showing responses on studying environmental education to improve environmental awareness

Research question 2: How has studying environmental education assisted the products of environmental education in the acquisition of basic knowledge related to environmental problems? This question was to evaluate the depth of basic environmental education knowledge acquired in relations to understanding and solving environmental problems. Statistically, simple percentage analysis was adopted to analyze the data obtained for this question. Frequency counts and bar charts was used to simplify the result. The summary of the result is presented in Table 2.

Table 2: Simple percentage analysis of responses on studying environmental education to acquired basic knowledge related to environmental problems (n=628)

S/N	Items	SA (%)	A (%)	D (%)	SD (%)	Total (%)
1.	Defecating in the bush is a way of enriching the soil for cultivation	176 (28.0)	86 (13.7)	260 (41.4)	106 (16.9)	628 (100)
2.	Using gamalin ²⁰ to fish is dangerous to human health	306 (48.7)	220 (35.0)	52 (8.3)	50 (8.0)	628 (100)
3.	Open toilet is a threat to the environment and human health	428 (68.2)	100 (15.9)	60 (9.6)	40 (6.4)	628 (100)
4.	Living in unhealthy environment can endanger one's health	282 (44.9)	302 (48.1)	4 (0.6)	40 (6.4)	628 (100)
5.	Uncontrolled birth rate is a serious environmental problem	252 (40.1)	204 (32.5)	100 (15.9)	72 (11.5)	628 (100)
6.	Bush burning is a serious threat to	328	180	80	40	628

	the environment	(52.2)	(28.7)	(12.7)	(6.4)	(100)
7.	Climate change is nature's anger on humanity for poor management of the earth	286 (45.5)	200 (31.8)	43 (6.7)	100 (15.9)	628 (100)
8.	Flooding is caused by improper disposal and management of waste	315 (50.2)	182 (29.0)	101 (16.2)	30 (4.8)	628 (100)

Results from responses and analysis shows that 176 respondents which is equivalent to 28.0% strongly agreed that defecating in the bush is a way of enriching the soil for cultivation and 86(13.7%) said they have agreed. On the contrary, 260 respondents which is equivalent to 41.4% said they have disagreed while 106 (16.9%) of the respondents strongly disagreed. In item 2, 306 (48.7%) of the respondents strongly agreed that using Gamalin²⁰ to fish is dangerous to human health; 220 (35.0%) of the respondents agreed to the submission while 52 respondents representing 8.3% and 50 respondents representing 8.0% represents those that disagreed and strongly disagreed.

In item 3, which states that open toilet is a threat to the environment and human health; 428 respondents representing 68.2% strongly agreed; 100 (15.9%) of the respondents said they have agreed while 60 (9.6%) of the respondents and 40 (6.4%) respectively said otherwise. Item 4 states that living in unhealthy environment can endanger one's health. On this item, 282 respondents which is equivalent to 44.9% said they strongly agreed, 302 (48.1%) of the respondents said they have agreed and 4(0.6%) and 40 (6.4%) accepted otherwise.

Responses on item 5 reveals that 252 respondents that is (40.1%) of the respondents strongly agreed that uncontrolled birth rate is a serious environmental problem; 204 respondents representing 32.5% said they have agreed to this perception while 100 (15.9%) disagreed and 72 respondents representing 11.5% said they strongly disagreed. Similarly, item 6 which states that bush burning is a serious threat to the environment had the following responses. A total of 328 respondents representing 52.2% strongly perceived this to be true; 180 (28.7%) of the

respondents said they have agreed and 80 respondents representing 12.7% disagreed with this perception while 40 (6.4%) of the respondents strongly disagreed to this perception.

Item 7 states that, climate change is nature’s anger on humanity for poor management of the earth. On this item, a significant proportion of 286 respondents representing 45.5% strongly agreed with this perception, 200 (31.8%) said they have agreed and 42 respondents representing 6.7% and 100 respondents which is equivalent to 15.9% said they disagreed and strongly disagreed. The implication of this result is that the study of environmental education is relevant to the acquisition of basic knowledge related to the understanding of environmental problems which will help to reduce if not eliminate environmental problems. The above information is further presented in a bar chart in Figure 2.

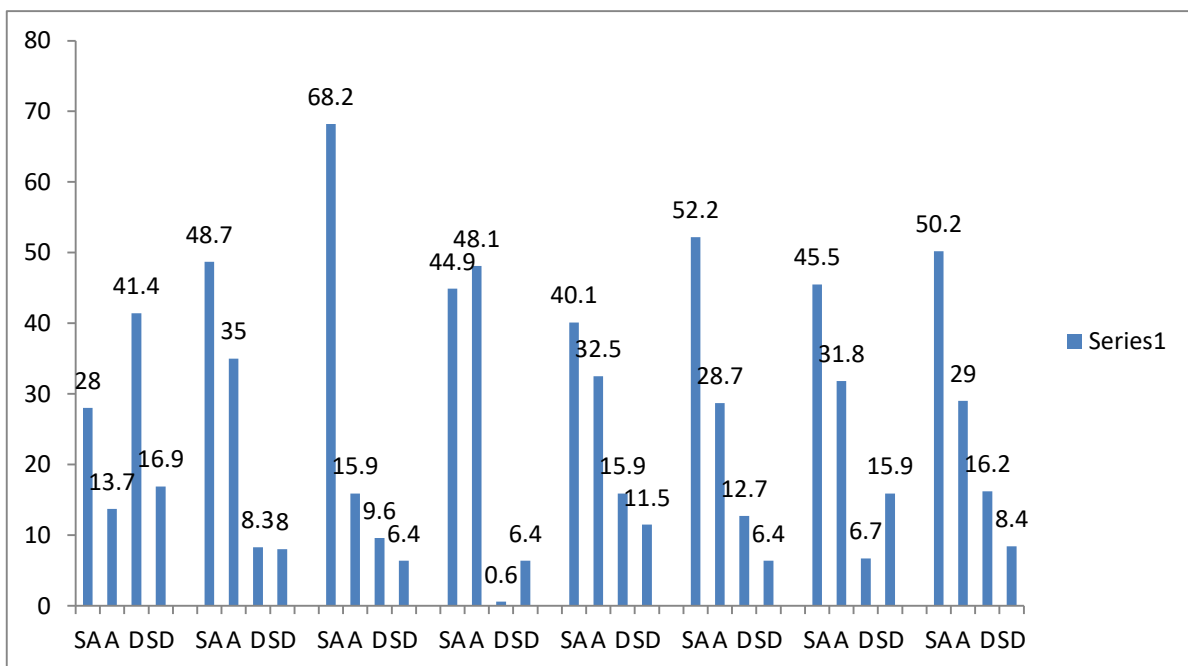


Figure 2: Bar chart showing responses on studying environmental education to acquired basic knowledge related to environmental problems

Discussion

Result from data analysis of research question one revealed that, Environmental Education Programme in the University of Calabar has increased students’ awareness level on environmental issues. The outcome of this result could be based on the respondents’ understanding and knowledge on the items provided in the instrument. The result of the finding

of this study is in line with the findings of Anijah-Obi, et al. (2013) who conducted a study on Environmental Education for public awareness: The role of educational administrators and planners. The work argued that the unique position of the educational system as the initiator and executor of educational policies has made it compelling for educational administrators and planners to champion the effective implementation of Environmental Education as a strategy for improving public awareness, environmental quality and hopefully propel sustainable development in Nigeria. The objectives of this paper therefore are four-fold: to present where we are in terms of policy issues, what the challenges and opportunities are, what we should be doing and the role of educational planners. The paper concludes that Environmental Education and the education process should assume a position of prominence and importance if the goal of sustainable development is to be achieved and stressed the need to urgently embrace the “green curriculum” and mainstream environment in education at all levels.

The finding is in line with that of Berezi (2021) who assessed secondary school teachers and students’ Environmental Education awareness and practice in Delta State, Nigeria. This study aimed to ascertain the level of awareness and practice of Environmental Education among secondary school students and teachers in Delta State. The of this study result revealed that, Environmental Education has increased students’ awareness on environmental issues. Based on the result of the findings it was recommended among others that strategies be put in place to strengthen environmental education awareness creation.

Result from data obtained from items provided for research question two revealed that, Environmental Education Programme has significantly helped students in the acquisition of basic knowledge related to environmental problems. The outcome of this result could be based on the fact that the knowledge of E.E has provided the students who are respondents of this study the requisite knowledge and basic skills related to environmental problems, hence the result. The finding of this study is in agreement with the findings of Babalola and Olawuyi (2021) whose work on advancing Environmental Education for sustainable development in higher education in

Nigeria: Current challenges and future directions. The important roles of Environmental Education (EE) as a tool for advancing the United Nations Sustainable Development Goals (SDGs) have been clearly identified in national policy visions and guidelines in Nigeria. Despite this increasing recognition however, the implementation and delivery of EE programmes remain adversely impacted by a wide range of practical implementation challenges. While a number of existing studies have compiled the importance of EE for advancing the SDGs, a detailed examination of the law and governance challenges that limit the implementation of EE programmes in Nigeria has remained absent.

Conclusion

Based on the results obtained from the study the researcher concludes that environmental education programme has played significant role in students awareness of environmental issues, acquisition of basic knowledge related to environmental problems, adherence to environmental policies and regulations; attitude towards environmental sustainability and students' motivation to participate in the protection of the environment and environmental education programme and students' development of necessary skills to identify and solve environmental problems.

Recommendations

The following recommendations are outlined:

1. There is need to improve environmental education programme to increase products level of awareness on environmental issues.
2. Adequate effort must be put in place to assist products of environmental education programme in the acquisition of basic knowledge related to environmental problems.
3. Adequate effort must be put in place to ensure that environmental education programme bring about change in attitude towards environmental sustainability.

4. There is need to ensure that environmental education programme is indepth and thorough to assist products in adherence to environmental policies and regulations.

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