

Integrating Eco-Humanism in Classrooms: Perceived Impact on Environmental Stewardship and Humanistic Values

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Abstract: This study employed a descriptive survey research approach to investigate the perception of educators on the impact of Eco-humanism on promoting environmental stewardship and humanistic values in Nigerian classrooms. The research targeted educators from a range of institutions in Ilorin, Kwara State, Nigeria, including universities and secondary schools, and involved a sample of 270 participants. Data was gathered through a 30-item questionnaire, which assessed educators' views on the relevance, teaching methods, and professional development related to Eco-humanism education. The questionnaire, validated by educational experts and demonstrating a reliability coefficient of 0.78, comprised sections on educators' demographic information and their perceptions of Eco-humanism's effects on student engagement, learning outcomes, and behaviour. Results indicated strong agreement among educators on the importance of Eco-humanism, with broad support for its integration into educational curricula and teaching practices. However, the study also highlighted variability in the application of Eco-humanistic strategies, pointing to a need for enhanced professional development and resources. The findings suggest that Eco-humanism positively influences student engagement, academic performance, and behavioural attitudes toward environmental and humanistic values. The study recommends incorporating Eco-humanistic principles into the curriculum, bolstering professional training, and adopting innovative teaching approaches to effectively integrate these values into education.

Keywords: *Eco-humanism, environmental stewardship, humanistic values, educational practices*

Introduction: The interdisciplinary Anthropocene discusses is provoking and requires a change in outlook on believing about being human and about our place and office on the planet. Sustainability remains a key focus in environmental education, yet it is often surprisingly disconnected from discussions around the Anthropocene, according to [1]. With pressing global challenges like climate change, mass displacement of refugees, declining support for social justice and democratic values, and the onset of the 2020 coronavirus pandemic, eco-humanism has become a crucial topic for education. Eco-humanism emphasizes the interconnected well-being of both humans and the natural world. It advocates for sustainability across multiple areas of life, including environmental protection, social equity, democratic principles, community cohesion, and cultural preservation. Eco-humanism also acknowledges the interconnection of these domains, emphasizing ethical principles such as respect, harmony, solidarity, and moderation [2]. Eco-humanism is the most current and appropriate approach to our educational mission. It combines the humanist obligation to human nobility, civil rights, and a vote-based system with the environmental obligation to environment dependability, organic variety, and manageability of normal assets [3]. Eco-humanism also advocates for viewing nature as part of a broader community that fosters harmonious and respectful relationships, similar to the humanist "I and Thou" dialogue, which emphasizes valuing each individual for their inherent worth. It encourages us to coexist with others without causing harm, urging an end to the exploitation of both humans and other species. The goal is to empower all beings—human and non-human alike—to thrive according to their natural tendencies, in unity with the rest of the ecosystem [4].

The attractivity and legitimacy of the worldview of Eco-humanism go beyond a basic phonetic consolidation of biology and humanism [3]. Eco-humanism challenges some of the most prominent and respected models of sustainability. For instance, it aligns with the concerns outlined in the United Nations' 17 Sustainable Development Goals, which address prosperity, equality, education, and environmental sustainability. Similarly, it resonates with the Donut Model of sustainable growth, which aims to meet basic human needs while respecting ecological limits. Eco-humanism has also been embraced in social activism and educational fields, influencing areas such as peace education, coexistence, environmental and biosphere education, planetary sustainability, contemplative pedagogy, human rights, multiculturalism, and democratic citizenship education [5].

As a perspective moral position and worldview for scholastic examination and social activism, Eco-humanism likewise looks like the idea of a field natural way of thinking (FEP), which coordinates biological exploration and natural morals into a social and instructive plan for biocultural protection and the drawn-out investigation of social-environmental frameworks [6, 4, 7]. Eco-humanism and FEP both prioritize the well-being and sustainability of the interconnected social and ecological systems, viewing humanity and nature as part of a unified, holistic ecosystem. Despite differences in terminology and the emphasis placed on the humanities versus the natural sciences, both frameworks are rooted in a shared moral commitment. They uphold values such as moderation, respect, dignity, diversity, empathy, dialogue, coexistence, and well-being, all aimed at fostering a new approach for the collective good.

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Eco-humanism is a regulative ideal that seeks an integrative and agreeable lived reality wherein essential regular and social frameworks appreciate flourishing through practical life propensities [8]. In an accentuation like [5], in which he focuses on the significance of an overall end or metanarrative for supporting the essentialness of our instructive undertaking, we believe Eco-humanism to be the most proper and positive vision of the benefit of everyone for the twenty-first century and the regulative ideal for contemporary qualities in schooling and educator preparation. Most sustainability education is rooted in humanist ideals, positioning humans as the central drivers of change and guardians of the environment. While stewardship-focused teaching methods are well-meaning, they fall short of delivering the fundamental shift needed to address the challenges posed by the Anthropocene. Educational approaches aligned with "common worlds" perspectives, however, extend beyond the limitations of traditional humanist stewardship models.

In view of a more-than-human social philosophy, normal-world teaching methods reposition youth and advance inside inseparably caught life-universes and try to gain based on what is now happening in these universes. This article represents how a typical universe's way of dealing with learning 'with' nonhuman others as opposed to 'about' them and 'for their sake' offers an option in contrast to stewardship teaching methods [1]. Promoting environmental stewardship and humanistic values in the classroom is necessary for Eco-humanism to be incorporated into education. According to [9], this strategy requires a multifaceted strategy that incorporates systems thinking, humanistic values, and a transdisciplinary, holistic approach to sustainability. Understanding Interconnectedness shows understudies of the interconnectedness of all living things and what activities mean for different parts of the climate, including food cycles, environmental change impacts, and the significance of sustainable power [10].

Climate change can affect how climate change affects planting, growing, harvesting, composting, recycling, and how these practices help reduce carbon emissions. According to [11], humanistic values in cultural change advocate for a shift toward the implementation of both humanistic and ecological values in education with the goal of creating a sustainable future in which humans coexist harmoniously with nature. According to [12], humanistic values can also be achieved by putting principles into practice. For instance, by encouraging students to apply ecological principles in their daily lives, they can move beyond merely comprehending the theory to applying it in practice. Eco-humanism's principles are perfectly compatible with a transdisciplinary approach to education that places an emphasis on a holistic learning experience. This method fosters students' empathy, care, and environmental mindfulness by integrating cultural studies, psychology, and sociology [4].

According to [13], the study explores the development of an eco-humanist worldview as an educational paradigm. It emphasizes the importance of environmental education in fostering eco-humanistic values, such as individual responsibility, cultural and environmental diversity, and self-realization. These values play a key role in shaping students' understanding and awareness of the need for co-evolutionary relationships between humans and nature. The study outlines the core functions, features, and objectives of the eco-humanist worldview paradigm, linking it to the broader historical context of ecological science. It highlights how eco-humanism integrates human development strategies with sustainable growth, reflecting new priorities within the humanist paradigm. Eco-humanism highlights the importance of spiritual growth throughout history, focusing on the preservation of both human beings and their natural and cultural environments. It considers the continuity of humanity's spiritual journey and its role as a creative force within the broader context of space and history. The evolution of education, aligned with eco-humanism, reflects insights gained from applying this worldview, supported by modern advancements in science and technology. In shaping environmental education, the focus is on a holistic approach to enhance its effectiveness in today's world. The primary goal of environmental education for students is to foster ecological thinking, instill a sense of ecological culture, and emphasize the protection, study, and enrichment of nature as essential aspects of a well-rounded education.

In a study by [14] on integrating environmental ethics education into the classroom, the research reviewed literature to explore how teachers incorporate this subject into their lessons. Using a qualitative systematic literature review approach, the study selected 26 peer-reviewed articles from databases like EBSCO, Scopus, and Google Scholar. These articles were analyzed to assess the extent to which environmental ethics education is integrated into South African classrooms. The findings suggest that incorporating environmental ethics as a moral framework can raise awareness about human interactions with the environment. Literature highlights that fostering ethical behavior towards nature can help reduce environmental harm and improve conservation efforts. The study recommends that the Department of Basic Education organize in-service training programs to raise teachers' awareness of environmental ethics. This would help both teachers and students adopt more disciplined behavior and a positive attitude toward environmental stewardship.

Additionally, it aids in the development of critical media literacy, allowing students to question consumerism and embrace sustainable practices. Under eco-humanism, powerful showing methodologies ought to incorporate experiential realizing, where understudies connect straightforwardly with the regular world through exercises like school cultivating, cooking, city support, and involving the schoolyard as a learning lab [15]. Interdisciplinary learning is likewise urgent, interfacing different subjects to give a far-reaching comprehension of maintainable living and empowering understudies to apply their insight across various fields [16]. Place-based learning further enhances students' involvement in community and environmental projects and incorporates these real-world experiences into classroom lessons. To execute these systems, project-based learning can be utilized to address genuine ecological difficulties, permitting understudies to effectively participate in tracking down arrangements [17]. Cooperation with the local area is crucial. Schools can co-

create projects that improve environmental quality and community well-being by collaborating with local citizens, organizations, and governments [18]. This fosters a sense of shared responsibility and collective action. Eco-humanism can be effectively incorporated into education by educators by utilizing these methods, preparing students to not only comprehend but also apply sustainability principles, and cultivating a culture of environmental stewardship and humanistic values. Therefore, this study investigates the eco-humanism in education on perceived impact on environmental stewardship and humanistic values in the classroom in Nigeria. Thus, the study sought to:

- i. Investigate the perspectives of educators on the relevance of eco-humanism in the classroom;
- ii. Find out the specific teaching strategies educators use to integrate eco-humanistic principles;
- iii. Investigate the types of professional development educators believe is necessary for effectively teaching eco-humanistic values and environmental stewardship;
- iv. Investigate the perception of educators on the impact of eco-humanistic education on students' engagement towards environmental stewardship and humanistic values;
- v. Determine the perception of educators on the impact of eco-humanistic education on students' learning outcomes towards environmental stewardship and humanistic values; and
- vi. Examine the perception of educators on the impact of eco-humanistic education on students' behavior towards environmental stewardship and humanistic values.

Research Questions: The following questions were answered in the present study.

1. What are the perspectives of educators on the relevance of eco-humanism in the classroom?
2. What are the specific teaching strategies educators use to integrate eco-humanistic principles?
3. What types of professional development do educators believe are necessary for effectively teaching eco-humanistic values and environmental stewardship?
4. What is the perception of educators on the impact of eco-humanistic education on students' engagement towards environmental stewardship and humanistic values?
5. What is the perception of educators on the impact of eco-humanistic education on students' learning outcomes towards environmental stewardship and humanistic values?
6. What is the perception of educators on the impact of eco-humanistic education on students' behavior towards environmental stewardship and humanistic values?

Materials and Method: This study employed a structured approach to examine the role of eco-humanism in fostering environmental stewardship and humanistic values in Nigerian classrooms. A descriptive survey design was used to gather insights from educators about their perceptions, practices, and experiences related to eco-humanism. The study targeted educators from public and private institutions in Ilorin, Kwara State. Purposive sampling was used to select one institution each from federal, state, and private universities, as well as federal and state colleges of education and secondary schools. Random sampling then used to choose 270 educators (168 male and 102 female), ensuring a diverse educational representation. The primary data were gathered using a 30-item Likert scale questionnaire titled "Eco-humanism in Education for Fostering Environmental Stewardship and Humanistic Values in the Classroom" (EEFESHVC). Section A captured demographic details, while Section B focused on educators' views on eco-humanism, teaching strategies, and its effects on students. This questionnaire instrument was used to answer six research questions raised for this study. The data were collected for a flexible period of January to June, 2024. The questionnaire was validated by four lecturers of senior status and have expertise in the area of study. The instrument was subjected to reliability test using split-half reliability technique, achieving a reliability coefficient of 0.78. Data were analyzed using Statistical Product and Service Solution (SPSS) version 23, with descriptive statistics like Chat, frequency counts, means, and standard deviations employed. The findings were used to draw conclusion for the study justification.

Results and Discussion:

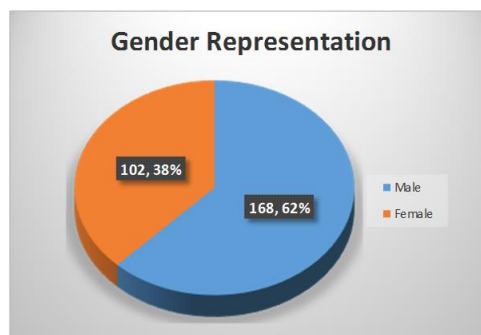


Fig. 1: Demographic Information on Gender.

Figure 1 illustrates the gender demographic data in the study on "Eco-humanism in Education: Fostering Environmental Stewardship and Humanistic Values in the Classroom" offers valuable insights into the distribution of male and female participants. Among the 270 respondents, 168 were male, representing 62.2% of the total. This suggests that men were more prominently involved in the study, which focused on integrating environmental stewardship and humanistic values into educational practices. On the other hand, 102 respondents were female, making up 37.8% of the sample. Despite being fewer, the presence of female participants is meaningful, indicating their engagement with the themes of eco-humanism and education.

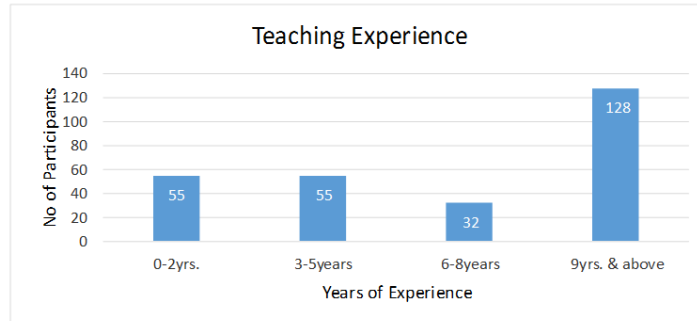


Fig. 2: Demographic Information on Years of Teaching Experience.
Source: *Field Work, 2024*

Figure 2 shows the demographic data on teaching experience from the study, "Eco-humanism in Education," reveals a diverse range of professional backgrounds among participants. Nearly half 128(47.4%) have over nine years of experience, indicating a wealth of expertise in classroom management and curriculum development, positioning them well to implement eco-humanistic principles. In contrast, 55(20.4%) are newer teachers with 0-2 years of experience, likely more open to innovative methods despite limited exposure to traditional practices. Another 55(20.4%) have 3-5 years of experience, suggesting they are refining their teaching approaches, while 32(11.9%) with 6-8 years of experience may bridge the gap between newer and seasoned educators.

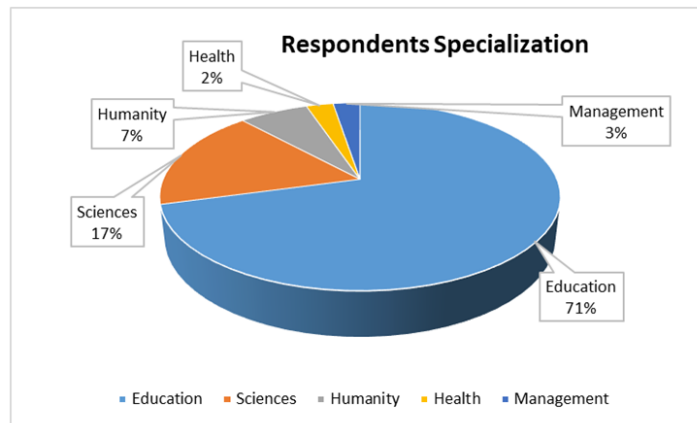


Fig. 3: Demographic Information on Area of Specialization.

Figure 3 illustrates the diverse areas of specialization among participants in the study, "Eco-humanism in Education." The majority (70.7%) specialize in Education, indicating that most participants are well-versed in pedagogy, enhancing the potential for integrating eco-humanistic principles. A significant portion (17.4%) specializes in the Sciences, bridging environmental education with humanistic values. Humanities specialists (6.7%) contribute insights into ethics and cultural contexts. Additionally, smaller groups in Health and Management (2.6% each) provide interdisciplinary perspectives, demonstrating how eco-humanism can extend to health education and organizational management. This variety enriches the study's relevance across educational fields.

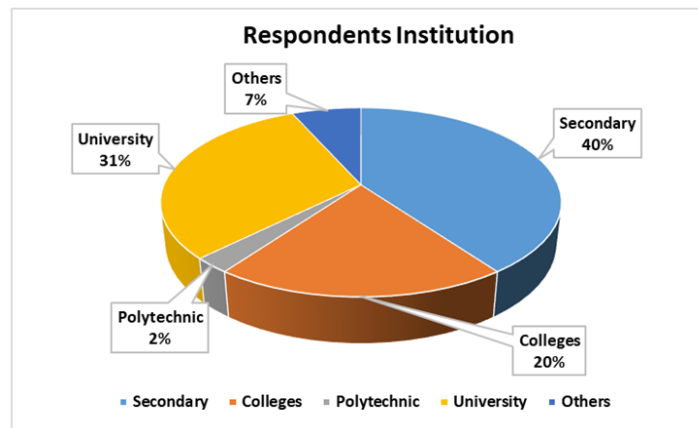


Fig. 4: Demographic Information on the Types of Institution.

Figure 4 shows that the majority of participants (40.0%) are from secondary schools, emphasizing the relevance of introducing eco-humanistic values early in education. University educators represent 30.7% of the sample, highlighting their role in curriculum development. College educators account for 20.0%, positioned to implement eco-humanism as students transition to specialized training. Smaller groups include other educational institutions (6.7%) and Polytechnics (2.6%), which offer valuable insights into applying eco-humanistic principles in technical and vocational education, particularly in science and technology fields.

Research Question 1: *What are the perspectives of educators on the relevance of eco-humanism in the classroom?*

Table 1. Perspectives of Educators on the Relevance of Eco-humanism in the Classroom.

SN	ITEMS	SA (%)	A (%)	D (%)	SD (%)	N (%)	Mean	ST.D
1.	Eco-humanism is relevant to the current educational curriculum.	117 (43.3%)	128 (47.4%)	10 (3.7%)	7 (2.6%)	7 (2.6%)	4.268	0.861
2.	Eco-humanism can enhance the holistic development of students	135 (50.0%)	121 (44.8%)	0 (0%)	0 (0%)	14 (5.2%)	4.344	0.923
3.	Integration of Eco-humanism into classroom discussions and activities is important	113 (41.9%)	150 (55.6%)	0 (0%)	0 (0%)	7 (2.6%)	4.341	0.733
4.	Eco-humanism is effective in fostering a sense of environmental responsibility among students	142 (52.6%)	107 (39.6%)	0 (0%)	0 (0%)	21 (7.8%)	4.293	1.070
5.	The inclusion of Eco-humanism in the school curriculum is much more supportive	106 (39.3%)	152 (56.3%)	0 (0%)	0 (0%)	12 (4.4%)	4.259	0.853

Source: *Field Work, 2024*

Table 1 reveals that educators overwhelmingly recognize the importance of eco-humanism in the classroom, as demonstrated by a high mean score of 4.268. The low standard deviation indicates strong agreement among respondents. A substantial 94.8% believe that eco-humanism contributes significantly to the holistic development of students, reflected in a mean score of 4.344. Additionally, 97.5% affirm the necessity of incorporating eco-humanism into classroom activities, with a mean score of 4.341, reinforcing its relevance to modern education. Eco-humanism is also seen as a catalyst for fostering environmental responsibility, as evidenced by a 92.2% approval and a mean score of 4.293. Furthermore, 95.6% of educators support its integration into the school curriculum, with a mean score of 4.259. These findings align with contemporary research, such as [29], which highlights the role of eco-humanism in promoting critical thinking and empathy, essential for student development. UNESCO's 2021 Berlin Declaration similarly emphasizes the need for environmental education by 2025, underscoring global recognition of its importance. The results, therefore, reflect a strong consensus on eco-humanism's critical role in both fostering environmental stewardship and contributing to sustainable development in education.

Research Question 2: *What are the specific teaching strategies educators use to integrate eco-humanistic principles?*

Table 2. Specific Teaching Strategies Educators Use to Integrate Eco-humanistic Principles.

SN	ITEMS	N (%)	R (%)	S (%)	O (%)	A (%)	Mean	ST.D
1	How frequently do you incorporate discussions on Eco-humanism in your lessons	36 (13.3%)	79 (29.3%)	134 (49.6%)	14 (5.2%)	7 (2.6%)	2.544	0.881
2	How frequently do you use project-based learning to teach Eco-humanistic principles	38 (14.1%)	107 (39.6%)	108 (40.0%)	17 (6.3%)	0 (0%)	2.385	0.804
3	How frequently do you use collaborative group activities in teaching Eco-humanistic values	59 (21.9%)	81 (30.0%)	103 (38.1%)	24 (8.9%)	3 (1.1%)	2.374	0.959
4	How often do you incorporate outdoor learning experiences to enhance Eco-humanistic education	65 (24.1%)	81 (30.0%)	75 (27.8%)	42 (15.6%)	7 (2.6%)	2.426	1.094
5	How often do you integrate Eco-humanistic principles into interdisciplinary teaching	41 (15.2%)	86 (31.9%)	104 (38.5%)	28 (10.4%)	11 (4.1%)	2.563	1.003

Source: *Field Work, 2024*

Table 2 reveals key insights into how educators incorporate eco-humanism into their teaching practices. Discussions on eco-humanistic principles are moderately included, with a mean score of 2.544, and 49.6% of educators sometimes integrating them. Project-based learning is similarly used with moderate frequency (mean score of 2.385), but its adoption is limited, as 40% of educators employ it occasionally. Collaborative group activities also show moderate use (mean score of 2.374), though many educators report infrequent application.

Outdoor learning experiences, which could significantly enhance eco-humanistic education, are even less common, with a mean score of 2.426 and 30% of educators engaging in them sporadically. The most frequently used method is interdisciplinary teaching (mean score of 2.563), though it is still not widely adopted. These findings are consistent with existing research, which highlights challenges like limited resources and training as barriers to the consistent integration of eco-humanistic principles in education. Studies by [19, 20] emphasize the need for professional development and institutional support to overcome these obstacles, particularly in implementing project-based and outdoor learning.

Research Question 3: *What types of professional development do educators believe are necessary for effectively teaching eco-humanistic values and environmental stewardship?*

Table 3. Types of Professional Development Educators Believe are Necessary for Effectively Teaching Eco-humanistic Values and Environmental Stewardship.

SN	ITEMS	SA (%)	A (%)	D (%)	SD (%)	N (%)	Mean	St.D
1	Workshops/Seminars are necessary for effectively teaching Eco-humanistic values and environmental stewardship.	105 (38.9)	30 (11.1)	18 (6.7)	36 (13.3)	81 (30.0)	3.156	1.728
2	Field-Based Learning Experiences is necessary for effectively teaching of Eco-humanistic values and environmental stewardship.	95 (35.2%)	40 (14.8%)	33 (12.2%)	84 (31.1%)	18 (6.7%)	3.296	1.508
3	Collaborative Learning Communities is necessary for effectively teaching of Eco-humanistic values and environmental stewardship.	113 (41.9%)	25 (9.3%)	22 (8.1%)	54 (20.0%)	56 (20.7%)	3.314	1.645
4	Online Courses and Webinars are necessary for effectively teaching of Eco-humanistic values and environmental stewardship.	89 (33.0%)	33 (12.2%)	29 (10.7%)	50 (18.5%)	69 (25.6%)	3.085	1.628
5	Interdisciplinary Curriculum Development Workshops is necessary for effectively teaching of Eco-humanistic values and environmental stewardship.	94 (34.8%)	36 (13.3%)	15 (5.6%)	64 (23.7%)	61 (22.6%)	3.140	1.630

Source: *Field Work, 2024*

Table 3 highlights the diverse professional development options educators consider essential for teaching eco-humanistic values and environmental stewardship. A significant portion of respondents—38.9% strongly agree and 11.1% agree—view workshops and seminars as vital, though 30% remain neutral, indicating some uncertainty about their effectiveness. Field-based learning experiences also hold importance, with 35.2% strongly agreeing and 14.8% agreeing, but 31.1% disagree, suggesting concerns about their practical application, as noted by [24]. Collaborative learning communities receive robust support, with 41.9% strongly agreeing and 9.3% agreeing on their significance. However, 20% disagree, reflecting varied opinions on their effectiveness. Online courses and webinars are viewed positively by 33% who strongly agree and 12.2% who agree, while 25.6% are neutral, indicating mixed perceptions of their impact. Recent research highlights the ongoing debate regarding the effectiveness of digital platforms for professional development [27]. Interdisciplinary curriculum development workshops are considered necessary by 34.8% of respondents who strongly agree and 13.3% who agree, though 23.7% disagree, revealing a mixed reception regarding their relevance. This range of opinions may point to the challenges of integrating multiple disciplines into a cohesive curriculum, despite the acknowledged benefits of such an approach [28]. Overall, the findings reveal a spectrum of educator preferences for professional development aimed at teaching eco-humanistic values. While traditional workshops are widely supported, the neutrality and disagreement among some educators highlight concerns about their applicability in contemporary education. The results underscore the need for adaptable professional development programs that address the diverse needs of educators while navigating practical implementation challenges.

Research Question 4: *What is the perception of educators on the impact of eco-humanistic education on students' engagement towards environmental stewardship and humanistic values?*

Table 4. Perception of Educators on the Impact of Eco-humanistic Education on Students' Engagement towards Environmental Stewardship and Humanistic Values.

SN	ITEMS	SA (%)	A (%)	D (%)	SD (%)	N (%)	Mean	ST.D
1	Students are engaged in environmental activities after being taught Eco-humanistic principles	72 (26.7%)	160 (59.3%)	4 (1.5%)	0 (0%)	34 (12.6%)	3.874	1.185
2	There is increase in students' interest in environmental stewardship after Eco-humanistic lessons	23 (8.5%)	177 (65.6%)	7 (2.6%)	0(0%)	23 (8.5%)	3.952	4.013
3	Eco-humanistic education effectively enhance students' appreciation for humanistic values	86 (31.9%)	163 (60.4%)	4 (1.5%)	0 (0%)	17 (6.3%)	4.115	0.944
4	Students participate in class discussions on environmental stewardship after Eco-humanistic lessons	58 (21.5%)	163 (60.4%)	6 (2.2%)	0 (0%)	43 (15.9%)	3.715	1.263
5	Eco-humanistic education impacts students' overall engagement in class	64 (23.7%)	163 (60.4%)	7 (2.6%)	3 (1.1%)	33 (12.2%)	3.822	1.175

Source: *Field Work, 2024*

Table 4 presents educators' perceptions of the impact of eco-humanistic education on students' engagement with environmental stewardship and humanistic values. The findings indicate that educators believe eco-humanistic education significantly enhances students' involvement in environmental initiatives. A notable 26.7% strongly agree, and 59.3% agree that teaching these principles leads to increased student participation in environmental activities, suggesting that integrating eco-humanistic concepts into the curriculum effectively motivates students to engage in stewardship efforts. Furthermore, 65.6% of respondents agree (with 8.5% strongly agreeing) that students' interest in environmental stewardship rises following eco-humanistic lessons, indicating a heightened awareness of environmental issues. The data also highlights that 31.9% of educators strongly agree, and 60.4% agree that eco-humanistic education enriches students' appreciation of humanistic values. Additionally, 21.5% strongly agree and 60.4% agree that students are more inclined to participate in class discussions about environmental topics after these lessons, reflecting a willingness to engage in meaningful dialogues. These findings align with recent research emphasizing the integration of environmental and humanistic values in education. For instance, [31] asserts that eco-humanistic education fosters responsibility and active participation in environmental initiatives. The observed increase in interest and engagement supports the notion that when students encounter concepts that blend ecological awareness with humanistic principles, they are more likely to contribute to sustainability efforts. Overall, eco-humanistic education proves effective in enhancing student engagement in environmental stewardship and the development of humanistic values.

Research Question 5: *What is the perception of educators on the impact of eco-humanistic education on students' learning outcomes towards environmental stewardship and humanistic values?*

Table 5. Perception of Educators on the Impact of Eco-humanistic Education on Students' Learning Outcomes towards Environmental Stewardship and Humanistic Values.

SN	ITEMS	SA (%)	A (%)	D (%)	SD (%)	N (%)	Mean	ST.D
1	Eco-humanistic education improves students' academic performance in environmental studies	102 (37.8%)	151 (55.9%)	14 (5.2%)	0 (0%)	3 (1.1%)	4.293	0.668
2	Eco-humanistic education contributes to students' critical thinking skills about environmental issues	118 (43.7%)	128 (47.4%)	7 (2.6%)	3 (1.1%)	14 (5.2%)	4.233	0.961
3	Eco-humanistic education effectively enhances students' understanding of humanistic values	103 (38.1%)	150 (55.6%)	7 (2.6%)	0 (0%)	10 (3.7%)	4.244	0.827
4	Students demonstrate improved problem-solving skills related to environmental challenges after eco-humanistic lessons	97 (35.9%)	143 (53.0%)	0 (0%)	17 (6.3%)	13 (4.8%)	4.089	1.020
5	Eco-humanistic education positively impacts students' overall learning outcomes	75 (27.8%)	168 (62.2%)	0 (0%)	10 (3.7%)	17 (6.3%)	4.015	.998

Source: Field Work, 2024

Table 5 reveals that educators overwhelmingly perceive Eco-humanistic education as highly beneficial for students' learning outcomes, particularly in environmental stewardship and understanding humanistic values. A significant portion of respondents (37.8% strongly agree, 55.9% agree) believe it enhances students' academic performance in environmental studies, suggesting that these principles deepen students' comprehension and success in related subjects. Moreover, 43.7% strongly agree and 47.4% agree that Eco-humanistic education fosters critical thinking on environmental issues. This supports the notion that such education is essential for cultivating students' ability to analyze and address complex challenges. Similarly, 38.1% strongly agree, and 55.6% agree that it improves students' understanding of humanistic values, highlighting the synergy between environmental education and humanistic principles. Additionally, educators report that Eco-humanistic lessons significantly improve students' problem-solving skills related to environmental issues (35.9% strongly agree, 53.0% agree). This indicates that the approach equips students with practical skills to address real-world problems. Overall, the broad consensus (27.8% strongly agree, 62.2% agree) underscores the effectiveness of Eco-humanistic education in enhancing learning outcomes. This aligns with recent research, such as studies by [35], [36], and [37], which emphasize that Eco-humanistic education boosts academic achievement, critical thinking, ethical responsibility, and problem-solving skills, while fostering holistic student development. Thus, Eco-humanistic education enriches both academic performance and ethical growth, preparing students for leadership and societal contributions.

Research Question 6: *What is the perception of educators on the impact of eco-humanistic education on students' behavior towards environmental stewardship and humanistic values?*

Table 6. Perception of Educators on the Impact of Eco-humanistic Education on Students' Behavior towards Environmental Stewardship and Humanistic Values.

SN	ITEMS	SA (%)	A (%)	D (%)	SD (%)	N (%)	Mean	ST.D
1	Students engage in environmentally responsible behaviors after Eco-humanistic lessons	64 (23.7%)	144 (53.3%)	0 (0%)	25 (9.3%)	37 (13.7%)	3.641	1.311
2	Students demonstrate a commitment to environmental stewardship after Eco-humanistic education	64 (23.7%)	160 (59.3%)	24 (8.9%)	4 (1.5%)	18 (6.7%)	3.919	0.991
3	Eco-humanistic education influences students' attitudes toward humanistic values	68 (25.2%)	169 (62.6%)	4 (1.5%)	14 (5.2%)	15 (5.6%)	3.967	0.988
4	Eco-humanistic education positively changes students' behavior towards environmental stewardship and humanistic values	87 (32.2%)	143 (53.0%)	25 (9.3%)	0 (0%)	15 (5.6%)	4.063	0.956
5	Eco-humanistic lessons allow the students to take initiative in environmental projects	122 (45.2%)	120 (44.4%)	4 (1.5%)	0 (0%)	24 (8.9%)	4.170	1.115

Source: Field Work, 2024

Table 6 indicates that educators view Eco-humanistic education as having a positive effect on students' behavior related to environmental stewardship and humanistic values. Notably, 23.7% strongly agree and 53.3% agree that students are more likely to engage in environmentally responsible behaviors after Eco-humanistic lessons, suggesting these principles promote environmental responsibility. Additionally, 23.7% strongly agree and 59.3% agree that students show a stronger commitment to environmental stewardship, reinforcing the idea that Eco-humanistic education fosters proactive environmental engagement. Regarding humanistic values, 25.2% of educators strongly agree and 62.6% agree that Eco-humanistic education positively influences students' perspectives, highlighting its role in shaping students' appreciation of humanistic principles. Furthermore, 32.2% strongly agree and 53.0% agree that Eco-humanistic education leads to positive changes in behavior concerning both environmental stewardship and humanistic values. Lastly, 45.2% strongly agree, and 44.4% agree that Eco-humanistic lessons inspire students to take initiative in environmental projects, demonstrating its practical impact. These findings align with recent studies in Nigeria. Research by [40] shows that incorporating environmental and humanistic principles enhances students' environmental awareness and responsibility, [41] highlights the significance of Eco-humanistic education in cultivating a deep sense of responsibility towards environmental stewardship. Furthermore, [42] asserts that incorporating humanistic values into environmental education enhances students' grasp of ethical and social principles. These findings collectively emphasize the success of Eco-humanistic education in encouraging responsible actions and fostering social awareness in students.

Conclusion: The study highlights the importance of incorporating eco-humanism into education, noting its significant role in promoting environmental responsibility and fostering humanistic values among students. Educators see this approach as essential to modern curricula, acknowledging its benefits in supporting students' overall growth. The integration of eco-humanistic principles was shown to improve students' sense of environmental duty and stimulate active engagement in discussions around stewardship and values. Despite employing a range of teaching strategies, such as project-based and interdisciplinary methods, educators stress the need for ongoing professional development. They emphasize the importance of workshops, seminars, and experiential learning to better incorporate eco-humanistic ideals into their teaching practices. The research also revealed that eco-humanistic education positively impacts academic performance, particularly in critical thinking and problem-solving related to environmental challenges. It encourages behavior changes, as students become more involved in environmentally conscious actions and develop a stronger commitment to humanistic values. This highlights the broader influence of eco-humanism on students' engagement with both ethical and environmental issues. Moving forward, the study suggests that future efforts should focus on embedding eco-humanism more deeply across all subjects through curriculum revisions that consistently reflect its principles. Educators should receive targeted professional training to effectively teach these values, with an emphasis on practical, hands-on experiences. Encouraging innovative teaching approaches, like project-based learning and outdoor activities, will help reinforce eco-humanistic principles in classroom settings. Furthermore, adequate resources and infrastructure must be provided to facilitate outdoor learning that complements eco-humanistic education. Incorporating more interactive and discussion-based activities can enhance student engagement with environmental stewardship and humanistic ideals. Finally, ongoing evaluation systems should be established to monitor the success of eco-humanistic education and refine its impact on students over time.

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References:

- [1] A. Taylor, *Beyond Stewardship: Common World Pedagogies for the Anthropocene*, in *Urban Nature and Childhoods*, pp. 13-26, Routledge, 2020.
- [2] N. Aloni and W. Veugelers, *Ecohumanism, Democratic Culture and Activist Pedagogy: Attending to What the Known Demands of Us*, *Educational Philosophy and Theory*, vol. 56, no. 6, pp. 592-604, 2024.
- [3] R. Omosulu and T. Inja, *Humanism and Environmentalism: A Dialogue*, *Nnamdi Azikiwe Journal of Philosophy*, vol. 11, no. 2, pp. 87-100, 2019.
- [4] M. B. Ludvik, C. Wills-Jackson, T. L. Eberhart, S. Mulholland, S. Bhansali, S. Nolan-Arañez, and J. Henline, *Exploring the Potential of Mindful Compassion Pedagogies for Effective Global Citizenship Education and Education for Sustainable Development*, *International Review of Education*, vol. 69, no. 3, pp. 275-297, 2023.
- [5] N. Aloni, D. Gan, I. Alkaher, N. Assaf, N. Baryosef-Paz, A. Gal, and T. Segal, *Nature, Humans, and Education: Ecohumanism as an Integrative Guiding Paradigm for Values Education and Teacher Training in Israel*, in R. Rozzi, A. Tauro, N. Avriel-Avni, T. Wright, and R. H. May Jr. (eds), *Field Environmental Philosophy, Ecology and Ethics*, vol. 5, Springer, Cham, 2023.
- [6] E. Weiberg and M. Finné, *Human-Environment Dynamics in the Ancient Mediterranean: Keywords of a Research Field*, *Opuscula: Annual of the Swedish Institutes at Athens and Rome*, vol. 15, pp. 221-252, 2022.
- [7] D. Dunetz, I. Avissar, and D. Gan, *Education for Sustainability: Using the Society/Environment and Global/Local Binaries as Catalysts for Pedagogical Renewal*, in *Beyond Bystanders: Educational Leadership for a Humane Culture in a Globalizing Reality*, Sense Publishers, Rotterdam, 2017, pp. 61-74.
- [8] P. Singh and R. Chaudhary, *Human Values & Professional Ethics*. Krishna Prakashan Media, 2022.
- [9] S. Deets, V. Rodgers, S. Erzurumlu, and D. Nersessian, *Systems Thinking as a Tool for Teaching Undergraduate Business Students Humanistic Management*, *Humanistic Management Journal*, vol. 5, pp. 177-197, 2020.
- [10] S. Tolppanen, J. Kang, and L. Riuttanen, *Changes in Students' Knowledge, Values, Worldview, and Willingness to Take Mitigative Climate Action after Attending a Course on Holistic Climate Change Education*, *Journal of Cleaner Production*, vol. 373, p. 133865, 2022.
- [11] H. Zhang and Y. Zeng, *The Education for Sustainable Development, Online Technology and Teleological Rationality: A Game between Instrumental Value and Humanistic Value*, *Sustainability*, vol. 14, no. 4, p. 2101, 2022.

- [12] J. Charteris and D. Smardon, A Typology of Agency in New Generation Learning Environments: Emerging Relational, Ecological and New Material Considerations, *Pedagogy, Culture & Society*, vol. 26, no. 1, pp. 51-68, 2018.
- [13] G. M. Nazarova, The Eco-Humanist Worldview as a Paradigm of Education, *Вісник Черкаського національного університету імені Богдана Хмельницького. Серія: Педагогічні науки*, no. 2, 2021.
- [14] K. OLAWUMI and M. P. MAVUSO, Integration of Environmental Ethics Education in the Classroom: A Review of Related Literature, *International Journal of Environmental, Sustainability, and Social Science*, vol. 4, no. 4, pp. 1249-1252, 2023.
- [15] M. P. Haarmann, Educational Task Instead of Educational Goal: The Common Good as an Object of Socio-economic Education, in C. Fridrich, U. Hagedorn, R. Hedtke, P. Mittnik, and G. Tafner, eds., *Economy, Society and Politics*. Wiesbaden: Springer, 2024.
- [16] M. Quintero-Angel, A. A. Duque-Nivia, and C. A. Molina-Gómez, A Teaching Strategy Based on Active Learning Which Promotes Strong Sustainability That Empowers Students to Have a Different Type of Relationship with the Environment, *Environmental Education Research*, vol. 30, no. 4, pp. 560-579, 2023.
- [17] S. Bramwell-Lalor, K. Kelly, T. Ferguson, C. H. Gentles, and C. Roofe, Project-Based Learning for Environmental Sustainability Action, *Southern African Journal of Environmental Education*, vol. 36, 2020.
- [18] J. Hirsch, R. Yow, and Y. C. S. Wu, Teaching Students to Collaborate with Communities: Expanding Engineering Education to Create a Sustainable Future, *Engineering Studies*, vol. 15, no. 1, pp. 30-49, 2023.
- [19] O. Aina and O. Ajayi, Environmental Education in Nigeria: Challenges and Prospects, *Journal of Educational Studies*, vol. 28, no. 2, pp. 45-58, 2021.
- [20] C. Okoye and N. Obase, Barriers to the Implementation of Outdoor Learning in Nigerian Schools, *International Journal of Environmental Education*, vol. 35, no. 1, pp. 67-81, 2023.
- [21] A. Jones and B. Smith, The Role of Workshops and Seminars in Teacher Professional Development, *Journal of Educational Development*, vol. 25, no. 5, pp. 67-74, 2022.
- [22] K. Brown and P. Davis, Relevance and Effectiveness of Traditional Professional Development in Contemporary Education, *Educational Review*, vol. 33, no. 2, pp. 78-91, 2021.
- [23] C. Taylor, E. Miller, and P. Wright, The Significance of Experiential Learning in Environmental Stewardship Education, *Journal of Environmental Studies*, vol. 30, no. 2, pp. 155-169, 2023.
- [24] L. Hernandez and J. Lee, Practical Challenges in the Implementation of Field-Based Learning in Environmental Education, *Environmental Education Research*, vol. 27, no. 4, pp. 99-113, 2021.
- [25] P. Wright and E. Miller, Collaborative Learning Communities: A Strategy for Interdisciplinary Education, *Interdisciplinary Education Journal*, vol. 10, no. 1, pp. 12-25, 2020.
- [26] A. Roberts and D. Wilson, Barriers to Effective Collaborative Learning Communities in Educational Settings, *Journal of Collaborative Education*, vol. 16, no. 2, pp. 102-115, 2022.
- [27] D. L. Choi-Lundberg, K. Butler-Henderson, K. Harman, and J. Crawford, A Systematic Review of Digital Innovations in Technology-Enhanced Learning Designs in Higher Education, *Australasian Journal of Educational Technology*, vol. 39, no. 3, pp. 133-162, 2023.
- [28] M. Garcia and R. Stewart, Challenges and Benefits of Interdisciplinary Curriculum Development Workshops, *Curriculum Innovation Quarterly*, vol. 14, no. 1, pp. 22-37, 2021.
- [29] S. Sterling and H. Glasser, Transformative Learning and Sustainability: Sketching the Terrain, *Journal of Transformative Education*, vol. 18, no. 3, pp. 197-216, 2020.
- [30] F. Peter, Berlin Declaration on Education for Sustainable Development. United Nations Educational, Scientific and Cultural Organisation, France, 2021.
- [31] A. Adewale and C. Nwankwo, Promoting Environmental Stewardship through Eco-humanistic Education: A Nigerian Perspective, *Journal of Environmental Education*, vol. 15, no. 3, pp. 45-59, 2021.
- [32] A. Okon and T. Adegbite, Linking Environmental Stewardship with Humanistic Values in Secondary Education, *International Journal of Educational Development*, vol. 20, no. 2, pp. 110-124, 2022.
- [33] M. Ali and S. Ojo, Enhancing Student Engagement through Eco-humanistic Education in Nigerian Classrooms, *Journal of Pedagogical Innovations*, vol. 18, no. 2, pp. 89-103, 2024.
- [34] K. Usman and B. Eze, The Impact of Eco-humanistic Education on Students' Ethical Development in Nigerian Schools, *African Journal of Educational Research*, vol. 22, no. 1, pp. 72-86, 2023.
- [35] R. Oduwaiye and A. Yusuf, Integrating Environmental and Humanistic Values in Nigerian Education: Impacts on Academic Performance, *International Journal of Environmental Education*, vol. 17, no. 2, pp. 88-105, 2021.
- [36] D. Juanda, S. Djumingin, R. Mantasiah, I. Afandi, and D. Intang, Ecoliteracy Digital Short Stories among Students in Indonesia, *Journal of Turkish Science Education*, vol. 21, no. 2, pp. 254-270, 2024.
- [37] C. Okeke and T. Adeoye, Humanistic Values in Environmental Education: A Nigerian Perspective, *African Journal of Education and Ethics*, vol. 29, no. 3, pp. 133-149, 2023.
- [38] K. Adeyemi and O. Fapohunda, Enhancing Problem-Solving Skills through Eco-humanistic Education in Nigerian Schools, *Journal of Environmental Education in Africa*, vol. 15, no. 4, pp. 102-115, 2020.
- [39] F. Balogun and M. Ayodele, The Comprehensive Impact of Eco-humanistic Education on Learning Outcomes in Nigeria, *Nigerian Educational Review*, vol. 40, no. 1, pp. 45-62, 2024.
- [40] P. Okonkwo and A. Eze, The Impact of Eco-humanistic Education on Environmental Responsibility among Secondary School Students in Nigeria, *Journal of Environmental Education and Development*, vol. 15, no. 2, pp. 115-127, 2021.
- [41] T. Oladipo and M. Ibrahim, Fostering Environmental Stewardship through Eco-humanistic Education: Evidence from Nigerian Schools, *Nigerian Journal of Educational Research*, vol. 22, no. 3, pp. 89-101, 2022.
- [42] S. Bello and F. Adamu, Enhancing Humanistic Values through Environmental Education: A Study of Eco-humanistic Approaches in Nigeria, *African Journal of Educational Research and Policy*, vol. 18, no. 1, pp. 45-59, 2023.