

STIMULATING GREEN ENTREPRENEURIAL INTENTIONS: CAN ENTREPRENEURSHIP EDUCATION MAKE A DIFFERENCE?

Ogunbekun Halimat Modupe Ph.D.

<https://orcid.org/0000-0002-7046-3663>

Department of Partnership and Assessments

Lagos State Scholarship Board

haliiklass80@gmail.com

Lawal Abdulazeez Abioye Ph.D

<https://orcid.org/0000-0001-6285-6304>

Department of Business Administration and Management

College of Applied Social Sciences,

Lagos State University of Science and Technology, Nigeria

alhajilawal2000@yahoo.com

&

Adebakin, Moruf Akanni Ph.D.

<https://orcid.org/0000-0001-5142-0820>

Department of Business Administration and Management

Yaba College of Technology, Lagos, Nigeria

moruf.adebakin@yabatech.edu.ng

Abstract

This study aims to examine the relationship between green entrepreneurship education (GEE) and green entrepreneurial intentions (GEIs) amongst undergraduates in selected Lagos State tertiary institutions (HEIs). A quantitative cross-sectional survey was used in this study, with data collected through an online self-administered questionnaire targeting final-year students from five purposely selected public and private higher education institutions in Lagos State. The Green Entrepreneurial Intentions Questionnaire (GEIQ) was used to collect data on GEE and undergraduates' intentions to establish green businesses. The results showed that GEE has a positive and significant effect on undergraduates' attitudes to GE with ($r = 0.704$; $t\text{-stat} = 30.600$; $p < 0.05$). The study's findings offer valuable insights for policy interventions aimed at promoting green entrepreneurs in Nigeria, aligning with sustainable development goals, and supporting the Lagos State Climate Action Plan (LASG CAP 2020-2025) by empowering undergraduates as drivers of change through academia.

Keywords: *Green entrepreneurship education, Green entrepreneurial intentions, Attitudes, Subjective norms, Perceived Behavioral Control*

Introduction

Background of the Study:

The increasing urgency of responding to environmental challenges such as climate change and global warming has increased the need for innovative solutions to promote sustainability. The management of environmental crises and the promotion of sustainable development are global priorities. Challenges such as climate change and global warming require innovative strategies (Santika et al., 2022). Entrepreneurship education plays an important role in promoting green entrepreneurial intentions by equipping ambitious entrepreneurs with the skills they need to address ecological issues. Through practical training, mentoring, and exposure to green business opportunities, entrepreneurship education promotes innovative solutions for climate mitigation. Green entrepreneurship (GE) integrates sustainable practices into business activities to combat environmental degradation and promote economic growth and environmental sustainability (Ediagbonya, 2023). Governments, policymakers, and higher education institutions (HEIs) are crucial to stimulating green business ideas (Santika et al., 2022). HEI students are exposed to the necessary skills and are often targeted for this stimulation.

In Lagos State, government efforts to tackle climate change, carbon emissions, and waste management highlight academia's role in driving green initiatives (LASG CAP 2020-2025). Factors like green entrepreneurship education (GEE), social norms, values, and environmental awareness contribute to

sustaining green entrepreneurial intentions (Shabeeb Ali et al., 2023).

In Nigeria, where environmental issues and a growing youth population intersect, HEIs recognize the need to cultivate job creators addressing socio-economic and environmental challenges (Okolie et al., 2021). Though entrepreneurship education is now mandatory, its effectiveness in tackling environmental problems remains largely unexplored (Achi, 2023).

Statement of the Problem:

Green entrepreneurship (GE) has garnered attention for its role in promoting biodiversity, economic growth, social benefits, and reducing environmental degradation (Yi, 2020). Many countries are adopting GE to protect the environment. However, despite its global appeal, several barriers hinder its successful implementation, including limited knowledge of green entrepreneurship education (GEE) and a lack of specialized educational resources. This contributes to slow growth in green entrepreneurial intentions (GEIs). Studies on the factors influencing GEIs have produced mixed results, with some showing a positive impact of GEE, while others highlight negative effects, suggesting that factors affecting GEIs vary by context.

Higher education institutions (HEIs) significantly promote sustainable development through innovative solutions to environmental challenges. HEIs partners in the knowledge-based economy by training future green entrepreneurs (Amankwah & Sesen, 2021). HEI students, who are in a critical career decision-making phase, need environmental education to prepare them for future challenges. Effectively stimulating GEIs in HEIs requires integrating GEE into traditional entrepreneurship education and providing the right tools for success.

Despite efforts to incorporate entrepreneurship education in Nigerian HEIs, gaps remain in fostering GEIs. Centers for Entrepreneurship Development (CED) face obstacles that limit their ability to inspire students to pursue green business ventures. This research aims to analyze these gaps, evaluate GEE's effectiveness in promoting GEIs, and propose strategies to cultivate green entrepreneurs in line with Nigeria's sustainable development goals.

Objectives of the Research and Research Questions:

The main purpose of this study is to examine the relationship between GEE and GEIs amongst

undergraduates in selected Lagos State tertiary institutions. The specific objectives are to:

- i. Examine the effect of GEE on undergraduates' attitudes towards GE
- ii. Investigate the effect of GEE on undergraduates' subjective norms towards GE
- iii. Assess the effect of GEE on undergraduates' perceived behavioral control towards GE

To achieve these objectives, the following research questions were addressed:

- i. Does GEE affect undergraduates' attitudes towards GEIs in Nigerian HEIs?
- ii. How does exposure to a GEE module influence undergraduates' subjective norms towards GE?
- iii. To what extent does EE affect the perceived behavioral control of undergraduates in Nigerian HEIs'?

Significance of the Study

This study focuses on selected tertiary institutions in Lagos State, the commercial hub of Nigeria where entrepreneurial activities are concentrated. Lagos' exposure to green opportunities, combined with its vulnerability to environmental degradation and the government's efforts to address these challenges, makes it an ideal location for this research. The survey targets final-year students from five Federal, State, and Private HEIs in Lagos, though findings are limited to these institutions. The study evaluates how well HEIs integrate green entrepreneurship (GE) principles into their educational frameworks.

The significance of this study is threefold. First, it contributes to the growing body of knowledge on green entrepreneurship education (GEE) and green entrepreneurial intentions (GEIs), areas that remain under-researched. Second, it provides empirical support for incorporating GEE into HEI curricula. Finally, the study's findings offer valuable insights for policy interventions aimed at promoting GEIs across HEIs, aligning with sustainable development goals and supporting the Lagos State Climate Action Plan (LASG CAP 2020-2025) by empowering undergraduates as drivers of change through academia.

Literature Review:

Theoretical Framework

This study is premised upon two major theories namely: the theory of planned behaviour; and the human capital theory. The Theory of Planned Behavior (TPB) by Ajzen (1991) explains that entrepreneurial intentions are shaped by three key factors: attitude toward the behavior, subjective

norms, and perceived behavioral control. In the context of green entrepreneurship, individuals' positive or negative views on sustainable business practices, social influences from family or peers, and their perceived ability to successfully start and manage a green business all contribute to their green entrepreneurial intentions (GEIs). Studies applying TPB, including those focused on environmental entrepreneurship, show that these factors collectively influence the likelihood of individuals engaging in green entrepreneurship (Shabeeb Ali et al., 2023).

Human Capital Theory (HCT), as introduced by Becker (1964), emphasizes the importance of education and skill development in enhancing individuals' productivity and entrepreneurial capabilities. Green entrepreneurship education (GEE) equips students with the knowledge and skills necessary to establish environmentally sustainable businesses. HCT suggests that by investing in GEE, students are more likely to develop GEIs, as education enhances their ability to identify opportunities in the green economy and implement sustainable business practices (Amankwah & Sesen, 2021). This theory highlights the value of entrepreneurship education in fostering green entrepreneurship, contributing to both individual success and environmental sustainability.

Conceptual Review

The concept of green entrepreneurial intentions (GEIs) refers to an individual's desire to start a business that not only seeks economic gain but also incorporates environmentally sustainable practices (Ediagbonya, 2023). Stimulating GEIs is a critical pathway for addressing environmental challenges like climate change and resource depletion. Entrepreneurship education (EE) plays a vital role in this process by equipping students with the necessary skills, knowledge, and mindset to engage in green entrepreneurship (Santika et al., 2022). This conceptual framework explores the relationship between EE and GEIs, analyzing how educational interventions can foster green entrepreneurial initiatives among students in higher education institutions (HEIs).

The conceptual model for this study integrates the Theory of Planned Behavior (TPB) with Green Entrepreneurship Education (GEE) to explore how entrepreneurship education influences green entrepreneurial intentions (GEIs). It suggests that exposure to general entrepreneurship education (EE) provides foundational knowledge, while GEE specifically fosters awareness and appreciation for

sustainability-focused business practices (Okolie et al., 2021). The model hypothesizes that GEE enhances students' attitudes toward green entrepreneurship by demonstrating its environmental, social, and economic benefits, thereby increasing the likelihood of developing GEIs (Yi, 2020).

The model also incorporates subjective norms and perceived behavioral control, which are key components of TPB. Social influences, such as peer and mentor encouragement, shape students' intentions by creating a supportive culture around green entrepreneurship in higher education institutions (HEIs) (Belz & Binder, 2017). Additionally, GEE enhances students' perceived behavioral control by providing resources, training, and opportunities that build confidence in their ability to start green businesses (Santika et al., 2022). External factors like government policies, societal support, and funding opportunities further influence GEIs, with initiatives like the Lagos State Climate Action Plan (LASG CAP 2020-2025) serving as critical stimuli for fostering green entrepreneurial activities (Ediagbonya et al., 2022).

Entrepreneurship Education (EE) affects planned behavior such as green GEIs and behavior. EE is usually described in terms of four fundamental components: know-what, know-why, know-who, and know-how which are important in developing students' entrepreneurial attitudes and intentions (Sun et al., 2017). Know-what refers to entrepreneurial concepts and knowledge; Know-why refers to the values and motives for starting entrepreneurship; Know-who refers to social interactions, namely interactions with teachers, successful entrepreneurs, or experts in the field of entrepreneurship research; and Know-how refers to the abilities, techniques, and skills needed to create one's own business. All these are important components for developing students' entrepreneurial attitudes and intentions (Zhang et al., 2019). The primary goal of EE is to provide students with the necessary skills and knowledge to identify and exploit entrepreneurial opportunities. EE is more effective in promoting entrepreneurial intentions and behavior than other forms of training, such as internships or apprenticeships (Krueger, 1993). EE positively affects entrepreneurial intentions and increases the likelihood of starting their businesses. Hoang et al., (2020) considered EE as an important factor in fostering entrepreneurial attitudes and intentions.

EE can be distinguished from business education. The first prepares students for starting their business; the second equips students with the knowledge to work for others (Martin-Navarro, et.al. 2023). Approaches to EE are usually classified as traditional or innovative. Traditional methods are centered on teachers and include normal conferences, seminars, readings, business plans, case studies, and project work. Innovative methods are centered on students and are more action-oriented. It includes business simulation games, guest speakers, business visits, advice, mentoring, and practical training (Tasnim, 2012).

GEE is a branch of EE that incorporates educational initiatives and programs within business management curricula to solve environmental problems and generate income for sustainable economic development. GEE strategically trains and enlightens individuals, communities, and institutions on the efficacy of GE (Anabaraonye et al., 2022). It teaches students the principles, practices, and challenges of creating and managing business ventures that value environmental sustainability and economic feasibility. GEE disseminates knowledge, skills, and attitudes required by prospective entrepreneurs to identify and exploit sustainable business opportunities, solve environmental problems, and navigate the complexities of sustainable entrepreneurship. (Jabarzadeh et al., 2018).

GEE evolves as a response to 20th-century environmentalism. It attempts to recognize the growing importance of incorporating environmental sustainability into business education, stimulating entrepreneurial intentions, and developing nascent entrepreneurs committed to bringing positive environmental and social change through innovative practices. Mohammad, Namreen, and Mahale (2024) stratified the evolution of GEE into seven phases: Early Roots (1970s-1990s), Emergence of Sustainable Business Programs (2000s), Rise of Green Entrepreneurship Programs (2010s), Integration of Sustainability into Business Curriculum, Expansion of Experiential Learning Opportunities, Globalization and Collaboration and Innovation and Adaptation to the market dynamics.

EIs is a state of mind that directs one's focus, abilities, and activities to start a new business (Bui et al., 2020). GEIs is an individual's intention to become an environmentally friendly entrepreneur. GEIs are important because they represent the first step towards GE. The formation of intentions can be explained by the theory of planned behavior which

assumes that humans always have a purpose in their behavior. The intention to become a green entrepreneur is a planned behavior that can be formed by social marketing in HEIs. Liguoro et al (2020) revealed that sometimes students want to become entrepreneurs, but they do not pursue it as a career due to a lack of support and resources. Therefore, to promote the concept of GE and the importance of implementing green business, HEIs need to provide awareness and support.

Empirical Review and Development of Hypotheses

Research on the effectiveness of entrepreneurship education (EE) in stimulating green entrepreneurial intentions (GEIs) has produced inconsistent results. While some studies have shown that EE positively influences attitudes, subjective norms, and perceived behavioral control, contributing to entrepreneurial intentions (Munir et al., 2019; Paray & Kumar, 2020), gaps remain in understanding its impact on GEIs specifically. Empirical evidence suggests that while EE enhances general entrepreneurial behavior, more research is needed to determine its influence on fostering sustainable, green-focused entrepreneurship among students.

Several studies have highlighted the positive relationship between green entrepreneurship education (GEE) and GEIs. For instance, Mambali et al. (2024) found that GEE enhances students' green entrepreneurial self-efficacy (GESE) and environmental awareness (ENVA), leading to a stronger intention to engage in green entrepreneurship. Shinnar, Hsu, and Powell (2018) also reported that GEE positively influences students' intentions to pursue environmentally sustainable businesses. Similarly, studies in Nigeria, Malaysia, Turkey, and Saudi Arabia have shown that GEE significantly impacts students' GEIs (Mkpado et al., 2020). These findings suggest that GEE provides essential knowledge, skills, and attitudes needed for identifying and pursuing sustainable business opportunities.

The empirical review above highlights the importance of GEE in shaping the composite measure of GEIs. In Nigeria, less attention was paid to the relationship between the three major components of GEIs and GEE, and the current study proposes to fill that gap. In this light, the following hypotheses are proposed:

H₀₁: GEE does not statistically significantly affect undergraduates' attitudes to green entrepreneurship.

H₀₂: There is no statistically significant effect of GEE on undergraduates' subjective norms toward green entrepreneurship

H₀₃: GEE does not statistically significantly affect undergraduates' perceived behavioral control on green entrepreneurship

Methodology

Research Design

A quantitative cross-sectional survey was used in this study, with data collected through an online self-administered questionnaire targeting final-year students from five purposely selected public and private higher education institutions (HEIs) in Lagos State. The choice of Lagos was based on its cosmopolitan nature, diverse population, and status as Nigeria's commercial hub, making it a prime location for studying green entrepreneurship. Lagos, a highly vulnerable coastal state, aims to be Africa's Model Smart City, with environmental sustainability as a key pillar of its "THEMES" Agenda. According to SMEDAN and FOS (2021), 75% of Nigeria's small and medium enterprises (SMEs) are located in Lagos, further supporting its selection for this study. Final-year students were chosen due to their exposure to entrepreneurship education (EE) throughout their academic careers.

Population and Sampling Plan

The population for the study was made up of 23,816 undergraduates of five purposively selected Lagos HEIs comprising: University of Lagos (UNILAG), Lagos State University (LASU), Yaba College of Technology (YABATECH), Lagos State University of Science and Technology (LASUSTECH) former Lagos State Polytechnic (LASPOTTECH), and Pan Atlantic University (PAU). Using the Rasoft Software sample size calculator at a 5% confidence interval, a total of 1407 undergraduates constituted the sample size for the study.

Data Collection and Instruments

The Green Entrepreneurial Intentions Questionnaire (GEIQ) was used to collect data on green entrepreneurship education (GEE) and undergraduates' green entrepreneurial intentions (GEIs). The questionnaire was adapted from three sources (Anghel & Anghel, 2022; Amankwa & Sesan, 2021) and divided into two sections. Section A gathered demographic information, while Section B focused on exposure to GEE programs and measured attitudes toward green entrepreneurship (UAG), subjective norms (USN), and perceived behavioral control (PBC). The 25-item questionnaire used a 5-point Likert scale, ranging from "Strongly

Agree" to "Strongly Disagree," to assess each variable.

Data were collected through an online survey shared via social media platforms and official HEI emails, with research assistants monitoring the process. Of the 1,407 questionnaires distributed through Google Forms, 926 responses (66%) were retrieved for analysis using SmartPLS 3.0. The study adhered to research ethics, ensuring respondent anonymity and obtaining consent through an introductory page in the questionnaire. This quantitative approach allowed for a thorough analysis of final-year students' exposure to GEE and their GEIs, with all necessary ethical considerations observed throughout the process.

Statistical Analysis Methods

The reliability of the Green Entrepreneurial Intentions Questionnaire (GEIQ) was confirmed using Cronbach's alpha, with all values exceeding the 0.70 threshold (Field, 2009). The reliability coefficients for EE, GEI, PBC, UAG, and USN ranged from 0.791 to 0.827, indicating the instrument's consistency. Convergent validity was also confirmed, with average variance extracted (AVE) values above 0.5. Data analysis involved descriptive and inferential statistics, including regression analysis, processed using SmartPLS 3.0. Partial least squares-based structural equation modeling (PLS-SEM) was applied to evaluate relationships among variables, ensuring the precision of path coefficients and enhancing theory formation (Hair et al., 2017).

The construct reliability of GEIQ was established using Cronbach's alpha reliability. The results confirm the reliability of the instrument. All values were above the 0.70 threshold (Field, 2009). The reliability coefficients of 0.827, 0.827, 0.796, 0.791, and 0.823 for EE, GEI, PBC, UAG, and USN respectively suggest that the data are reliable and consistent with acceptable research standards. Subsequently, the convergent validity of the constructs was also verified according to the average variance extracted (AVE), with values above 0.5 in all cases

Results

Diagnostic Tests

These pre-estimation diagnostics include normality, linearity, and Multicollinearity tests.

Normality

The data was analyzed for normality using the Shapiro-Wilk tests, skewness, and kurtosis.

Tabachnik and Fidell (2007) suggest that a non-significant result (sig. value of more than 0.05) indicates normality. On the other hand, a

significance value of .000 suggests a violation of the assumption of normality. The results are presented in Table.1

Table 1: Results of Normality Diagnostic Test

Shapiro-Wilk				
Variables	Statistic	Sig.	Skewness	Kurtosis
Entrepreneurship Education (EE)	.826	.076	-.718	-.384
Undergraduates' Attitudes (UAG)	.836	.056	-.636	-.556
Subjective Norms (USN)	.910	.143	-.733	-.593
Perceived Behavioral Control (PBC)	.935	.532	-.692	-.629
Valid N (listwise)				

Source: Field Survey Results (2023)

Table 1 depicts the normality results of the dependent (undergraduate attitude, subjective norms, perceived behavioral control) and independent variables (GEE). Shapiro-Wilk test was employed. In the Shapiro-Wilk test, the hypothesis is stated in the alternate form. This implies that the variables are significant at $p > 0.05$. The significant values of all the constructs of each of the explanatory variables were greater than 0.05 indicating the existence of normalcy of the variables of this study. To further confirm the normality of the data, the study employed the skewness test. All the values for skewness and kurtosis are within the range (-1 to 2), which indicates that the variables meet the skewness and kurtosis assumption (Yule & Kendall, 1991).

Collinearity Statistics

Table 2: Collinearity Statistics Test

	VIF
EE 1	1.750
EE 2	1.442
EE 3	1.783
EE 4	1.622
EE 5	1.329
UAG 1	2.012
UAG 2	1.663
UAG 3	1.839
UAG 4	1.684
UAG 5	1.495
USN 1	1.717
USN 2	1.904
USN 3	1.818
USN 4	1.834
USN 5	1.792
PBC 1	1.339
PBC 2	1.609
PBC 3	1.614
PBC 4	1.867
PBC 5	1.446

Source: Author's Computation (2023)

The collinearity items Variance Inflation Factor (VIF) value of above 10 indicates presence of multi-collinearity (Hair *et al.*, 2010).

Discriminant Validity

Table 3: Fornell-Larcker Criterion

	EE	GEI	PBC	UAG	USN
EE	0.769				
GEI	1.000	0.769			
PBC	0.674	0.672	0.744		
UAG	0.704	0.701	0.690	0.739	
USN	0.729	0.727	0.777	0.694	0.766

Source: Author’s Computation (2023)

From Table 3, the Fornell-Larcker Criterion was employed to determine discriminant validity. The table shows the result of discriminant validity through the Fornell and Larcker criterion (Hair, Risher, Sarstedt, & Ringle, 2019). The validity of the discriminant is evaluated by comparing the correlations between the constructs and the square root of the extracted variance for a construct. The square root values of variances extracted by constructs on the diagonal of the matrix are larger than the correlations below the diagonal, indicating adequate discriminant validity.

Latent Variable Correlation

Table 4: Latent Variable Correlation

	EE	PBC	UAG	USN
EE	1.000	0.674	0.704	0.729
EV	0.645	0.768	0.655	0.720
PBC	0.674	1.000	0.690	0.777
UAG	0.704	0.690	1.000	0.694
USN	0.729	0.777	0.694	1.000

Source: Author’s Computation (2023)

To determine the value of a latent variable, the study quantifies the observable variables and establishes a relationship between them and the latent variable. Table 4, depicts that there exists a positive relationship among latent variables of the study. This indicates that unobserved items of the study variables are not characterized with the problem of multicollinearity, none of the latent variables correlation values is up to 0.8.

Path Coefficients

Table 5: Path-Coefficient and Total Effect

Hypotheses	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
EE -> UAG	0.704	0.705	0.023	30.600	0.000
EE -> USN	0.729	0.730	0.021	35.493	0.000
EE -> PBC	0.674	0.676	0.022	31.244	0.000

Source: Author’s Computation (2023)

From the results in Table, GEE has a positive and significant effect on undergraduates’ attitudes to GE in Lagos State with ($\beta = 0.704$; t-stat = 30.600; $p < 0.05$). Also, GEE has a positive and significant effect on undergraduates’ subjective norms towards GE among undergraduate institutions in Lagos State ($\beta = 0.729$; t-stat = 35.493; $p < 0.05$). Similarly, GEE has a positive and significant effect on undergraduates' perceived behavioral control toward GE among undergraduate institutions in Lagos State with ($\beta = 0.674$; t-stat = 31.244; $p < 0.05$).

Quality Criteria

Table 6: Regression Model and Size Effect (R Square and f-Square)

Independent Variable and Dependent Variable	R Square	R Square Adjusted	f ² (Effect Size)
GEE and Undergraduate Attitude to Green (UAG)	0.495	0.494	0.980
GEE and Undergraduate Subjective Norms (USN)	0.531	0.531	1.133
GEE and Perceived Behavioural Control (PBC)	0.455	0.454	0.833

Source: Researcher's Computation (2023) from PLS 3.0

As depicted in Table 6, for hypothesis one; the R² is 0.495 which accounted that those observed variables like GEE as an exogenous variable explained 49.5% variances in UAG. GEE has an R² is 0.531, explaining a 53.1% variance in USN. GEE accounted for the R² of 0.455 in PBE indicating that GEE explained 45.5% in PBC

Similarly, to test for the size effect among study predictive and reflective models, there exist thresholds to test the effect size or degree of strength of an effect thus: where $f^2 < 0.020$ (no substantial effect), $0.020 \leq f^2 < 0.150$ (weak effect size), and $0.150 \leq f^2 < 0.350$ (medium effect size), and $f^2 \geq 0.350$ (large effect size). For this study, Table 6 depicts that GEE has a large effect on UAG, and GEE has a large effect on USN

Discussion of Findings

GEE empowers undergraduates with the knowledge, skills, values, and attitudes to address the myriad of global challenges, including climate change, environmental degradation, loss of biodiversity, poverty, and inequality. Education is a transformational process equipping undergraduates with the requisite knowledge for solving current and future challenges. Climate change is an existential threat to the welfare of society. Globally, it hurts the social and environmental health of human beings: clean air, safe drinking water, sufficient food, and secure shelter. The negative effects of climate change are manifested in heat waves and severe weather, deteriorated air quality, displacement, and migration of vectors generating a variety of health problems.

In summary, the four hypotheses proposed in our study were empirically supported. Table 6 summarizes the standardized regression coefficients and the proportions of the explained variance (R²). These results can be confirmed with previous studies on GEE. (Munawar, et al.,2023; Peng et al.,2021, Yasir et al. 2021, Zhang et al. 2019, Munir et al. 2019, and Paray and Kumar 2020). Similarly, the research findings of Otache (2019) equally substantiate the position that GEE has a positive and significant effect on attitude toward GE. Contrarily,

Karimi et al. (2016) and Galvão et al. (2018) found that EE does not affect attitude towards behavior. This disparity due to the nature of the countries within which these researches were carried out. Several empirically related studies such as Yasir et al. (2021); and Peng et al. (2021), corroborate the findings that GEE has a significant positive effect on subjective norms toward GE. Finally, the research of Elnadi & Gheith, 2023; and Peng et al. (2021), revealed that EE has a positive and significant effect on perceived behavioral control.

Conclusion and Recommendations

EE in HEIs a veritable strategy for empowering undergraduates for career advancement and sustainable development. GEE will go a long way in stimulating Nigerian HEIs and subsequently enhance their climate resilience. Therefore, an analysis of the significant impact of GEE on GEIs has revealed the need to educate undergraduates on GE to ensure sustainable development. The effective and efficient EE in HEIs will be contingent on the following recommendations:

1. EE programs in HEIs need to be refocused and upgraded to produce green technological innovation and result-oriented green entrepreneurs.
2. Provision of financial, technical, and moral support should be given to HEIs promoting GEE through activities such as exchange visits, training programs, seminars, workshops, and other monitoring programs.
3. Providing access support information for prospective green entrepreneurs. Information on specific GE support agencies will assist in the development of GE.
4. The research and development institutes should be empowered to develop indigenous green technology.
5. Apart from personal conviction, prospective green entrepreneurs should receive positive reinforcement from their family, friends, and colleagues

References

- Achi, J. (2023). Entrepreneurship Education in Nigerian Tertiary Institutions: A Solution To Graduates Unemployment, *CEDS Journal of Entrepreneurship and Innovation Research*, 2(2) 87-98.
- Ajzen, I. (1991). The theory of planned behaviour organisation; Organisation and human decision process. *Journal of Human Decision Process*. 50(20), 179–211.
- Amankwah, J., & Sesen, H. (2021). On the relation between green entrepreneurship intention and behavior. *Sustainability*, 13, 74 – 78
- Anabaraonye, B, Okon, E, Ewa, B, Adeniyi T and Nwobu, A.(2022).Green entrepreneurship education for sustainable development in Nigeria, *International Journal of Research in Civil Engineering and Technology*, 3(1): 16-19
- Anghel, G.A. & Anghel, M.A. (2022). Green Entrepreneurship among Students—Social and Behavioral Motivation. *Journal of Sustainability*. 14, 87- 30.
- Becker, G. S. (1964). *Human capital: A theoretical and empirical analysis, with special reference to education*. University of Chicago Press
- Belz, F., & Binder, J. (2017). Sustainable entrepreneurship: A convergent process model. *Business Strategy and the Environment*, 26(1), 1-17. <https://doi.org/10.1002/bse.1887>
- Bui, T., Nguyen, T., Tran, M., & Nguyen, T. (2020). Determinants influencing entrepreneurial intention among undergraduates in universities of Vietnam. *The Journal of Asian Finance, Economics and Business*, 7(7), 369-378
- Elnadi, M., & Gheith, M. H. (2023). The role of individual characteristics in shaping digital entrepreneurial intention among university students: Evidence from Saudi Arabia. *Thinking Skills and Creativity*, 10, 12-36.
- Ediagbonya, K., Okolie, U. C., & Amankwah, S. (2022). Climate action and green entrepreneurial intentions: A case study of HEIs in Lagos State, Nigeria. *Journal of Climate and Sustainability*, 14(1), 45-63.
- Ediagbonya, K. (2023). Green entrepreneurial intentions: An emerging paradigm in entrepreneurship education. *Journal of Green Entrepreneurship*, 12(2), 78-91.
- Ediagbonya, K, Oviawe, J, Imeokparia, P, Adamu, I , & Igbinedion, V.(2024). Green Opportunity Recognition and University Education Support as Predictors of Green Entrepreneurial Intention in Edo State, *Asian Journal of Vocational Education and Humanities*,5(1), 1–9.
- Galvão, A., Marques, C. S., & Marques, C. P. (2018). Antecedents of entrepreneurial intentions among students in vocational training programmes
- Hair, J. F., Risher, J. J., Sarstedt, M., and Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *Eur. Bus. Rev.* 31, 2–24
- Hoang, G., Le, T. T. T., Tran, A. K. T., & Du, T. (2020). Entrepreneurship education and entrepreneurial intentions of university students in Vietnam: the mediating roles of self-efficacy and learning orientation
- Jabarzadeh, Y., Sarvari, R., & Alghalandis, N. A. (2018). Exploring socio-economic barriers of green entrepreneurship in Iran and their interactions using interpretive structural equation modeling. *International Journal of Industrial and Systems Engineering*, 12(3), 392-397
- Karimi, S., Biemans, H. J., Lans, T., Chizari, M., & Mulder, M. (2016). The impact of entrepreneurship education: A study of Iranian students' entrepreneurial intentions and opportunity identification. *Journal of Small Business Management*, 54(1), 187-209.
- Krueger, N. (1993). The impact of prior entrepreneurial exposure on perceptions of new venture feasibility and desirability. *Entrepreneurship theory and practice*, 18(1), 5-21
- Liguoro, E., Winkler, C., Vanevenhoven, J., Winkel, D., & James, M. (2020). Entrepreneurship as a career choice: intentions, attitudes, and outcome expectations. *Journal of Small Business & Entrepreneurship*, 32(4), 311-331.
- Mambali, Emmanuel, Ruwaichi., Mariam, Said, Kapipi., Ismail, Abdi, Changalima. (2024). Entrepreneurship education and business and science students' green entrepreneurial intentions: The role of green entrepreneurial self-efficacy and environmental awareness. *The International Journal of Management Education*, doi: 10.1016/j.ijme.2024.100987
- Martín-Navarro, A., Velicia-Martín, F., Medina-Garrido, J. A., & Palos-Sánchez, P. R. (2023). Impact of effectual propensity on entrepreneurial intention. *Journal of Business Research*, 157, 113604.
- Mkpado, M. A., Ezeadichie, E. M., & Adeniji, A. A. (2020). Green entrepreneurship intention among Nigerian university students: Insights from entrepreneurship education. *International Journal of Sustainability in Higher Education*, 21(6), 1247-1265.
- Mohammad, A, Namreen, A, and Prasad M.(2024). Green Entrepreneurship Education: Fostering Sustainable Innovation In Business Management Programs, *International Research*

- Journal of Modernization in Engineering, Technology and Science, 6, 2, 822-829
- Munawar, S., Yousaf, H. Q., Ahmed, M., & Rehman, S. (2023). The influence of online entrepreneurial education on entrepreneurial success: An empirical study in Pakistan. *The International Journal of Management Education*, 21(1), 100752.
- Munir, H., Jianfeng, C., & Ramzan, S. (2019). Personality traits and theory of planned behavior comparison of entrepreneurial intentions between an emerging economy and a developing country. *International Journal of Entrepreneurial Behavior & Research*.
- Okolie, U. C., Nwajiuba, C. A., Eneje, B., Binuomote, M. O., Ehiobuche, C., & Hack-Polay, D. (2021). A critical perspective on industry involvement in higher education learning: Enhancing graduates' knowledge and skills for job creation in Nigeria. *Industry and Higher Education*, 35(1), 61-72.
- Otache, I. (2019). Enhancing the effectiveness of entrepreneurship education: the role of entrepreneurial lecturers.
- Paray, Z. A., & Kumar, S. (2020). Does entrepreneurship education influence degree background. *Journal of International Education in Business*.
- Peng, H., Li, B., Zhou, C., & Sadowski, B. M. (2021). How Does the Appeal of Environmental Values Influence Sustainable Entrepreneurial Intention? *International Journal of Environmental Research and Public Health*, 18(3), 1070.
- Santika, I. W., Wardana, I. M., Setiawan, P. Y., & Widagda, I. G. N. J. A. (2022). Entrepreneurship education and green entrepreneurial intention: A conceptual framework. *Linguistics and Culture Review*, 6(S1), 797-810.
- Shabeeb Ali, M.A.; Ammer, M.A.; Elshaer, I.A. (2023) Born to Be Green: Antecedents of Green Entrepreneurship Intentions among Higher Education Students. *Sustainability* 2023, 15, 6668. <https://doi.org/10.3390/su15086668>
- Shinnar, R.S., Hsu, D.K., Powell, B.C. & Zhou, H. (2018). Entrepreneurial intentions and start-ups: Are women or men more likely to enact their intentions? *Int. Small Bus.*, 36, 60–80.
- Tabachnick, B. G., & Fidell, L. S. (2007). Using multivariate statistics (5th ed.). Boston, MA: Pearson/Allyn Bacon.
- Tasnim, N. (2012). Playing entrepreneurship: Can game make a difference? *Entrepreneurship Practice Review*, 2(4), 4 – 18.
- 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
- Yi, X. (2020). Green entrepreneurship: Drivers and barriers to a sustainable future. *Sustainability*, 12(9), 3621. <https://doi.org/10.3390/su12093621>
- Yule, G.V., Kendall, M.G.: An Introduction to the Theory of Statistics, 14th edn. Griffin, London (1968)
- Zhang, F., Wei, L., Sun, H., & Tung, L. C. (2019). *How entrepreneurial learning impacts one's intention towards entrepreneurship: A planned behavior approach*. Chinese Management Studies.