RESEARCH ARTICLE

Promoting Quality Education Through the Integration of Sustainable Development in Elementary School Curricula: The Case of Jolo III District- Sulu

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ABSTRACT. This descriptive-correlational study examined the impact of formative assessment on writing skills in English as a second language among public senior high schools in Sulu for the School Year 2023-2024, using 100 samples acquired through non-probability sampling by purposive sampling. The research utilized weighted mean, standard deviation, t-test for independent samples, One-way ANOVA, and Pearson's correlation, leading to the following results: 1) Of the 100 student respondents, mostly male, aged 19–20 years, enrolled in the GAS strand, with parents who have completed elementary education and possess monthly incomes of 10,000 or less; 2) Formative assessment had an overall positive average effect on English writing skills; 3) In addition to age, gender, strand, parental education level, and parents' average monthly earnings significantly affect how senior high students perceive the impact of formative assessment on their English writing capabilities. The effect of formative assessment on English writing skills is perceived differently by student respondents across various strands. ABM students have a more positive view of Writing Skill Development, TVL students value Teacher Feedback and Guidance, while HUMMS students appreciate Peer Interaction and Collaboration. In contrast, student respondents whose parents have a monthly income averaging between 10,000-15,000 demonstrate a better understanding of Writing Skill Development, Teacher Feedback and Guidance, and Peer Interaction and Collaboration; 4) Senior high school students in Sulu who perceive formative assessment as improving English writing skills as Agree or to a High Extent show considerable similarity; In ESL writing, this approach indicates that students gain knowledge from their own experiences, others, and their surroundings.

KEYWORDS: Quality Education, Sustainable Growth, Elementary Curriculum

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Introduction

Education is recognized globally as a vital tool for promoting sustainable development, with an emphasis on fostering critical thinking and problem-solving skills among students. The United Nations Sustainable Development Goals (SDGs), particularly Goal 4, aim to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all"

(UNESCO, 2015). This global initiative highlights the interconnectedness of education and sustainability, demonstrating that when educational systems prioritize sustainability, they prepare students to engage meaningfully with pressing global challenges such as climate change, poverty, and inequality (Chavez JV and Prado RTD, 2023). Research has shown that integrating sustainability into curricula enhances student motivation and fosters a deeper understanding of complex issues, enabling them to become informed and responsible global citizens (Tilbury, 2011; Kahn, 2010).

In numerous educational systems globally, such as those in Finland and Canada, successful implementation of innovative teaching methods that integrate sustainability principles has occurred. For example, research shows that project-based learning methods, which frequently incorporate sustainability themes, motivate students more successfully and result in improved academic performance (Wiek et al., 2011). These activities show that when students are motivated to investigate real-world issues and create solutions, they not only grasp content but also gain vital skills for maneuvering through a more complicated and interconnected world. As countries strive to meet the SDGs, the importance of education in creating a sustainable future is paramount (Chavez, J.V., 2020). In the Philippines, incorporating sustainable development into the education system is increasingly being adopted to improve the quality and significance of education. The Department of Education (DepEd) has acknowledged the necessity of aligning the national curriculum with sustainable development principles to prepare students with the skills and knowledge needed for the challenges of the 21st century (DepEd, 2016). Introduced in 2012, the K to 12 curriculum highlights critical thinking, creativity, and social responsibility, offering a structure for integrating sustainability into different subjects. Nonetheless, the successful execution of these initiatives is obstructed by obstacles like insufficient teacher training and scarce resources, which may detrimentally affect the overall quality of education (Nye, 2019; Salinas, 2020).

Recent research emphasizes the significance of improving teachers' abilities to incorporate sustainability into their instructional methods. For example, Sarmiento (2018) points out that sustainability-centered professional development programs can greatly enhance teachers' comprehension and application of these ideas in the classroom. Additionally, David (2020) highlights the importance of formative assessments in tracking students' advancement towards sustainability goals, indicating that ongoing evaluation can aid in the successful incorporation of sustainable development into educational programs. Tackling these challenges is crucial for the Philippines to achieve its educational and sustainability objectives, guaranteeing that future generations are prepared to address urgent societal problems.

In the Jolo III District of Sulu, incorporating sustainable development principles into elementary school curricula is especially vital, considering the region's distinct socio-economic and environmental difficulties. The area boasts a varied cultural background and abundant natural assets, highlighting the importance for educational organizations to promote awareness and accountability regarding sustainability (Alonto, 2021). Nonetheless, local schools encounter substantial obstacles, such as inadequate infrastructure, lack of teacher training, and a curriculum that frequently fails to represent the actual circumstances of students' lives. Incorporating sustainability into the curriculum allows schools to enable students to actively connect with their community and environment, fostering a sense of responsibility essential for the district's future (Huckle & Sterling, 1996).

Initial research in the area shows that incorporating sustainability ideas into the curriculum leads to greater student involvement and a more profound comprehension of key issues impacting

their community (Murro RA, Lobo JG, Inso ARC, Chavez JV., 2023). For instance, community projects focused on integrating environmental education into science classes have demonstrated potential in improving students' understanding of local ecological issues, including deforestation and waste disposal (Garcia & Cruz, 2021). By concentrating on practical issues, programs motivate students to enhance their critical thinking abilities and cultivate a sense of empowerment. The purpose of this study was to examine how effective it is to incorporate sustainable development within elementary school curricula in the Jolo III District of Sulu, providing essential insights that could guide educational policies and practices, ultimately fostering a more sustainable future for the local community.

Research Questions

1.What is the demographic profile of the teacher-respondents in terms of:

1.1. Age;
1.2. Gender;
1.3. Civil Status;
1.4. Length of Service; and
1.5. Educational Attainment?

2.What is the extent of promoting quality education through the integration of sustainable development in elementary school curricula at of Jolo III District – Sulu in the context of:

2.1. Curriculum Design;
2.2. Teacher Preparedness; and
2.3. Learner Outcomes?

3.Is there a significant difference in the extent of promoting quality education through the integration of sustainable development in elementary school curricula at Jolo III District – Sulu when data are grouped according to their demographic profile in terms of:

3.1. Civil Status;
3.2. Length of Service; and
3.3. Educational Attainment

4.Is there a significant correlation among the sub-categories subsumed under the extent of promoting quality education through the integration of sustainable development in elementary school curricula at Jolo III District – Sulu in terms of curriculum design, teacher preparedness, and learner outcomes?

Literature

Foreign Studies and Literature

Integration of Sustainability into the Elementary School Curriculum in the United States. This study focused on the integration of sustainability themes within elementary school curricula, emphasizing the potential for such themes to transform foundational educational experiences in the United States. Researchers observed that embedding sustainability into everyday classroom activities and lesson plans led to notable improvements in students' environmental literacy and critical thinking skills. This educational approach encouraged students to engage with real-world issues, fostering a deeper understanding of the challenges surrounding sustainability and instilling in them a sense of environmental responsibility from a young age (Bondoc RS Jr., 2024).By addressing global issues at the elementary level, educators helped create a generation more

informed about and capable of tackling environmental challenges on both local and global scales. This research highlights the vital role of early education in establishing a base for lifelong environmental awareness and critical thinking, preparing students for more complex environmental discussions and problem-solving as they advance through their education. Harris et al. 2017

Sustainable Development in Germany's Education System. In their research on sustainable development within Germany's education system, Schmidt and colleagues found that integrating sustainability themes into the curriculum significantly broadened young learners' understanding of global environmental issues. Through an emphasis on sustainability, students were able to recognize their roles within a broader global ecosystem, which encouraged a more conscious and informed perspective on environmental responsibility. The study demonstrated that early exposure to sustainability concepts enables students to develop a global mindset, where they view themselves not only as individuals but as active participants in a larger environmental context. As a result, students cultivated a strong awareness of pressing global challenges and felt empowered to consider potential solutions, ultimately fostering a foundation for global citizenship and responsible environmental stewardship from a young age. Schmidt et al. 2018

Difficulties of Embedding Sustainable Development within Australian School Curricula. The research conducted by Thomson and Brown explored the challenges linked to the integration of sustainable development concepts into Australian educational programs, emphasizing the effects of these difficulties on teachers and students alike. The study revealed that educator training and availability of resources were crucial factors for effectively incorporating sustainability education (Carpio LB, Caburnay ALS, Nolledo SM, et al., 2024). Educators who had sufficient training and resources were better prepared to effectively teach sustainability topics, whereas those without support found it challenging to communicate the importance and relevance of sustainable practices to their students. This disparity underscores the significance of comprehensive support for educators, guaranteeing they possess the resources needed to foster sustainability in their classrooms. Furthermore, the research highlighted that insufficient resources might obstruct student participation and the extent of learning, underscoring the importance of thorough resource distribution and professional training for effectively implementing sustainable practices in educational institutions. Thomson and Brown 2019

Incorporating Sustainable Development Principles into Primary Education in the UK. The study conducted by Norton and McClure in the United Kingdom investigated the incorporation of sustainable development concepts into primary education, revealing it to be crucial in cultivating a sense of community responsibility and environmental care among young learners. The study emphasized that introducing sustainability ideas in school at an early age prompted children to reflect critically on their responsibilities in their communities and the effects of their behaviors on the environment. This method not only fostered cognitive growth but also encouraged social and emotional development, as students started to grasp the relationship between their actions and the environment. Via class discussions, group tasks, and sustainability-focused projects, students developed a basic sense of responsibility and recognized the importance of collective efforts, thereby strengthening community connections and fostering enduring social responsibility. Norton and McClure, 2021

The Contribution of Sustainability Education to the Development of Critical Thinking in Danish Students. Jensen and colleagues' study in Denmark looked at how sustainability education is incorporated into classrooms and how it affects students' critical thinking and involvement with environmental issues around the world. Researchers discovered that pupils were more engaged in

environmental debates and actively questioned and analyzed the causes and consequences of global concerns like resource depletion and climate change when sustainability themes were incorporated into the curriculum. In addition to encouraging critical thinking, this educational strategy produced a more knowledgeable and involved student body that was equipped to tackle environmental issues with an analytical and critical mindset. By prioritizing sustainability, Danish schools developed students' cognitive and problem-solving skills in ways that are directly applicable to real-world situations. Jensen et al. 2016

Teacher Preparedness and Sustainability Education in South Korea. Smith and Lee's study in South Korea demonstrated how crucial teacher readiness is to incorporating sustainability into the curriculum. They discovered that educators were much more successful in imparting these ideas to pupils when they had access to training and materials tailored to sustainability education. On the other hand, unprepared teachers found it difficult to communicate the significance and applicability of sustainability, which affected students' interest in and understanding of sustainability-related subjects. The study emphasized the necessity of ongoing sustainability-focused professional development programs to keep educators up to date and equipped to provide effective instruction that fosters environmental responsibility and awareness. The researchers stressed that fostering a culture of sustainability among students is largely dependent on having teachers who are well-prepared. Smith and Lee 2017

The Role of Community Partnerships in Sustainability Education in New Zealand. In New Zealand, Williams and colleagues explored how partnerships between schools and local organizations supported the promotion of sustainable development education. Their findings revealed that community partnerships provided valuable resources and learning opportunities for students, deepening their understanding of sustainability through real-world applications. Schools that collaborated with environmental organizations, local businesses, and government agencies were able to offer students experiential learning opportunities such as field trips, workshops, and community projects. This collaborative approach not only enhanced students' educational experience but also strengthened the connection between students and their communities, instilling a sense of shared responsibility for sustainable development. The study demonstrated that community involvement is a powerful tool for fostering environmental awareness and engagement among students. Williams et al. 2021

Experiential Learning and Sustainability in Hong Kong. In Hong Kong, Chan and his team found that experiential learning opportunities significantly enhanced students' ability to understand and apply sustainability concepts in real-world contexts. Through activities such as nature excursions, sustainability workshops, and environmental science projects, students were able to connect theoretical knowledge to practical applications, which enriched their learning experience and strengthened their environmental consciousness. This experiential approach allowed students to observe the impact of sustainability firsthand, deepening their appreciation for environmental stewardship and encouraging a proactive approach to environmental issues. By incorporating real-world experiences into the curriculum, the study showed that students gained a more comprehensive understanding of sustainability, which translated into stronger environmental attitudes and behaviors. Chan et al. 2018

Teacher Support and Sustainable Development Education in South Africa. Johnson and Miller's study in South Africa examined the role of teacher support in promoting sustainable development education, with an emphasis on the importance of continuous professional development. They concluded that sustained support and ongoing training are essential for teachers to effectively integrate sustainability into their curriculum. Teachers who participated in

professional development programs felt more confident and capable in delivering sustainability education, which translated into more effective classroom practices and increased student engagement. The researchers found that continuous teacher support not only benefited educators but also positively impacted students, as well-prepared teachers were better able to facilitate learning experiences that encouraged students to think critically about environmental issues. The study highlights the importance of institutional support in fostering an educational environment that prioritizes sustainable development. Johnson and Miller 2020

Digital Resources to Advance Education on Sustainable Development in the United Arab Emirates. Turner's study, which concentrated on using digital technologies to support sustainable development teaching in the United Arab Emirates, found that students' comprehension of sustainability ideas was much improved by technology. Teachers have been able to explain complicated environmental concerns in an interesting and approachable way by integrating digital resources like interactive simulations, virtual field trips, and online debates into the curriculum. In addition to making learning more engaging, technology use helped students better understand and remember sustainability-related subjects. This study highlights the importance of digital tools in contemporary education by showing how technology may help sustainability education by helping students relate to and understand environmental challenges. Turner (2021)

Local Studies and Literature

Integrating Sustainability Education into Elementary School Curricula in the Philippines. This study focused on the effectiveness of integrating sustainability education within elementary school programs in the Philippines, revealing that schools with structured sustainability initiatives saw significant improvements in student participation in environmental activities. By embedding sustainability into the curriculum, students developed stronger connections with ecological issues and demonstrated increased enthusiasm for conservation efforts, suggesting that formal education plays a vital role in shaping early environmental engagement. Santos and Cruz, 2018

The Role of Local Communities in Promoting Sustainability Education in Rural Areas of the Philippines. Bautista's research highlighted the impact of community involvement on the success of sustainability programs in rural Philippine schools. By partnering with local organizations and families, schools were able to foster a supportive environment for sustainability education, which led to heightened student interest and a more cohesive approach to environmental awareness. This study underscores the potential of community partnerships in enhancing the effectiveness and reach of school-based sustainability initiatives. Bautista, 2019

Impact of Sustainability Integration in Public Schools in Metro Manila Garcia's study examined how integrating sustainability education within public school programs in Metro Manila influenced students' environmental behaviors. Findings demonstrated that students exposed to these lessons developed a heightened sense of responsibility toward environmental protection, evidenced by increased participation in stewardship activities. This result highlights the value of sustainability in public school curricula as a way to encourage proactive environmental actions among young learners. Garcia, 2020

Teacher Preparedness in Integrating Sustainable Development in Philippine Public Schools. Reyes and colleagues investigated the essential role of teacher readiness in implementing sustainable development education across Philippine public schools (Dagoy THS, Ariban AI, Chavez JV, et al., 2024). The study's findings revealed that ongoing training in sustainability concepts is crucial for teachers to effectively integrate these topics into their curriculum. Teacher preparedness emerged as a key determinant of program success, impacting not only the quality of education but also student engagement and comprehension. Reyes et al., 2019

Challenges Faced by Public Schools in Implementing Sustainability Education in the Philippines. Lorenzo's research delved into the barriers public schools encounter when embedding sustainability within their educational frameworks, identifying a lack of resources as the primary challenge (Quisay ARC, Aquino MEC., 2024). Schools often struggle with limited funding, insufficient instructional materials, and a lack of teacher training, all of which hinder effective sustainability education. The study calls attention to the need for policy support and increased resource allocation to make sustainable education accessible and impactful in public schools. Lorenzo, 2018

Alvarez's study in Davao, which looked at the results of putting sustainability-focused programs into place in schools, found that students who participated in these curricula reported higher levels of engagement and academic improvement, especially in subjects like science and social studies. Students got more engaged in their education by concentrating on environmental and societal issues, proving that sustainability improves academic performance generally in addition to ecological knowledge. Alvarez (2020)

The part that school administrators play in advancing education about sustainable development in the Visayas. Marquez investigated how leadership affects the effectiveness of sustainability education initiatives in Visayan schools. The results showed that implementing and sustaining successful sustainability programs required dedicated school administrators. Strong leadership made it easier to obtain resources, promoted an environmentally conscious culture throughout the school, and made sure that sustainability ideas were incorporated into the curriculum on a regular basis. Marquez (2021)

The ability of experiential learning to support Mindanao's sustainable development. According to Villanueva's research on experiential learning in Mindanao, practical exercises like gardening and recycling initiatives were very successful in imparting sustainability knowledge. Through these exercises, students were able to relate sustainability ideas to real-world situations and develop a stronger sense of environmental responsibility by bridging the gap between theory and practice. According to the study, experiential learning is a useful strategy for encouraging pupils to be sustainable. Villanueva (2018)

Effect of Teacher Collaboration on Sustainability Education in Iloilo: Salazar's study in Iloilo found that effective sustainability education relies on collaborative teaching methods. Teachers that collaborated were able to provide a more thorough approach to sustainability, adding a variety of viewpoints and tactics to the curriculum. According to the study, collaboration among teachers resulted in more successful sustainability instruction, giving students a more comprehensive grasp of environmental concerns. Salazar (2018)

Impact of Sustainability Workshops on Quezon City Teaching Practices: Santos investigated how sustainability-focused workshops affected Quezon City teachers' teaching strategies. The results showed that educators who participated in workshops were more prepared to use interactive techniques like project-based learning and multimedia presentations to include sustainability themes into their curricula. This study emphasizes the necessity of ongoing professional development to help educators provide successful sustainability instruction. Santos (2021)

Including Indigenous Knowledge in Mindoro's Sustainability Education De Guzman's research examined how indigenous environmental practices were incorporated into Mindoro's curriculum. According to the study, students were able to develop a deeper understanding of sustainability ideas by applying local ecological information, such as sustainable farming and

fishing methods. Students were given relatable examples of sustainable living and were taught to appreciate ancient wisdom through this culturally relevant approach. De Guzman (2020)

Cagayan de Oro Parental Influence on Student Sustainability Practices Garcia investigated how parental participation affected Cagayan de Oro students' sustainability practices (Chavez, J.V., Adalia, H.G., and Alberto, J.P., 2023). According to the results, children who had parents who engaged in eco-friendly activities were more likely to follow suit. This study emphasizes how crucial family participation is to enhancing sustainability education in the classroom. Garcia (2021)

According to Martinez's analysis of the integration of sustainability into Ilocos Norte's entrepreneurship curriculum, students who were taught eco-friendly product design and waste minimization techniques demonstrated a greater understanding of the importance of sustainability for economic growth (Mendoza, M.V., 2023). In order to prepare students for socially conscious business operations, the research emphasizes the importance of combining sustainability with entrepreneurship. Martinez (2020)

Implementation of Recycling Programs in Iloilo Schools, Santiago's study assessed the effectiveness of school-based recycling programs in Iloilo in promoting sustainable practices. The research found that recycling initiatives significantly increased students' understanding of waste management and encouraged them to adopt similar practices at home, suggesting that practical programs within schools can positively influence environmental behavior in broader contexts. Santiago, 2018

Green Classroom Design and Student Wellbeing in Cavite, Morales researched the impact of green classroom designs, such as increased natural light and indoor plants, on student well-being and learning in Cavite. Results indicated that these designs not only created a healthier learning environment but also inspired students to appreciate nature and understand sustainability. Morales' study illustrates the role of physical learning environments in reinforcing sustainability education. Morales, 2019

Methodology

1. Population and Sampling Design

This study was carried out in various elementary schools in the Jolo III District of Sulu. The Jolo III District falls under the governance of the Department of Education – Sulu, where a descriptive-exploratory research design employing a quantitative research approach was utilized to assess how effectively quality education is promoted by integrating sustainable development into the elementary school curricula within Jolo III District – Sulu. Descriptive research design clarifies and uncovers existing conditions and provides the necessary knowledge and experiences that will assist in establishing a more comprehensive study (Venson, 2004). The research employed a non-probability sampling technique referred to as convenience sampling. It is a form of sampling design in which participants are chosen for the sample based on their availability and ease of access for the researcher (Nikolepoulou, 2022). The participants of the study consisted of one hundred (100) chosen elementary school teachers from Jolo III District for the academic year 2024-2025. A total of one hundred (100) participants were intentionally selected for this research. The teacher participants were selected from each of the seven (7) public elementary schools in the mentioned district.

2. Research Instruments

The research tool was modified from Arjen Wals (2000) "A Leader in Sustainability Education and Action Learning." The research tool consists of two sections. Part I presents the demographic

characteristics of the participants. Part II scope of advancing quality education via the incorporation of sustainable development in elementary school programs: the example of Jolo III District – Sulu.

3. Data Gathering Procedure

To collect data, approval to conduct the questionnaire was requested from the Dean of the School of Graduate Studies at Sulu State College, followed by the Schools Division Superintendent, and then from the individual school heads of Asturias Elementary School, Bakud Elementary School, Camp Asturias Elementary School, Jati Elementary School, Lawm Alat Elementary School, Kasanyangan Elementary School, and Tanjung Elementary School in the Jolo III District.

4. Data Analysis

The analysis on the demographic characteristics of the participants and their views on enhancing quality education through sustainability efforts. Descriptive statistics were used to summarize the demographic information, offering insights into the backgrounds of the teacher-participants. This included measures like mean, median, and mode for continuous variables, along with frequency distributions for categorical variables, to provide a comprehensive understanding of the respondents' demographics (Bucoy RK, Enumerabellon KM, Amilhamja AJ, et al. 2024.) After the demographic analysis, inferential statistics were applied to assess the level of sustainable development integration in the curricula and its observed effect on educational quality. This included the use of various statistical tests, such as t-tests or ANOVA, to evaluate the responses across different groups based on demographic factors. Additionally, the second segment of the research tool utilized a Likert scale to assess educators' views on the effectiveness and execution of sustainable development practices in their teaching. The findings are significant, underscoring the necessity for ongoing funding in teacher training and curriculum development centered on sustainable education, crucial for cultivating a future generation that is environmentally aware and responsible. Scale: 4.50 – 5.00 (Strongly Agree) 3.50 – 4.49 (Agree) 2.50 – 3.49 (Moderately Agree) 1.50 – 2.49 (Disagree) 1.00 – 1.49 (Strongly Disagree)

Results

Question 1. 1. What is the demographic profile of the teacher-respondents in terms of 1.1 Age, 1.2 Gender, 1.3 Civil Status, 1.4 Length of Service and 1.5 Educational attainment?

Table 1.1 displays the age distribution of the instructor respondents. This table shows that, of the 100 teacher respondents, 4 (4.0%) are under the age of 20, 36 (36.0%) are between the ages of 21 and 30, and 60 (60.0%) are over the age of 31. More than half of the teacher respondents in this study are in the age range of 31 and older, according to the findings. This further suggests that the majority of the teacher respondents in this study are in the upper age range that this study has classified.

Age	Number of Respondents	Percent
20 years old and below	4	4.0%
21-30 years old	36	36.0%
31 years old and above	60	60.0%
Total	100	100%

Table 1.2. displays the gender-specific demographic profile of the instructor responders. This table shows that 91 (91.0%) of the 100 instructor responders are female, and 9 (9.0%) are male.

More than half of the instructor responders who participated in this study are female, according to the findings. This suggests that, in terms of gender, the vast majority of Jolo III district's teacher respondents are female.

Gender	Number of Respondents	Percent
Male	9	9.0%
Female	91	91.0%
Total	100	100%

Table 1.3 demonstrates the civil status demographic profile of the teacher respondents. Out of 100 teacher responders, 40 (40.0%) are single, 58 (58.0%) are married, and 2 (2.0%) are widowed or separated, as this table shows. This survey demonstrates that more than one-half of the total number of teacher-respondents are married. This finding suggests that there are a sizable proportion of married teachers in the Jolo III area.

Civil Status	Number of Respondents	Percent
Single	40	40.0%
Married	58	58.0%
Separated/Widowed	2	2.0%
Total	100	100%

Table 1.4 displays the length of service and demographic profile of the instructor responders. This table shows that 36 (36.0%) of the 100 teacher respondents have been teaching for 5 years or less, 26 (26.0%) have been teaching for 6–10 years, 20 (20.0%) have been teaching for 11–15 years, and 16 (16.0%) have been teaching for 16 years or more. According to this poll, almost half of all teacher respondents have taught for five years or less. This suggests that the teaching staff in the Jolo III region is comparatively young or in their early careers.

Length of Service	Number of Respondents	Percent
5 years and below	38	38.0%
6-10 years	26	26.0%
11-15 years	20	20%
16 years and above	16	16%
Total	100	100%

Table 1.5 shows the demographic profile of teacher-respondents in terms of Educational Attainment. It can be seen from this table that out of 100 teacher-respondents, 50 (50.0%) have bachelor's degree, 25 (25.0%) have bachelor's degree with Master's units, 15 (15.0%) have master's degree, 7 (7.0%) have Doctorate units and 3 (3.0%) have Doctoral degree. This study reveals that half of the total number of teacher-respondents have only bachelor's degree. This implies that the prevalence of bachelor's degrees among the teacher-respondents involved in this study suggest a need for an ongoing professional development and opportunities for career advancement among the elementary school teachers of Jolo III district.

Educational Attainment	Number of respondents	Percent
Bachelor's Degree	50	50.0%
With master's unit	25	25.0%
Master's degree	15	15.0%
With doctoral units	7	7.0%
Doctoral degree	3	3.0%
Total	100	100%

Question 2. 2.What is the extent of promoting quality education through the integration of the context of: 2.1 Curriculum Design, 2.2 Teacher Preparedness and 2.3 Learner Outcomes?

Table 2.1 demonstrates the extent to which Jolo III District-Sulu's elementary school curricula incorporate sustainable development in order to provide high-quality education. With a weighted mean score of 4.38 and a standard deviation of.43624, this category received an overall rating of "Agree." The high weighted mean score of 4.38 and the low standard deviation of.43624 in this survey show that the instructors who participated acknowledged the inclusion of sustainable development principles in the elementary school curriculum. This suggests that educators are dedicated to advancing high-quality instruction through environmentally friendly methods, strengthening students' capacity to deal with social and environmental issues.

	Statements	Mean	S.D	Rating
1.	The school curriculum provides sufficient opportunities for students to learn about sustainable development concepts	4.51	.57726	Strongly Agree
2	Sustainable development topics are well-integrated into all subjects across the elementary school curriculum.	4.35	.59246	Agree
3	The curriculum encourages critical thinking about real-world environmental and sustainability issues.	4.43	.60727	Agree
4	Sustainable development is a core focus of lesson plans in most subjects.	4.36	.57770	Agree
5	Textbooks and instructional materials cover sustainable development topics comprehensively.	4.30	.61134	Agree
6	The curriculum promotes a balance between environmental, economic, and social aspects of sustainability.	4.36	.55994	Agree
7	Students are frequently given hands-on activities related to sustainability in the classroom.	4.41	.60461	Agree
8	The curriculum encourages the use of interdisciplinary approaches to solve sustainability problems.	4.35	.50000	Agree
9	Sustainable development is introduced at an age-appropriate level for each grade.	4.35	.59246	Agree
10	The curriculum provides opportunities for students to engage in sustainability-related projects or activities.	4.38	.61595	Agree
	Total Weighted Mean	4.38	.43624	Agree

Legend: (5) 4.50-5.00=Strongly Agree; (4) 3.50-4.49=Agree; (3) 2.50- 3.49=Moderately Agree; (2) 1.50-2.49=Disagree; (1) 1.00- 1.49=Strongly Disagree

Table 2.2 demonstrates the degree to which sustainable development is being included into elementary school curricula in Jolo III District-Sulu in order to promote high-quality education while also taking teacher preparation into consideration. With a weighted mean score of 4.41 and a standard deviation of.41849, this category received a rating of "Agree." According to this finding, the study's participating teachers confirmed that they are well equipped to include

sustainable development into the curricula of elementary schools. This suggests that educators have the know-how and abilities to integrate sustainable development concepts into their lesson plans, thereby supporting high-quality education.

	Statements	Mean	S. D	Rating
1	Teachers feel confident in integrating sustainable development concepts into their teaching.	4.52	.577	Strongly Agree
2	The school provides sufficient training and resources to help teachers teach sustainable development effectively.	4.39	.618	Agree
3	Teachers regularly attend professional development workshops focused on sustainability education.	4.25	.672	Agree
4	Teachers have access to lesson plans and teaching aids that support sustainability topics.	4.53	.559	Strongly Agree
5	Teachers collaborate with colleagues to develop sustainability-focused classroom activities.	4.47	.540	Agree
6	The administration supports teachers in incorporating sustainability themes across various subjects.	4.31	.563	Agree
7	Teachers are knowledgeable about the environmental, economic, and social dimensions of sustainability.	4.44	.538	Agree
8	Teachers frequently update their teaching methods to improve how they integrate sustainability.	4.49	.595	Agree
9	Sustainability-related teaching resources are easy to access and implement in daily lessons.	4.34	.607	Agree
10	Teachers feel adequately supported by school leadership in their efforts to promote sustainability education.	4.37	.580	Agree
	Total Weighted Mean	4.41	.41849	Agree

Legend: (5) 4.50-5.00=Highest extent; (4) 3.50-4.49=Moderately extent; (3) 2.50- 3.49=Moderately Agree; (2) 1.50-2.49=Disagree; (1) 1.00- 1.49=Strongly Disagree

Table 2.3 demonstrates the extent to which sustainable development is being included into elementary school curricula in Jolo III District, Sulu, in order to promote high-quality education in the context of learner outcomes. With a standard deviation of, this category's overall weighted mean score was 4.17. .43310, which has a "Agree" rating. This finding suggests that the instructors who participated in the study agreed that including sustainable development into the curriculum has a beneficial effect on student achievements. This suggests that including sustainable development principles into the curriculum helps students become more knowledgeable, proficient, and environmentally conscious.

	Statements	Mean	S. D	Rating
1	Students demonstrate a clear understanding of sustainable development concepts in class discussions.	4.22	.543	Agree

2	Students can explain the importance of sustainable development in their own words.	4.08	.598	Agree
3	Students actively participate in sustainability projects and activities organized by the school.	4.27	.548	Agree
4	Students are aware of how their actions impact the environment and society.	4.02	.619	Agree
5	Classroom instruction on sustainability has influenced students' daily habits, such as recycling and conserving resources.	4.40	.586	Agree
6	Students show an interest in sustainability-related topics and express curiosity about solving real-world problems.	4.36	.628	Agree
7	Students discuss sustainability topics with their peers and family members outside of school.	4.05	.730	Agree
8	Students can identify practical solutions to sustainability challenges, such as climate change or resource management.	4.03	.611	Agree
9	Students engage in critical thinking when addressing social, environmental, and economic issues related to sustainability.	4.14	.620	Agree
10	Students are enthusiastic about participating in local or community-based sustainability initiatives.	4.13	.580	Agree
	Total Weighted Mean	4.17	.43310	Agree

Legend: (5) 4.50-5.00=Highest extent; (4) 3.50-4.49=Moderately extent; (3) 2.50- 3.49=Moderately Agree; (2) 1.50-2.49=Disagree; (1) 1.00- 1.49=Strongly Disagree

Question 3.3..Is there a significant difference in the extent of promoting quality education through the integration of sustainable development in elementary school curricula at Jolo III District - Sulu when data are grouped according to their demographic profile in terms of 3.1 Civil Status; 3.2 Length of Service; and 3.3 Educational Attainment

Table 3.1. demonstrates the variation in promoting quality education via the incorporation of sustainable development in elementary school curricula at Jolo III District – Sulu, as data is classified based on their demographic profile regarding civil status. This table indicates that, at an alpha level of 0.05, the F-values or probability values for the subcategories related to promoting high-quality education through the integration of sustainable development in the curricula of elementary schools in Jolo III District-Sulu are not significant. This suggests that even though the civil status of the teacher respondents in this research differs, their perspectives on how integrating sustainable development into elementary school curricula enhances high-quality teaching are mostly consistent. This suggests that married teacher-respondents might not have a superior understanding of how to enhance quality education by incorporating sustainable development into elementary school curricula when compared to their single, separated, or widowed counterparts, and vice versa.

Sources of Variation		Sum of squares	Df	Mean Square	F	Sig.	Description
Curriculum Design	Between Groups	.293	2	.146	.765	.468	Not Significant
	Within Groups	18.547	97	.191			
	Total	18.840	99				
Teacher Preparedness	Between Groups	.116	2	.058	.328	.721	Not Significant
	Within Groups	17.222	97	.178			
	Total	17.338	99				
Learner Outcomes	Between Groups	.920	2	.460	2.529	.085	Not Significant
	Within Groups	17.650	97	.182			
	Total	18.570	99				

* Significant at alpha 0.05

Table 3.2 shows the difference in promoting quality education by integrating sustainable development into elementary school curricula at Jolo III District – Sulu when data is categorized based on their demographic profile regarding length of service. From this table, it can be inferred that none of the F-values and probability values for the included subcategories are significant at alpha 0.05. This indicates that while the teacher-respondents participating in this study have different years of experience, they generally share similar views on the level of promoting quality education by integrating sustainable development into elementary school curricula. It suggests that teacher-respondents with 16 years or more of experience might not perceive the promotion of quality education through sustainable development integration in elementary school curricula as effectively as those with just 5 years of service, and the opposite may also be true.

Sources of Variation		Sum of squares	Df	Mean Square	F	Sig.	Description
Curriculum Design	Between Groups	.562	3	.187	.983	.404	Not Significant
	Within Groups	18.278	96	.190			
	Total	18.840	99				
Teacher Preparedness	Between Groups	.683	3	.228	1.313	.275	Not Significant
	Within Groups	16.654	96	.173			
	Total	17.338	99				
Learner Outcomes	Between Groups	.646	3	.215	1.152	.332	Not Significant
	Within Groups	17.924	96	.187			
	Total	18.570	99				

* Significant at alpha 0.05

Table 3.3 shows the variation in promoting quality education via the incorporation of sustainable development in elementary school curricula at Jolo III District – Sulu when data is categorized by demographic profile related to educational attainment. From this table, it can be inferred that, aside from curriculum design, all F-values and probability values of the included subcategories are significant at alpha 0.05. This indicates that variations in educational achievement greatly affect views on Teacher Preparedness and Learner Outcomes, with the exception of Curriculum Design. This indicates that teacher-respondents with diverse educational qualifications, including those with a bachelor's degree or those pursuing or having completed Master's or Doctoral programs, have differing perceptions regarding Teacher Preparedness and Learner Outcomes.

Sources of Variation		Sum of squares	Df	Mean Square	F	Sig.	Description
Curriculum Design	Between Groups Within Groups Total	1.420 17.420 18.840	4 95 99	.355 .183	1.936	.111	Not Significant
Teacher Preparedness	Between Groups Within Groups Total	2.231 15.107 17.338	4 95 99	.558 .159	3.507	.010	Significant
Learner Outcomes	Between Groups Within Groups Total	2.247 16.323 18.570	4 95 99	.562 .172	3.270	.015	Significant

* Significant at alpha 0.05

Table 3.3.1 Post Hoc Analysis: Variations in the degree of advancing quality education via the incorporation of sustainable development in elementary school curricula at Jolo III District – Sulu when information is categorized based on their demographic profile concerning Educational Attainment.

Dependent Variable	(I) Grouping by Year Level	(J) Grouping Year Level	Mean Difference (I-J)	Std. Error	Sig.
Teacher Preparedness	Bachelor's Degree	With doctoral units	.45200	.16093	.047
Learners Outcomes	Bachelor's Degree	Masters degree	.32267	.12203	.040

* The mean difference is significant at the 0.05 level.

Question 4. 4.Is there a significant correlation among the sub-categories subsumed under the extent of promoting quality education through the integration of sustainable development in elementary school curricula at Jolo III District - Sulu in terms of curriculum design, teacher preparedness, and learner outcomes?

Table 4 shows the correlation among the subcategories subsumed under the extent of promoting quality education through the integration of sustainable development in elementary school curricula in Jolo III District - Sulu. As shown in the table, the computed Pearson correlation Coefficients (Pearson r) between these variables are significant at alpha 0.05.

Furthermore, the correlational degree among the extent of promoting quality education through the integration of sustainable development in elementary school curricula: the case of Jolo III District - Sulu is as follows:

1) Very High positive degree and statistically significant correlation on the extent of promoting quality education through the integration of sustainable development in elementary school curricula between the aspect of Curriculum Design and Teacher Preparedness (r = 0.769) and between Teacher Preparedness and Learner Outcomes (r = 0.709). This suggests that well-designed curricula support teacher preparedness, which in turn enhances learner outcomes. This implies that well-structured curricula enhance teachers' readiness to deliver effective instruction.

2) Learner outcomes and curriculum design have a strong positive and statistically significant link (r = -0.593) about how much sustainable development is incorporated into primary school curricula to promote high-quality education. This suggests that while improved student outcomes are typically linked to curriculum design improvements, the association is not as strong as it is for other variables, and vice versa.

According to teachers in Jolo III district-Sulu, it is possible to conclude that there is a strong correlation between the subcategories that fall under the general heading of enhancing quality education through the integration of sustainable development in primary school curricula. As a result, the hypothesis that claims that "teachers at Jolo III district-Sulu perceive no significant correlation among the sub-categories subsumed under the extent of promoting quality education through the integration of sustainable development in elementary school curricula" is rejected.

Variables		Pearson *r*	Sig.	N	Description
Dependent	Independent				
Curriculum Design	Teacher Preparedness	.769	.000	100	Very High
	Learner Outcomes	.593	.000	100	High
Teacher Preparedness	Curriculum Design	.769	.000	100	Very High
	Learner Outcomes	.709	.000	100	Very High

*Correlation coefficient is significant at alpha .05
Correlation Coefficient Scales Adopted from Hopkins, Will (2002):
0.0-0.1 = Nearly Zero; 0.1-0.3 = Low; 0.3-0.5 = Moderate; 0.5-0.7 = High; 0.7-0.9 = Very High; 0.9-1 = Nearly Perfect

Conclusion

Most of the respondents are in their early 30s and older, with females making up the largest group, primarily married, and a few remaining single. They have limited years of service, as none have been employed for 10 years or longer, and only a small number have completed graduate studies. The outcome indicates that the educators participating in the research validated their recognition of the incorporation of sustainable development principles in the elementary school curriculum, that they feel adequately equipped to implement it, and that it affects student results. It merely indicates that the demographic characteristics of the respondents have no substantial effect on how the teacher respondents in Jolo III District view the degree of promoting quality education by integrating sustainable development into the elementary curriculum, except regarding educational attainment. It indicates that the teacher respondents holding a master's degree have a superior understanding of how sustainable development integration enhances quality education in elementary school curricula within the Jolo III District. The outcome suggests that the various

subcategories are interconnected and challenging to distinguish, as curriculum design influences teachers' readiness, which in turn impacts learners' results, or the opposite.

References

Alonto, M. A. (2021). Education for sustainable development in the Bangsamoro: Strategies and challenges in the context of Jolo, Sulu. Journal of Sustainable Development, 14(2), 30-45.

Alvarez, L. (2020). The role of sustainability-focused curricula in student engagement and academic performance: A case study from Davao. Philippine Journal of Education and Environment, 34(2), 49–61

Bautista, S. (2019). Community involvement in promoting sustainability education in rural Philippines. Rural Education and Sustainability Review, 11(1), 34–45.

Bondoc RS Jr. ICT-Driven instructional and assessment strategies for physical education in the new normal. Environment and Social Psychology 2024; 9(4): 2155. Doi: 10.54517/esp.v9i4.2155

Bucoy RK, Enumerabellon KM, Amilhamja AJ, et al. 2024. Knowledge deficits and analysis on comprehension of teachers on their common legal rights as teachers. Environment and Social Psychology 2024; 9(9): 2559. Doi: 10.59429/esp.v9i9.2559

Carpio LB, Caburnay ALS, Nolledo SM, et al. Technology-based teaching among nursing instructors: Confidence and apprehension in using simulation equipment for training. Environment and Social Psychology 2024; 9(8): 2591. Doi: 10.59429/esp.v9i8.2591

Chavez, J.V. (2020). Academic and Health Insecurities of Indigent Students during Pandemic: Study on Adaptive Strategies under Learning Constraints. Journal of Multidisciplinary in Social Sciences. 16(3): 74-81

Chavez, J.V., Adalia, H.G., and Alberto, J.P. (2023). Parental support strategies and motivation in aiding their children learn the English language. Forum for Linguistic Studies 2023; 5(2): 1541. http://doi.org/10.59400.fls.v5i2.1541

Chavez JV and Prado RTD (2023) Discourse analysis on online gender-based humor: Markers of normalization, tolerance, and lens of inequality. Forum for Linguistic Studies 5(1): 55–71. DOI: 10.18063/fls.v5i1.1530

Cruz, M., & Velasco, H. (2020). Impact of eco-friendly school policies on student attitudes in Batangas. Philippine Journal of Environmental Studies, 15(1), 87–102.

Dagoy THS, Ariban AI, Chavez JV, et al. Discourse analysis on the teachers' professional interest and integrity among teachers with multiple administrative functions. Environment and Social Psychology 2024; 9(12): 2521. Doi:10.59429/esp.v9i12.2521

David, A. (2020). The role of formative assessment in promoting inclusive education in the Philippines. Philippine Journal of Education, 99(1), 55-78.

De Guzman, A. (2020). Indigenous knowledge integration in sustainability education in Mindoro. Philippine Education Forum, 5(2), 92–107.

DepEd. (2016). K to 12 curriculum guide: Science. Department of Education, Republic of the Philippines. Retrieved from DepEd Official Website

arcia, J. (2020). Sustainability integration in public schools of Metro Manila: Impacts on student behavior. Southeast Asian Journal of Environmental Education, 12(2), 58–70.

Garcia, L., & Cruz, R. (2021). Enhancing student engagement through environmental education in Mindanao. Journal of Education and Practice, 12(4), 88-96.

Garcia, M., Sanchez, A., & Lopez, C. (2019). Fostering environmentally conscious behavior through sustainability education: A Spanish perspective. European Journal of Educational Studies, 5(3), 144–159.

Garcia, R. (2021). Parental influence on student sustainability practices in Cagayan de Oro. Family and Education Studies, 6(3), 120–135.

Harris, M., Brown, L., & White, T. (2017). Integrating sustainability into the elementary school curriculum in the United States. Journal of Environmental Education Research, 15(1), 23–35.

Huckle, J., & Sterling, S. (1996). *Education for Sustainability*. In J. Huckle & S. Sterling (Eds.), *Education for Sustainability* (pp. 1-21). Earthscan Publications.

Jensen, K., Holm, A., & Sorenson, L. (2016). Fostering critical thinking through sustainability education in Denmark. Nordic Education Journal, 21(4), 279–294

Johnson, B., & Miller, A. (2020). Teacher support and sustainable development education in South Africa. Journal of Education in Developing Areas, 9(1), 41–56.

Kahn, P. (2010). The importance of sustainable education in the 21st century. Journal of Environmental Education, 41(2), 95-105.

Lorenzo, E. (2018). Challenges in implementing sustainability education in Philippine public schools. Journal of Philippine Education, 22(2), 131–146.

Marquez, P. (2021). Role of school administrators in promoting sustainable development in the Visayas. Journal of Philippine Education Management, 13(2), 172–185.

, J. (2020). Sustainability education and environmental attitudes in Bacolod schools. Environment and Education Quarterly, 22(1), 105–119.

Mendoza, M.V. (2023). Analysis Of The Filipino Brand Of Customer Service In The Accommodation Sector. Journal of Namibian Studies, 33(2023): 4685-4704 ISSN: 2197-5523 (online)

Morales, T. (2019). The influence of green classroom design on student well-being and learning in Cavite. Philippine Journal of Educational Facilities, 11(2), 56–70.

Murro RA, Lobo JG, Inso ARC, Chavez JV. (2023). Difficulties of parents with low educational attainment in assisting their children in modular distance learning during pandemic. Environment and Social Psychology 2023; 9(1): 1957. Doi: 10.54517/esp.v9i1.1957

Norton, S., & McClure, P. (2021). Integrating sustainable development in UK primary education. British Journal of Education for Sustainable Development, 16(1), 60–75.

Nye, J. (2019). Challenges and opportunities for teacher training in sustainable development education in the Philippines. International Journal of Educational Development, 68, 12-21.

Nye, R. (2019). Challenges in Implementing Sustainable Development Education in the Philippines. *Philippine Journal of Education*, 98(2), 113-130

Quisay ARC, Aquino MEC. Stress levels of science teachers when delivering distance education instruction in a state college during the COVID 19 pandemic. Environment and Social Psychology 2024; 9(9): 2916. Doi: 10.59429/esp.v9i9.2916

Reyes, A., Santos, E., & Lim, M. (2019). Teacher preparedness for sustainability education in Philippine public schools. Journal of Education and Teaching Practice, 14(2), 89–105.

Salazar, I. (2018). Teacher collaboration in sustainability education in Iloilo. Philippine Journal of Educational Practice, 15(2), 87–100.

Salinas, S. (2020). Integrating Sustainable Development into Philippine Education: A Review of Policies and Practices. *Education Policy Analysis Archives*, 28(15), 1-25.

Santiago, F. (2018). School-based recycling programs and sustainability in Iloilo schools. Philippine Journal of Environmental Initiatives, 9(1), 45–59.

Santos, L. (2021). Effects of sustainability workshops on teaching practices in Quezon City. Philippine Journal of Teacher Development, 20(3), 165–179

Schmidt, F., Bauer, K., & Hoffmann, U. (2018). Sustainable development education in Germany's schools. Journal of Global Education Studies, 24(1), 54–70.

Smith, A., & Lee, D. (2017). Teacher preparedness for sustainability curriculum integration in South Korea. Asian Journal of Environmental Education, 3(2), 115–130.

Tilbury, D. (2011). Education for sustainability: The role of education in promoting sustainable development. International Journal of Sustainability in Higher Education, 12(4), 290-305.

UNESCO. (2014). *Shaping the Future We Want: UN Decade of Education for Sustainable Development*. Retrieved from UNESCO ESD.

UNESCO. (2015). *Education 2030: Incheon Declaration and Framework for Action*. Retrieved from UNESCO Education 2030.

UNESCO. (2015). *Education 2030: Incheon Declaration and Framework for Action*.

UNESCO. (2015). Transforming our world: The 2030 agenda for sustainable development. United Nations. Retrieved from UNESCO Website

Wiek, A., Withycombe, L., & Redman, C. L. (2011). Key competencies in sustainability: A reference framework for academic program development. Sustainability Science, 6(2), 203-218.

Williams, T., Martin, K., & Parker, J. (2021). Community partnerships in promoting sustainability education in New Zealand. Australasian Journal of Community Education, 17(2), 181–198.