

**Sustainability Education and Sustainability Behaviours among Social Studies
Undergraduates in University of Calabar, Calabar, Nigeria**
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Abstract

This study investigates sustainability education and sustainability behaviours of Social Studies undergraduate in the University of Calabar, Calabar, Nigeria. Four research questions and one null hypothesis guided the study. A descriptive survey design was adopted. The population of the study comprised 30 undergraduates (10 male and 20 female) from the Department of Social Studies and Civic Education, University of Calabar, Calabar, Nigeria. The census sampling technique was used since the population is small and manageable. A 20-item instrument titled 'Educational Sustainability Awareness and Behaviour Questionnaire (ESABQ) was used in collecting data for the study. Research questions were answered using mean and standard deviation. While independent t-test was used to test the null hypothesis at .05 level of significance. Findings reveal that sustainability education level, sustainability behaviour awareness level and sustainability behaviour practices were all to a high extent enhanced by sustainability education among Social Studies Undergraduate. The result also revealed that male undergraduates were better in sustainability practices than their female counterparts. The study recommended among others that interventions, curriculum reinforcement, practical learning experiences, and community engagement initiatives to bridge the gap between knowledge and action be put in place by relevant stakeholders.

Keywords: Sustainability education, Social Studies, undergraduate behaviour, University of Calabar, Nigeria, sustainable development, environmental literacy.

Introduction

In recent years, the global urgency for environmental stewardship has intensified in no small measure. This has prompted many academic institutions across the world to incorporate sustainability into curricula. Nigeria, facing multiple sustainability challenges including deforestation, pollution, waste mismanagement, climate vulnerabilities, etc., needs the

empowerment of its youth, particularly university undergraduates, to promote sustainable behaviours. As future educators and community influencers, Social Studies undergraduates at the University of Calabar represent a critical demographic in embedding sustainable practices in society. This is because their good grasp of the social media could serve a very good leverage in carrying their peers and others in different locations within and even outside Nigeria along in advocating for the imbibing of sustainable behaviours that could save the fast-dying world. Sustainability education plays a pivotal role in transforming students' attitudes and behaviours towards environmental conservation. Research indicates that exposure to sustainability education significantly enhances environmental awareness, promotes positive attitudinal shifts, and encourages participation in eco-friendly activities (Gupta et al., 2024; Fernández et al., 2023). For instance, environmental education programmes have been shown to increase recycling, energy conservation, and the reduction of plastic waste among students (Gupta et al., 2024). These findings suggest that integrating sustainability education into the curriculum can have a profound impact on the practical behaviours of Social Studies undergraduates in the University of Calabar.

Sustainability education, aligns with the United Nations Sustainable Development Goals (SDGs), particularly SDG 4 (Quality Education) and SDG 13 (Climate Action), aims to equip learners with the knowledge, skills, values, and attitudes necessary to act for sustainable development. However, the researcher from personal perceives a persistent gap exists between theoretical knowledge and practical application among students in Nigerian universities. This is one key gap this study will address.

This study aims to explore how sustainability education influences the sustainability behaviours of Social Studies undergraduate in the University of Calabar. This is with a view to providing insights for curriculum developers, educators, and policymakers to enhance education for sustainable development (ESD) within higher education.

Purpose of the study

The purpose of this study is to explore the influence of sustainability education on sustainability behaviours among Social Studies Undergraduates in University of Calabar, Calabar, Nigeria. Specifically, the seeks to ascertain:

1. The level of sustainability education awareness among Social Studies undergraduates.
2. The level of sustainability behaviours awareness among Social Studies undergraduates
3. The level of sustainability behaviours practices among Social Studies undergraduates
4. The extent to which gender influence sustainability behaviour practices among Social Studies undergraduates.

Statement of problem

The increasing global environmental change largely due to the activities of man in his environment among other factors that can be tied to natural occurrences has informed a lot of research all over the world. While most of these research endeavours aimed at tackling the scourge of global environmental change has concentrated on industrial emissions, exploration/exploitation of natural minerals by man, earthquakes, etc., none to the researcher's knowledge has been done on the current focus of the present study. This study therefore seeks to investigate the role of sustainability education in shaping sustainability behaviours among Social Studies Undergraduates in University of Calabar, Calabar, Nigeria. The study intends to among others provide answers to the question: how does sustainability education shape sustainability behaviours among Social Studies undergraduates?

Literature Review

Sustainability education, as articulated by UNESCO (2023), is an approach to learning that empowers individuals to make informed decisions and responsible actions for environmental integrity, economic viability, and social justice. It integrates critical thinking, systems thinking, and participatory learning methodologies (Sterling et al., 2023). In the Nigerian context, sustainability education is embedded within Social Studies, Environmental Education, and Citizenship Education curricula (Okonkwo & Ede, 2020). Research has established how sustainability education impacts on sustainability attitudes and behaviours in several nations of the world particularly within school settings. For instance, Yusliza et al. (2020) investigated pro-environmental behaviour and sustainable development in Malaysia. The authors examined the interplay between environmental commitment, consciousness, lifestyle, and self-efficacy in promoting pro-environmental behaviour, particularly in an educational setting in Malaysia. The study reported that environmental commitment, environmental consciousness, green lifestyle, and green self-efficacy all have a positive impact on pro-environmental behaviour among students. This suggests that fostering these attributes can lead to more environmentally friendly actions in educational settings. Attributes such as environmental commitment, environmental consciousness, green lifestyle, and green self-efficacy highlighted in this reviewed work can only be seen in lives that in a way or the other have been impacted by sustainability education. This is what this current study is canvassing for.

In another study, Yasir et al. (2021) explored the Impact of Environmental, Social Values and the Consideration of Future Consequences for the Development of a Sustainable Entrepreneurial Intention. This study builds upon the theory of planned behaviour, which postulates that intention is a significant predictor of behaviour. The authors modified this theory to include additional constructs relevant to sustainability, thereby enhancing its

applicability in the context of sustainable entrepreneurship. Among others, the results showed that social norms and personal attitudes towards sustainability positively impact students' intentions to engage in sustainable entrepreneurship. This suggests that a supportive social environment and positive attitudes can enhance entrepreneurial intentions. The findings of the reviewed work suggest that educational institutions and practitioners can enhance students' sustainable entrepreneurial intentions by promoting environmental and social values, as well as encouraging a long-term perspective on consequences. This can be achieved through targeted educational programmes and initiatives such as the inclusion of sustainability education in school curriculum.

In a similar vein, Zhang and Cao (2025) examined the psychological mechanisms of education for sustainable development: environmental attitudes, self-efficacy, and social norms as mediators of pro-environmental behavior among university students. The study confirmed that the effects of ESD on pro-environmental behaviour were fully mediated by environmental attitudes, self-efficacy, and social norms. This means that ESD's effectiveness is contingent upon its ability to positively influence students' environmental attitudes, enhance their self-efficacy, and foster supportive social norms. The findings Zhang and Cao's study underscore the importance of targeting these psychological pathways (environmental attitudes, self-efficacy, and social norms) in the design and implementation of sustainability education programmes. This is because, by focusing on transforming attitudes, building self-efficacy, and creating supportive social environments, educators and policymakers can enhance the effectiveness of ESD initiatives in higher education settings.

Gupta et al., (2024) assessed the influence of environmental education on college students' behavioural attitudes towards sustainability. The authors explored the critical role of environmental education (EE) in shaping students' attitudes and behaviours regarding sustainability. The paper emphasizes that EE is fundamental for promoting sustainable development. It provides individuals with essential knowledge, values, and skills to tackle environmental issues effectively. The study specifically investigated how EE influences college students' awareness and behaviours related to sustainability. It aims to understand the impact of EE programmes on students' attitudes and their engagement in sustainable practices. The result indicated that students who participate in EE programmes show significantly higher levels of environmental awareness and a stronger commitment to sustainability compared to those who do not engage in such programmes. This suggests that EE can effectively enhance students' understanding of environmental issues. This result contributes valuable insights into how educational strategies can be optimized to promote sustainable behaviors among students, ultimately supporting broader environmental goals. The

relatedness of the reviewed work to the present study lies in the pivotal role EE plays in the understanding of sustainability education.

Fernández et al. (2023) carried out an Analysis of the Ecological Attitude and Sustainable Behaviour of Students: A Green Campus Model, the Case of the University of Medellín, Colombia. The study explored the intersection of environmental education and students' behaviour in higher education. The paper underlines the critical role of environmental education/sustainability education in higher education institutions. It suggests that such education fosters an understanding of sustainability, which positively impacts students' ecological attitudes and behaviours. This aligns with the broader literature that highlights the importance of integrating sustainability into educational curricula to promote responsible environmental stewardship. The research indicated that the influence of environmental education/ sustainability education extends beyond academic settings. Students who engage in these programmes are inspired to adopt environmentally responsible behaviours in their daily lives. This finding is consistent with existing studies that show how educational initiatives can lead to long-term changes in behaviour and attitudes towards the environment. Čapienė et al. (2024) examined “consumer engagement in sustainable consumption: do demographics matter?”. The authors explored various dimensions of sustainable consumption behaviour, particularly focusing on how demographic factors influence pro-environmental and pro-social engagement. They considered the importance of personal characteristics such as age, gender, financial situation, and education level in shaping sustainable consumption behaviours. It highlights that these factors can significantly affect how individuals engage with pro-environmental and pro-social issues. Among others, the findings indicate that women tend to show greater concern for pro-environmental and pro-social issues compared to men. Women are influenced by factors such as pro-environmental commitment, biospheric values, personal norms, and perceived responsibility. In contrast, men are more influenced by egoistic values, self-efficacy, social norms, and attachment to place.

From the foregoing review, it can be deduced that the existing literature are very foreign to the location, subject and population of the present study. This is the gap this study seeks to address.

Research questions

The following research questions were posed for the study:

1. What is your level of awareness about sustainability education?
2. To what extent are you aware of sustainability behaviours?
3. To what extent do you practice sustainability behaviours?

4. To what extent does gender influence sustainability behaviours among Social Studies undergraduates?

Statement of hypotheses

The following null hypothesis was formulated for the study:

Hypothesis 1: Undergraduates' gender does not significantly influence sustainability behaviours among Social Studies undergraduates.

Methodology

This study adopted a descriptive survey design. The study was carried out in the University of Calabar, Calabar, Nigeria. The sample for the study consisted of 30 undergraduates drawn from the Department of Social Studies and Civic Education. The study adopted the census sampling technique since the population size is small and can be conveniently handled by the researcher. This is in line with Okoli and Ifeakor (2011), Etikan et al. (2016), and Mujere (2016), who averred that where the study population is small, the entire population can be used as a sample. A 10-item instrument titled 'Environmental Sustainability Behaviour Questionnaire (ESBQ), developed by the researcher was used in collecting data for the study. The instrument was a four-point scale of Very High Extent (VHE), High Extent (HE), Low Extent (LE) and Very Low Extent (VLE) with values 4, 3, 2, and 1 respectively was used. The instrument was face validated by an expert in Educational Measurement and Evaluation, one from Environmental Education and one from Education Geography/Sustainable Development Studies. Research questions were answered using mean and standard deviation. responses from Social Studies undergraduate students at the University of Calabar. The reliability of the instrument was established using the test-retest procedure. Data obtained from the two administrations were correlated using Pearson Product Moment Correlation which yielded a coefficient of 0.75. Research questions were answered using mean and standard deviation. While independent t-test was used to test the null hypothesis at .05 level of significance. The real limit of numbers 0.05-1.49 (VLE), 1.50-2.49 (LE), 2.50-3.49 (HE), 3.50 and above (VHE), guided the decision rule taken while answering the research questions. While the null hypothesis was tested at 0.05 level of significance.

Results

Research question 1: What is your level of awareness about sustainability education?

Table 1: Level of awareness about sustainability education

S/n	Item	Mean	SD	Decision
1	I can recall learning about the importance of conserving resources like water and electricity	2.19	0.166	Low Extent

2	I have learnt ways to reduce waste and the impact of single-use plastics	2.83	0.145	High Extent
3	I know the benefits of choosing eco-friendly or sustainably sourced products	2.81	0.162	High Extent
4	I have learnt about recycling and proper waste management	3.03	0.148	High Extent
5	I am aware of the environmental impact of different food choices, such as meat consumption	2.15	0.134	Low Extent
Pooled Mean		2.60	0.151	High Extent

Table 1 reveals that the mean responses in all the items except item 1 and 5 ranged from 2.81-3.03 which indicated a high extent mean response by the real limit of numbers. These implies that they agreed among others that they: have learnt ways to reduce waste and the impact of single-use plastics. The pooled mean of 2.60 which indicated a high extent in the real limit of numbers affirmed that respondents agreed that they have a high extent level of awareness about sustainability education. The pooled standard deviation value of 0.151 indicated that the responses of the respondents are close to the mean and one another.

Research question 2: To what extent are you aware of sustainability behaviours?

Table 2: Extent of awareness of sustainability behaviours

S/N	ITEM	MEAN	SD	DECISION
1	I am aware of turning light off when not in use	2.83	0.173	High Extent
2	I know of taking short showers to conserve water	2.97	0.169	High Extent
3	I am aware of reusable shopping bags and single-use plastic bags	2.18	0.169	Low Extent
4	I know of reusable containers for food and leftovers	2.63	0.155	High Extent
5	I am aware it is good to try to repair items instead of immediately discarding them	2.97	0.122	High Extent
Pooled Mean		2.72	0.152	High Extent

Table 2 indicates that the mean responses in all the items except item 3 ranged from 2.63-2.97 which indicated a high extent mean response by the real limit of numbers. This implies that the respondents agreed among others that they are aware of taking short showers to conserve water. The pooled mean of 2.72 which indicated a high extent in the real limit of

numbers affirmed that respondents agreed that they have a high extent level of awareness about sustainability behaviours. The pooled standard deviation value of 0.152 indicated that the responses of the respondents are close to the mean and one another.

Research question 3: To what extent do you practice sustainability behaviours?

Table 3: Extent of practice of sustainability behaviours

S/N	ITEM: Resource Conservation (Water & Electricity)	MEAN	SD	DECISION
1	I often turn off lights when I leave a room	2.73	0.151	High Extent
2	frequently I take short showers to conserve water	2.76	0.171	High Extent
3	I often turn off the tap while brushing my teeth or washing dishes	3.09	0.159	High Extent
4	I frequently unplug electronic devices when they are not in use (e.g., phone chargers, TVs)	1.57	0.135	Very Low Extent
5	I often choose energy-efficient settings on appliances (e.g., washing machine, air conditioner)	3.13	0.142	High Extent
Pooled Mean		2.66	0.152	High Extent
ITEM: Waste Reduction				
6	I often use reusable shopping bags instead of single-use plastic bags	3.11	0.188	High Extent
7	I frequently use a reusable water bottle instead of disposable plastic bottles	2.82	0.176	High Extent
8	I often use reusable containers for food and leftovers	2.53	0.157	High Extent
9	I frequently products with excessive or unnecessary packaging	2.64	0.124	High Extent
10	I often try to repair items instead of immediately discarding them	2.87	0.104	High Extent
Pooled Mean		2.79	0.150	High Extent

Table 3 indicates that the mean responses in all the items except item 4 ranged from 2.53-3.13 which indicated a high extent mean response by the real limit of numbers. This implies that the respondents agreed among others that they often turn off lights when leaving their rooms to conserve light; as well as often use reusable shopping bags instead of single-use plastic bags in order to reduce waste. The pooled mean of 2.66 and 2.79 which indicated a

high extent in the real limit of numbers affirmed that respondents agreed that to a high extent they practice sustainability behaviours. The pooled standard deviation value of 0.152 and 0.150 indicated that the responses of the respondents are close to the mean and one another.

Ho: Undergraduates' gender does not significantly influence sustainability behaviours among Social Studies undergraduates. The independent t-test analysis of responses of respondents on the above hypothesis is presented in Table 4.

Table 4: Independent t-test analysis of the influence of gender on sustainability behaviours among Social Studies undergraduates (N=30).

Gender	N	\bar{X}	SD	Df	t-value	p-value	Remark
Male	10	17.39	1.58		28	2.77	0.003
Female	20	17.14	1.49				Significant

Table 4 shows the p-value of .003 which is less than 0.05 level of significance. This implies that the null hypothesis was rejected. Therefore, Undergraduates' gender does significantly influence sustainability behaviours among Social Studies undergraduates.

Discussion

The findings shows that sustainability education enhances sustainability behaviours among Social Studies undergraduates. This finding aligns with Fernández et al. (2023) whose findings disclosed that environmental education nurtures an understanding of sustainability, which positively impacts students' ecological attitudes and behaviours. Adding that students who engage in educational programmes that emphasize sustainability are inspired to adopt environmentally responsible behaviours in their daily lives. Also, the result shows that undergraduates' gender does significantly influence sustainability behaviours among Social Studies undergraduates. This result is in agreement with Čapienė et al. (2024) whose findings indicated that women tend to show greater concern for pro-environmental and pro-social issues compared to men. Adding that women are influenced by factors such as pro-environmental commitment, biospheric values, personal norms, and perceived responsibility. In contrast, men are more influenced by egoistic values, self-efficacy, social norms, and attachment to place.

Recommendations

The following recommendations were made:

1. Curriculum Enhancement: Integrate practical sustainability projects into Social Studies courses, such as campus greening initiatives.

2. Infrastructure Improvement: Provide accessible recycling points and energy-efficient facilities across the university.
3. Student Empowerment: Establish student-led sustainability clubs with institutional backing.
4. Faculty Training: Regular workshops for lecturers on participatory teaching methods for sustainability.
5. Community Partnerships: Collaborate with local NGOs to extend sustainability campaigns beyond campus.

Conclusion

This study underscores the pivotal role of sustainability education in shaping students' sustainability behaviours. Among Social Studies undergraduates in the University of Calabar, while awareness is commendable, behavioural practices require reinforcement through institutional and experiential interventions. By addressing infrastructural barriers, enhancing curriculum delivery, and fostering student leadership, the university can cultivate a culture of sustainability that extends beyond the classroom into community and future professional life. The research affirms the importance of continuous monitoring and iterative improvements to ensure that sustainability education translates effectively into sustainable behaviour among university students.

References

Ari, E. & Yilmaz, V. (2017). Effects of environmental illiteracy and environmental awareness among middle school students on environmental behavior. *Environ. Dev. Sustain.*, 19, 1779–1793.

Blok, V.; Wesselink, R.; Studynka, O. & Kemp, R. (2015). Encouraging sustainability in the workplace: A survey on the pro-environmental behaviour of university employees. *J. Clean. Prod.*, 106, 55–67.

Čapienė, A., Rūtelionė, A., & Adamonienė, R. (2024). Consumer engagement in sustainable consumption: do demographics matter? *Engineering Management in Production and Services*, 16(2), 90–103. <https://doi.org/10.2478/emj-2024-0015>

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1–4.

Fernández, Y. L., López, S. M., Delgado-Gómez, D. L., & Sánchez-Torres, J. A. (2023). *Analysis of the Ecological Attitude and Sustainable Behavior of Students: A Green Campus Model, the Case of the University of Medellín, Colombia*. <https://doi.org/10.2478/jtes-2023-0014>

Gupta, M., Samrutwar, A. M., Rahandale, A. M., & Edlabadkar, A. A. (2024). The Influence of Environmental Education on College Students' behavioural Attitudes towards Sustainability. *Journal of Learning and Educational Policy*, 46, 48–58. <https://doi.org/10.55529/jlep.46.48.58>

Mujere, N. (2016). Sampling in research. In *Mixed methods research for improved scientific study* (pp. 107–121). IGI Global.

Okoli, J. N., & Ifeakor, A. C. (2011). Appraisal of utilization of E-learning technology in science teacher's preparation: A study of universities in southeast Nigeria. *Orient Journal of Education*, 6(1 & 2), 136–144.

Olawale, B. T., & Abubakar, A. M. (2022). University students' sustainable behavior in Nigeria: Predictors and barriers. *Sustainability*, 14(3), 1482. <https://doi.org/10.3390/su14031482>

Sterling, S., Dawson, J., & Warwick, P. (2023). Transforming sustainability education: A pedagogical framework. *Higher Education for Sustainability*, 8(1), 10–28. <https://doi.org/10.1007/s10734-023-00976-w>

Ugwoke, S. C., Agbo, S. N., & Nwafor, C. E. (2023). Participatory pedagogies and student sustainability behavior in Nigeria. *Journal of Educational Sustainability*, 5(2), 67–84. <https://doi.org/10.1177/09732586231176324>

UNEP. (2024). Emissions gap report 2024. United Nations Environment Programme. <https://www.unep.org/resources/emissions-gap-report-2024>

UNESCO. (2023). Education for sustainable development: Learning objectives. Paris: UNESCO Publishing. <https://unesdoc.unesco.org/ark:/48223/pf0000247444>

Yasir, N., Mahmood, N., Mehmood, H. S., Babar, M., Irfan, M., & Liren, A. (2021). Impact of Environmental, Social Values and the Consideration of Future Consequences for the Development of a Sustainable Entrepreneurial Intention. *Sustainability*, 13(5), 2648. <https://doi.org/10.3390/su13052648>

Yusliza, M. Y., Amirudin, A., Rahadi, R. A., Nik Sarah Athirah, N. A., Ramayah, T., Muhammad, Z., Dal Mas, F., Massaro, M., Saputra, J., & Mokhlis, S. (2020). An Investigation of Pro-Environmental Behaviour and Sustainable Development in Malaysia. *Sustainability*, 12(17), 7083. <https://doi.org/10.3390/su12177083>

Zhang, J., & Cao, A. (2025). The Psychological Mechanisms of Education for Sustainable Development: Environmental Attitudes, Self-Efficacy, and Social Norms as Mediators of Pro-Environmental Behavior Among University Students. *Sustainability*, 17(3), 933. <https://doi.org/10.3390/su17030933>