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An Analysis of the Relationship Between Environmental Awareness and Sustainable Development Practices Among Senior High School Students in Tablas Island, Romblon.

Augusto D. Tayco Jr., Ph.D.
College of Public Affairs and Governance, Romblon State University, San Agustin, Romblon, Philippines
*E-mail: masterjun.tayco@yahoo.com

Abstract
The study focused on the importance of raising environmental awareness and promoting sustainable development in schools, specifically on Tablas Island in the Province of Romblon. Involving 292 senior high school students from nine educational institutions, the study aimed to examine the relationship between students' environmental awareness and their sustainable development practices. The results showed that students exhibited a good level of both environmental awareness (AWM=3.24) and sustainable development practices (AWM=3.22). Statistical analysis revealed several significant correlations, particularly between practices like waste management, tree planting, composting, and issues such as pollution, climate change, and forest conservation. These findings underscore that greater environmental awareness is linked to more active participation in sustainable development practices. Based on the study's findings, integrating environmental education into school curricula and enforcing environmental protection laws are essential to improve students' environmental awareness and sustainable behaviors. Schools can enhance these practices by fostering stronger connections with the broader community, local government units, and environmental organizations. This collaborative approach, extending beyond the classroom, is crucial for achieving sustainability, as it involves students, schools, and external stakeholders working together to create a more sustainable future. Strengthening these partnerships can amplify the impact of sustainable practices, ensuring that they are not only practiced within schools but also across the entire community.
Keywords: Environmental Awareness, Sustainable Development Practices, Senior High School Students, Tablas Island Philippines
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1. Introduction

The importance of environmental education is central to fostering sustainable societies, where trust and cooperation are built through the protection of natural, cultural, and aesthetic environments. According to Laiphrakpam, Aroonsrimorakot, & Rama Shanker, (2018), the environment is a shared heritage that all humans must preserve to ensure a sustainable future. However, widespread environmental degradation continues, including illegal deforestation, pollution, and resource smuggling, as noted by the Department of Environmental Quality Promotion (2018). Raising awareness through quality environmental education is key to addressing these issues, as it helps individuals understand their responsibility towards the environment, promotes sustainable practices, and encourages the conservation of natural resources.

Environmental awareness has become a global priority as concerns over the depletion of natural resources, pollution, illegal logging, and climate change intensify. As highlighted by Atthirawong and Panprung (2017), the increasing environmental issues have given rise to sustainable development practices aimed at minimizing ecological damage. However, human civilization's impact has caused irreparable harm to ecosystems, contributing to species extinction and threatening biodiversity, particularly in countries like the Philippines. Environmental pollution, deforestation, and rapid population growth have exacerbated these issues, including the generation of solid waste. To address these challenges, many nations have enacted policies focused on conservation and the protection of endangered species, while also emphasizing the importance of environmental education to foster awareness and behavior changes toward sustainability. Integrating environmental education across all levels of schooling is essential to cultivating an informed and responsible generation. Studies show that incorporating environmental awareness into school curricula can significantly shape students' knowledge, attitudes, and behaviors regarding environmental protection (Raman, 2016). From early education to university, such initiatives help children and young adults understand the complexities of environmental issues like pollution, climate change, and deforestation, fostering a deeper appreciation for nature (Panth et al., 2015). Furthermore, frameworks such as those proposed by the United Nations Economic Commission for Europe (UNECE) emphasize the development

of competencies in teachers to effectively implement environmental education. These frameworks encourage a holistic approach to teaching sustainability, focusing on knowledge, identity, social collaboration, and action, which together aim to transform society and equip individuals to tackle environmental challenges.

Environmental education has been recognized globally since the Stockholm Conference of 1972 and subsequent declarations, such as the Belgrade and Tiflis Declarations. It is designed to initiate behavioral changes and cultivate values that prioritize environmental conservation. Studies like those of Turan, Emine Zehra (2019), and Bovornkijpraserta and Rawanga (2016) stress that this education must cover both the physical and social environments to foster awareness and behavior that protects and enhances environmental quality. In the Philippines, Republic Act No. 9512 underscores the importance of promoting environmental education through initiatives like Environmental Awareness Month, linking it directly to sustainable development goals and societal progress.

A study on environmental awareness and sustainable development on Tablas Island in the Province of Romblon highlights the critical need for quality education, especially given the island's vulnerability to climate change and its socio-economic challenges. With poverty levels high and basic infrastructure like sanitation and safe drinking water lacking, the study emphasizes the role of education in equipping youth with the critical thinking skills necessary for addressing environmental challenges. The findings align with the Sustainable Development Goals (SDGs), advocating for collaboration among agencies to address the island's environmental and societal needs. Teachers, as key figures in shaping environmental education, are vital in helping students understand these issues and fostering the necessary values for sustainable development.

Generally, this study aims to analyze the significant relationship between senior high school students' environmental awareness and their engagement in sustainable development practices in Tablas Island, Romblon, within the context of the senior high school curriculum. Specifically, this will (1) determine the level of students' environmental awareness in terms of (1.a) waste management; (1.b) pollution; (1.c) forest conservation; and (1.d) climate change; (2) to determine the level of integration for sustainable development practices in terms of (2.a) proper waste disposal (2.b) recycling; (2.c) composting; (2.d) tree planting; (2.e) energy and water conservation; and (3) to determine the significant relationship between environmental awareness and sustainable development practices into the senior high school curriculum.

2. Methodology

This study utilized a descriptive-correlational research design to explore the integration of environmental awareness and sustainable development practices within senior high school curricula. The descriptive method was used to assess the level of environmental awareness among students in areas such as waste management, pollution, forest conservation, and climate change, as well as their engagement in sustainable development practices like waste disposal, recycling, tree planting, and energy conservation. The correlational method was then employed to determine if there was a significant relationship between the students' level of environmental awareness and their sustainable development practices. The study targeted nine schools from different municipalities on Tablas Island, Romblon, with a total of 1,138 students. A sample size of 296 students was selected using stratified random sampling, where the number of respondents from each school was proportionate to the student population of that school.

Table 1
Distribution of Respondents per School

Senior High School	Number	Percentage
A. Odiongan	103	34.8
B. Looc	41	13.9
C. San Agustin	29	9.8
D. Alcantara	24	8.1
E. Calatrava	23	7.8
F. San Andres	21	7.1
G. Sta. Maria	20	6.8
H. Sta. Fe	18	6.1
I. Ferrol	17	5.7
Total	**296**	**100%**

Data collection followed a structured process, starting with obtaining permission from educational

authorities and school administrators. Ethical guidelines were adhered to, ensuring informed consent, confidentiality, and participants' right to withdraw. A researcher-created questionnaire was the primary data collection tool, which was validated by experts in environmental science and sustainable development. The questionnaire, tested for reliability with a Cronbach's Alpha score of .956 and .986, was divided into two parts: one addressing environmental awareness and the other focusing on sustainable development practices. Additional data were gathered through unstructured interviews with student leaders and members of relevant school clubs, while record scanning was also used to clarify certain aspects. The responses were analyzed using descriptive statistics, such as weighted mean, to assess the levels of awareness and practices, and Pearson's Product-Moment of Correlation to examine the relationship between environmental awareness and sustainable development practices. These statistical tools helped interpret the data and draw conclusions on the effectiveness of environmental education and sustainable practices in the school curriculum.

3. Results and Discussion

3.1 Integration of Environmental Awareness

Waste Management. Table 2 presents the level of integration of environmental awareness along waste management. The overall mean of 3.28, interpreted as *Very Aware*, indicates that senior high schools in Tablas Island moderately integrate waste management practices into their curriculum. However, the extent of integration varies across indicators and schools. The indicator with the highest level of integration was the use of allotted time to provide concrete data and information on proper waste management. School I recorded an AWM of 4.00, interpreted as *Strongly Aware*, which signifies excellent classroom integration of waste management concepts. These finding highlights how effective use of instructional time strongly influences student awareness.

By contrast, the least integrated indicator was the conduct of regular assessment of waste management procedures, which obtained the lowest score of 2.50 in School D. Even in higher-performing schools, assessment remained relatively weak, with an overall mean of only 2.87, categorized as *Fairly Aware*. This suggests that while students are being taught about proper waste management, schools struggle to institutionalize systematic monitoring and evaluation.

Segregation practices were moderately integrated, with School I achieving 3.82, compared to only 2.75 in School D. The overall mean for this indicator was 3.28 (Very Aware), reflecting that most schools encourage segregation but do not consistently implement it. Similarly, student participation at home and school scored 3.60 in School G, but only 2.87 in School D, again averaging 3.28 (Very Aware). This reveals that while schools encourage participation, differences in implementation across schools are evident.

Table 2. Waste Management

Indicators	Highest AWM (School)	Lowest AWM (School)	Overall Mean	Interpretation
Allotted time wisely to provide concrete data and information	4.00 (School I)	3.20 (School D)	3.55	Strongly Aware
Conducting regular assessments of waste management procedures	3.00 (School C)	2.50 (School D)	2.87	Fairly Aware
Segregation of waste is practiced at school	3.82 (School I)	2.75 (School D)	3.28	Very Aware
Student participation at home and in school activities	3.60 (School G)	2.87 (School D)	3.28	Very Aware

When comparing schools, School I obtained the highest overall mean of 3.55 (Strongly Aware), driven by its strong integration of instructional discussions and waste segregation. Conversely, School D recorded the lowest overall mean of 2.87, with its highest indicator at only 3.13 (student encouragement) and its lowest at 2.50 (regular assessments). This suggests that School D was least successful in embedding waste management practices into the senior high school curriculum.

The variability across schools demonstrates that while some institutions excel in embedding waste management, others lag due to weak monitoring and less structured programs. This aligns with Selvam and Abdul Nazar (2011), who stressed that environmental education shapes student attitudes, and with Baula (as cited in Punongbayan, 2014), who emphasized that awareness alone is insufficient — it must be

accompanied by active participation to ensure sustainability. Qualitative insights further validated the findings. Students reported that teachers frequently reminded them about proper garbage disposal: *"Yes, our teacher allots time in discussing waste management. S/he always reminds us of how to properly throw our garbage."* (P1). Others added: *"Yes, especially before the classes begin or after the breaktime"* (P2) and *"Our teacher would always tell us to clean as we go"* (P3). Participants also noted being taught to follow segregation rules to avoid the harmful effects and diseases associated with improper waste disposal (P4, P1, P3).

Overall, the findings suggest that waste management integration is present but inconsistent across schools. Teachers play a vital role in raising awareness, but institutional support for systematic monitoring and follow-through is essential. Schools must strengthen assessment mechanisms and develop strategic interventions to ensure that student awareness evolves into sustained behavioral practices.

Pollution. The integration of environmental awareness along pollution into the SHS curriculum achieved an overall mean of 3.24, interpreted as Very Aware. This indicates that most schools moderately succeed in teaching students about pollution, yet significant gaps remain in translating knowledge into hands-on practices.

A recurring theme in the results is the importance of teacher modeling and information delivery. The highest-rated indicators, "teachers acting as role models in countering pollution and providing students with data on its effects on human health" (AWM = 3.30) suggest that schools rely heavily on teachers' examples and factual inputs as their main strategies. These findings highlight how knowledge transmission and behavior modeling remain the dominant modes of integration. On the other hand, the weakest area of integration was activity-based learning.
The indicator on providing appropriate activities to minimize pollution recorded the lowest overall mean of 3.14, and in "School D", it fell to as low as 2.79. This reflects the difficulty schools face in designing and implementing interactive, student-centered activities that move beyond classroom instruction. The literature supports this gap: Ferreira, M. E., & Pitarma, R. (2016) emphasized that environmental education is most effective when paired with participatory, real-life activities that foster critical engagement.

Table 3. Pollution

Indicators	Highest AWM (School)	Lowest AWM (School)	Overall Mean	Interpretation
Teachers as role models in addressing pollution	3.60 (School I)	2.83 (School D)	3.24	Very Aware
Providing concrete data on the effects of pollution on health	3.30 (School I)	2.90 (School F)	3.24	Very Aware
Provision of appropriate student activities to address pollution	3.25 (School G)	2.83 (School D)	3.14	Very Aware
Discussions of pollution integrated into classroom learning	3.40 (School I)	2.95 (School D)	3.20	Very Aware

Differences among schools were also evident. School I emerged as the strongest performer (overall mean = 3.60), particularly excelling in giving concrete information about pollution's health effects (AWM = 3.71). In contrast, School D obtained the lowest overall mean of 2.83, with its weakest point in activity integration. This divergence points to disparities in institutional emphasis; some schools prioritize structured knowledge delivery, while others lag in applying systematic teaching practices.

The students' and teachers' qualitative accounts affirm these trends. Teacher-respondents shared that they often use illustrative examples, simulations, or practical demonstrations (P3, P4) to contextualize pollution's impacts. Students likewise mentioned learning preventive habits such as proper segregation (P2), use of eco-friendly food containers (P3), and involvement in coastal clean-up and tree planting programs (P4). One student noted that the program not only increased awareness but also instilled "discipline and care for the environment" (P5). These voices reveal that, when integrated meaningfully, pollution awareness fosters not just knowledge but also values and practices of responsibility.

Scholars such as Sata et al. (2015) and Olufemi et al. (2014) affirm the need for diverse methods environmental-based activities, multimedia, and everyday resources like newspapers to enhance

awareness. Bovornkijpraserta and Rawang (2016) further argue for a holistic learning management approach, where theoretical, experiential, and evaluative components are combined. Applied to the present context, this approach could address the low scores in activity provision and ensure that awareness develops into practical competence.

In summary, the findings highlight a duality: while teachers' modeling and factual instruction are strong, interactive activities and participatory approaches are still weak. Strengthening this balance would allow students not only to understand the pollution conceptually but also to internalize sustainable practices in their daily lives.

Forest Conservation. The integration of environmental awareness on forest conservation into the SHS curriculum yielded an overall mean of 3.17, interpreted as Very Aware. This suggests that while schools provide a considerable level of instruction on forest conservation, gaps remain in cultivating student participation and advocacy. One strong theme evident in the results is the emphasis on foundational knowledge.

Table 4. Forest Conservation

Indicators	Highest AWM (School)	Lowest AWM (School)	Overall Mean	Interpretation
Providing information on the importance of forests to human life	3.88 (School I)	3.00 (School D)	3.17	Very Aware
Encouraging student participation in wildlife preservation	3.20 (School G)	3.03 (School D)	3.03	Aware
Campaigns against illegal logging and deforestation	3.50 (School F)	2.80 (School D)	3.20	Very Aware
Participation in tree planting initiatives	3.40 (School I)	2.90 (School D)	3.17	Very Aware

The indicator "Teachers provide information on the importance of forests to human life" consistently ranked highest across schools, with School I posting the highest AWM of 3.88 and other schools ranging between 3.30 and 3.72. This indicates that most teachers successfully highlight the ecological and human value of forests. Knowledge-based instruction thus appears to be the most integrated and reliable approach in fostering forest conservation awareness.

By contrast, the weakest points relate to active engagement and advocacy. Indicators such as "Encouraging students to join in forest conservation activities" (AWM = 3.05) and "Encouraging students to participate in information dissemination on wildlife preservation" (AWM = 3.03) showed the lowest levels of integration. This reflects a limitation in moving beyond information-sharing toward student empowerment and involvement in conservation efforts. For instance, School F emerged as the overall top performer (AWM = 3.50), excelling in knowledge provision (AWM = 3.67), but even here, activity-based indicators lagged, both rated at 3.38.

The findings underscore an imbalance: awareness is strongly delivered, but opportunities for students to apply that awareness through hands-on conservation or advocacy remain underdeveloped. This echoes Paulos (2017), who found a positive correlation between knowledge and attitudes in forest conservation, but emphasized that both dimensions must be nurtured together. Mishra et al. (2015) and Kaur & Singh (2012) likewise stressed the importance of equipping teachers not only with content knowledge but also with pedagogical tools and learning materials to foster active participation. Orimaye et al. (2015) went further, recommending structural initiatives such as conservation clubs, field trips, and curriculum integration to translate classroom learning into real-life environmental stewardship.

The insights from teachers and students reinforce these quantitative patterns. Teachers described deriving motivation from both institutional campaigns and their personal concern for the environment: "I do not just teach for the sake of teaching, rather, I teach out of my concern for the environment" (P1). Another emphasized that awareness efforts were prompted by the annual campaigns against illegal logging and by the local context of San Andres and the Calsanag Watershed (P2). Students, however, expressed a desire for more concrete lessons on wildlife preservation: "We need to be taught how to preserve wildlife and understand its effects" (S1), with another stressing the importance of being trained to care for animals as part of conservation (S2). These voices highlight the need to shift from passive instruction to participatory, experience-based learning.

In total, the results show that schools have successfully integrated knowledge-centered approaches to forest

conservation, but the challenge remains in expanding toward participation, advocacy, and wildlife protection. Bridging this gap requires not only more creative pedagogy but also institutional support through programs, partnerships with LGUs, and experiential activities that empower students to become proactive forest stewards.

Climate Change. The integration of climate change awareness into the SHS curriculum resulted in an overall mean of 3.26, interpreted as Strongly Aware. This reflects that students across the respondent schools possess a relatively high level of awareness, though the areas emphasized vary significantly.

A central theme in the findings is the priority given to disaster preparedness and risk reduction. The indicator "Teachers develop positive attitudes of students on risk reduction and disaster preparedness" received consistently high ratings, including 3.70 in School G and 3.56 in School H, leading to the highest indicator mean overall (3.33). This suggests that schools are most effective in preparing students for climate-related disasters, a focus reinforced by regular earthquake and fire drills. These structured activities not only raise awareness but also strengthen community resilience, consistent with Wunderlich (2013), who emphasized the critical role of schools in shaping early climate awareness.

Table 5. Climate Change

Indicators	Highest AWM (School)	Lowest AWM (School)	Overall Mean	Interpretation
Development of positive attitudes toward disaster preparedness	3.65 (School I)	2.78 (School D)	3.26	Strongly Aware
Student involvement in information campaigns about climate change	3.25 (School F)	3.18 (School D)	3.18	Very Aware
Awareness of human contribution to climate change	3.50 (School I)	2.85 (School D)	3.22	Very Aware
Participation in drills, role plays, and school programs on climate change	3.55 (School I)	2.90 (School D)	3.30	Strongly Aware

In contrast, student engagement in information campaigns remains weak. The indicator "Teachers enhance awareness of students by involving them in information campaigns on climate change" obtained the lowest overall mean (3.18), and in San Andres NHS, it dropped to 2.68. This suggests that while knowledge and preparedness drills are emphasized, opportunities for students to actively disseminate information and participate in climate action are limited. Lokhorst et al. (2013) highlighted that commitment-making and participatory approaches are key to promoting long-term pro-environmental behavior—a gap clearly visible in these findings.

School-level differences further illustrate this imbalance. School I achieved the highest overall mean of 3.65, excelling in integrating climate-related discussions into class time (AWM = 3.76). Meanwhile, School D recorded the lowest overall mean of 2.78, with weak performance in both updating students on global climate issues (AWM = 3.08) and encouraging participation in campaigns (AWM = 2.50). These variations reveal uneven implementation of climate education across institutions, pointing to the need for more standardized and comprehensive integration.

Qualitative perspectives help explain these patterns. Teachers reported using role plays, forums, and creative outputs like artwork to raise awareness (P2), while students described concrete concerns such as garbage burning, air pollution from vehicles (P4), illegal logging (P1), and habitat loss from mining and land conversion (P1). These accounts show that students recognize climate change as an immediate and local concern, though their engagement is often reactive rather than proactive.

The literature underscores the importance of moving beyond awareness to empowerment. Lopez and Malay (2017) observed that Filipino students rely on multiple sources—television, internet, and school—for climate knowledge, suggesting that schools can serve as the hub connecting these channels. Hujo, K., & Carter, M. (2019) and the United Nations (2015) likewise stress that youth, who comprise a significant proportion of developing countries' populations, can play a decisive role in building climate-resilient societies if their awareness is coupled with opportunities for leadership and participation. Overall, the findings show that climate change awareness in SHS is strongest in risk preparedness but weakest in advocacy and participation. While

students are strongly aware that climate change is happening and manifests in diverse ways, schools must do more to equip them with avenues for leadership, information dissemination, and community-based climate action. Only then can awareness translate into sustained adaptation and mitigation practices.

3.2 Integration of Sustainable Development Practices

Proper Waste Disposal. The integration of sustainable practices on proper waste disposal in the SHS curriculum resulted in an overall weighted mean of 3.28, interpreted as Strongly Aware. This suggests that schools are generally effective in raising awareness about solid waste disposal, although the consistency of practices and monitoring remains uneven across institutions.

A dominant feature in the findings is the emphasis on infrastructure and physical provisions. The highest-rated practice, "School designates a specific place for garbage bins and pits in the campus", obtained an overall mean of 3.42, with School C scoring 3.76. This reflects that schools recognize the importance of establishing designated waste facilities, a basic but necessary step for solid waste management. However, this structural compliance does not always translate into sustained behavioral change.

Table 6. Proper Waste Disposal

Indicators	Highest AWM (School)	Lowest AWM (School)	Overall Mean	Interpretation
Allotted time wisely to provide concrete data and information	4.00 (School I)	3.20 (School D)	3.55	Strongly Aware
Conducting regular assessments of waste management procedures	3.00 (School C)	2.50 (School D)	2.87	Fairly Aware
Segregation of waste is practiced at school	3.82 (School I)	2.75 (School D)	3.28	Very Aware
Student participation at home and in school activities	3.60 (School G)	2.87 (School D)	3.28	Very Aware

The results also reveal a gap in systematic monitoring and adoption of best practices. Indicators such as "School monitors periodically the disposal of stored wastes to prevent emission of foul odor" scored lowest with an overall mean of 3.20, while "School employs classroom activities showcasing best practices on solid waste management" only reached 3.26. This suggests that while physical waste bins exist, the consistent application of standards and learning-based reinforcement of proper waste management remains weak. In fact, School D scored as low as 2.58 in multiple indicators, highlighting its limited compliance. The comparison across schools illustrates these contrasts clearly. School I led with an overall mean of 3.58, excelling particularly in waste segregation (AWM = 3.82), while School D lagged at 2.63, struggling in both standard-setting and monitoring. These results imply that leadership and institutional commitment strongly influence the level of sustainable practice integration.

From a policy standpoint, these findings directly align with the mandates of Republic Act No. 9003 (Ecological Solid Waste Management Act of 2001), which requires the Department of Education and related agencies to integrate ecological solid waste management into the school system. Although most schools meet the minimum requirements (e.g., garbage bins, basic segregation), the weaker results in monitoring and best practice replication suggest partial compliance and highlight the need for stricter institutionalization of RA 9003's provisions. The contextual perspectives both reinforce and complicate the survey data. School informants acknowledged routine inspections and segregation monitoring: "Our school inspects and monitors whether staff are implementing waste segregation strictly" (P4). However, others admitted that these practices are often neglected: "These practices are not given due attention. Students and even teachers are not paying attention to the role each has to play to make the practices sustainable" (P6). Participants further stressed that constant reminders, consistent monitoring, and active student involvement are necessary for the continual improvement of waste disposal systems (P2, P4, P5). The results affirm the insights of Phupan, S., Koomklang, J., Amornsiriphong, S., et. al., (2025), who argued that environmental practices should extend beyond classroom walls to connect learning with everyday life. Similarly, maintaining order through cleanliness, as highlighted in the findings, contributes to shaping students' attitudes and instilling responsibility toward the environment. Yet the challenge remains: schools must ensure that waste management practices do not remain symbolic but evolve into a culture of sustained participation, reinforced through both teacher leadership and institutional accountability.

Recycling. The integration of sustainable development practices along recycling obtained an overall mean

of 3.21, interpreted as Very Aware. This finding indicates that schools have incorporated recycling concepts into their curriculum, though the level of practice remains uneven across schools and across specific recycling activities. A central strength across the respondent schools is the emphasis on instilling environmental values. The indicator "School implants in the students the value of reduce, reuse, and recycle" received the highest overall mean (3.28), with School G recording the top score at 3.65. This shows that schools are relatively effective in embedding the philosophy of 3Rs as a guiding principle for students' behavior. In fact, the practice of simple recycling activities, such as reusing containers and plastic bags, was also highly rated (AWM = 3.27), suggesting that students understand and apply recycling at a basic, day-to-day level. These results echo Magulod (2018) and Keles (2017), who both stressed the pivotal role of schools in shaping attitudes, values, and critical thinking about environmental sustainability.

Table 7. Recycling

Indicators	Highest AWM (School)	Lowest AWM (School)	Overall Mean	Interpretation
Instilling the values of reduce, reuse, recycle (3Rs)	3.65 (School G)	2.75 (School D)	3.28	Very Aware
Reusing plastic containers and other materials	3.40 (School F)	2.80 (School D)	3.27	Very Aware
Demonstrating techniques for storing recyclables	3.25 (School C)	2.75 (School D)	3.18	Very Aware

Despite this strength in value formation, the translation of recycling values into technical or systematic practices remains limited. The least observed indicators were "Demonstrating techniques of storing recyclable materials" (AWM = 3.18) and "Implanting the value of wise conservation of school supplies such as paper and notebooks" (AWM = 3.12). These low ratings suggest that schools often stop at promoting values and simple practices, but rarely extend into structured recycling systems, such as proper storage, processing, or large-scale reuse. School D exemplified this gap with the lowest overall mean of 2.69, and its weakest practice being the conservation of supplies (AWM = 2.33).

Comparing across schools, School G achieved the highest mean of 3.51, excelling in both values and daily practices (AWM = 3.70 for reuse of containers). Meanwhile, School D consistently lagged, with modest ratings even in the most basic recycling activities (AWM = 2.96). This disparity highlights the variability in school commitment, infrastructure, and educational strategies for recycling. Sivamoorthy, Nalini, and Kumar (2013) previously observed a similar trend where awareness levels were high but practice levels remained moderate, pointing to institutional gaps that must be addressed through stronger coordination and support.

The qualitative insights reinforce this interpretation. Key informants noted that lack of technical knowledge and insufficient training programs are barriers to effective recycling. One participant emphasized the need for "programs on recycling techniques that would bring economic impact and benefits" (P3, P4), suggesting that linking recycling to livelihood opportunities could strengthen both student and community participation. Bhavika Bharat Shah et al. (2010) similarly argued that apathetic attitudes toward recycling often stem from external and internal factors, which can be mitigated through curricular reforms and targeted activities. Overall, the results point to a partial success in recycling education: schools have successfully instilled values of the 3Rs and promoted simple practices, but systematic recycling processes and conservation habits remain underdeveloped. Moving forward, partnerships between schools, local government, and environmental organizations could provide the missing technical and programmatic support to elevate recycling practices from modest individual habits to institutionalized systems of sustainability.

Composting. The integration of composting practices into the SHS curriculum received an overall mean of 3.16, interpreted as Very Aware. This suggests that schools are moderately successful in incorporating composting into their sustainability initiatives, though inconsistencies exist in how practices are implemented and reinforced. A notable strength lies in the schools' ability to motivate students and promote the benefits of organic farming. The indicator "School motivates students to practice composting at home and in the community" stood out with the highest ratings, reaching 4.00 in "School I" and 3.72 overall in School I. Similarly, "Promoting the benefits of organic farming" emerged as the top-rated

practice across schools, averaging 3.26. These findings reveal that schools often emphasize the theoretical and advocacy aspects of composting, connecting it to health, environmental improvement, and sustainable agriculture. This aligns with the Environmental Protection Agency (2016), which describes composting as a cost-effective solution that enhances soil quality and reduces reliance on traditional pollution-control technologies.

Despite this strength, the application side of composting remains underdeveloped. The weakest indicator was "School makes use of organic fertilizers in school gardens," with an overall mean of only 3.03, and as low as 2.21 in School D. This shows that while students are encouraged to practice the composting conceptually, the actual utilization of composted material in school gardens or agriculture projects is often neglected. Such gaps reflect a broader challenge in sustainability education: moving from awareness to practice. Sussman et al. (2012) highlighted that composting behavior can be significantly improved when institutions use visual prompts and role models, underscoring the importance of making composting both visible and habitual.

Table 8. Composting

Indicators	Highest AWM (School)	Lowest AWM (School)	Overall Mean	Interpretation
Motivating students to practice composting at home and/the community	4.00 (School I)	2.80 (School D)	3.72	Strongly Aware
Promoting the benefits of organic farming	3.40 (School F)	2.90 (School D)	3.26	Very Aware
Use of organic fertilizers in school gardens	3.30 (School C)	2.47 (School D)	3.03	Aware

Differences across schools further illustrate this imbalance. School I led the group (overall AWM = 3.72), excelling in motivating students to compost at home (AWM = 4.00). In contrast, School D recorded the lowest overall mean (2.47), with consistently poor performance in applying compost in gardens (AWM = 2.21). These disparities suggest that institutional leadership and resources strongly influence composting integration. Schools with stronger programs foster student motivation and link composting to community practices, while weaker schools fail to operationalize even the most basic composting applications.

The qualitative findings reinforce this pattern. One informant emphasized that organic farming programs serve as the schools' primary avenue for teaching composting concepts: "Organic agriculture contributes to mitigating greenhouse effects and global warming through its ability to sequester carbon in the soil" (P1). Other participants stressed that organic practices enhance biodiversity, soil fertility, and reduce dependence on agrochemicals (P4, P6). These perspectives highlight the potential of composting not only as a waste management strategy but also as a contributor to broader environmental goals. Taken together, the findings point to a dual reality: composting is well-integrated as a concept and motivation, but weakly realized in practice. To close this gap, schools must invest in hands-on training, partnerships with agencies like DENR and DAR, and consistent use of compost in school gardens. By doing so, composting education can move beyond rhetoric, providing students with both the knowledge and the skills to implement sustainable agricultural practices in their daily lives.

Tree Planting. The integration of tree planting into the curriculum yielded an overall mean of 3.19, interpreted as Very Aware. This reflects that schools moderately succeed in instilling sustainable development practices through tree planting, though variations exist in the depth and scope of implementation across institutions.

A key strength lies in the schools' ability to develop values among students regarding the importance of trees. The indicator "School sustains development of values in the students about the environmental importance of trees" recorded the highest average of 3.30, with particularly strong ratings in School H (3.56) and School G (3.55). These findings indicate that schools prioritize shaping students' environmental values, emphasizing how trees contribute to ecological balance, climate regulation, and community well-being. Such efforts are crucial, as Puri and Joshi (2017) highlighted that students' attitudes toward the environment are often reflected in their direct actions and commitments to sustainability.

Beyond values formation, student participation in tree planting activities was also moderately emphasized. The indicator "School allows students to participate in tree-planting activities in compliance with DENR and DepEd policies" received an overall mean of 3.24, showing that schools are aligning their initiatives with national mandates. However, some gaps are evident. For instance, nurseries for endangered tree species were poorly observed, with the lowest overall rating of 3.13, and particularly weak in School D (2.33). This demonstrates that while students are encouraged to plant trees, schools often fall short in sustaining these initiatives through long-term conservation practices like nurturing endangered species.

The results also reveal variations among schools. School I emerged as the top performer with an overall mean of 3.58, excelling in establishing a nursery for endangered tree species (AWM=3.82). In contrast, School D ranked lowest with a mean of 2.64, reflecting minimal integration, particularly in long-term practices like tree nurseries. This unevenness highlights the role of institutional leadership and resources in ensuring the continuity of tree planting programs.

Table 9. Tree Planting

Indicators	Highest AWM (School)	Lowest AWM (School)	Overall Mean	Interpretation
Developing values on the importance of trees	3.58 (School I)	2.75 (School D)	3.30	Very Aware
Participation in tree planting activities	3.40 (School F)	2.90 (School D)	3.19	Very Aware
Establishing nurseries for endangered species	3.20 (School G)	2.33 (School D)	3.13	Aware

From a broader perspective, these findings are situated against the backdrop of alarming global forest loss. Reports from the Global Forest Atlas (2017) and Weisse & Goldman (2017) note that millions of hectares of forest are lost annually due to agriculture, logging, and mining. Similarly, INTERPOL (2017) estimated that illegal logging accounts for 50–90% of forestry activities in tropical regions. Within this context, the role of schools in promoting reforestation, urban greening, and community participation becomes more urgent. Tree planting is not just an educational activity but a critical intervention against widespread deforestation and biodiversity loss.

The voices of respondents reinforce these findings. Several participants emphasized that schools are inculcating values about the ecological importance of trees, while also acknowledging the lack of sufficient structural support to sustain initiatives like nurseries and reforestation projects. This reflects Situmorang's (2018) assertion that hands-on environmental activities foster both awareness and responsibility, while Yusuf (2012) argued that positive environmental experiences during childhood have long-lasting impacts on sustainability practices in adulthood.

Taken together, the results suggest that while schools are effective in fostering values and encouraging student involvement in tree planting, they must go further by investing in sustainable structures such as nurseries, monitoring programs, and stronger partnerships with communities and government agencies. This dual approach values-driven education and practical conservation can strengthen the role of schools as active partners in combating deforestation and promoting ecological sustainability.

Energy and Water Conservation. The integration of sustainable development practices on energy and water conservation in the SHS curriculum reflected an overall mean of 3.26, interpreted as Very Aware. This finding suggests that schools are making commendable efforts in embedding conservation values into educational practices, though the depth and consistency of implementation vary across institutions.

A key highlight is the strong institutional commitment to conservation practices. The indicator "School ensures that all lighting, computers, projectors, air conditioning, fans, and water systems are turned off during night and other unoccupied times" yielded the highest overall mean of 3.31, indicating that energy efficiency measures are widely institutionalized. School G, in particular, stood out with an overall mean of 3.55, reinforcing the school's ability to consistently apply such practices. This aligns with Ateneo de Manila University's (2015) sustainability initiatives, which emphasized water and energy management as core aspects of campus environmental stewardship.

Another notable area is student involvement in community-based initiatives. The practice "School allows students to organize community campaigns in energy and water conservation" garnered high scores in School C (3.69), School G (3.65), and School I (3.50). These results suggest that students are not only passive recipients of environmental knowledge but also active participants in advocacy and awareness efforts. By empowering students to take leadership roles, schools reinforce conservation values as social responsibility. This approach resonates with Bueno's (2019) call for sustainability education that extends beyond classroom instruction to lived, practical experiences.

Table 10. Energy and Water Conservation

Indicators	Highest AWM (School)	Lowest AWM (School)	Overall Mean	Interpretation
Ensuring equipment/water systems are turned off when not in use	3.55 (School G)	2.90 (School D)	3.31	Strongly Aware
Involvement in organizing community campaigns	3.40 (School I)	2.80 (School D)	3.28	Very Aware
Encouraging home-based conservation practices	3.30 (School F)	2.70 (School D)	3.23	Very Aware
Monitoring energy use and water consumption	3.25 (School C)	2.50 (School D)	3.21	Very Aware

Despite these strengths, gaps remain in fostering personal accountability. Indicators such as "School encourages students to monitor energy and water usage, participate in auditing efforts, and contribute innovative energy-saving ideas" received the lowest mean (3.21 overall), with particularly low ratings in School D (2.50). Similarly, practices encouraging conservation at home were inconsistently observed, with School E rating as low as 3.00. These findings reveal that while schools have succeeded in institutional enforcement and collective campaigns, they are less effective in cultivating individual-level habits that extend to households. This shortfall is concerning, as literature emphasizes that sustainability is most effective when knowledge translates into consistent personal behavior (Keles, 2017).

The thematic pattern of results underscores that conservation in schools is strongest at the institutional and collective levels, but weaker in the personal and innovative dimensions. This duality highlights a challenge: while schools can regulate energy use within their campuses, fostering creativity, accountability, and household integration requires more intensive educational strategies. As stressed by Sata, Wongpho, and Chankong (2015), linking classroom learning with daily practices can diversify opportunities for responsibility and bridge the gap between knowledge and real-world application.

In sum, the results affirm that schools are building a solid foundation of conservation practices, particularly in managing electricity and water systems and in mobilizing students for community campaigns. However, to achieve deeper integration, schools must strengthen monitoring, encourage student-led innovations, and reinforce conservation habits at home. These improvements would not only enhance the sustainability of school operations but also cultivate long-term pro-environmental behaviors among students, ensuring that energy and water conservation is sustained across future generations.

3.3 The Relationship Between the Integration of Environmental Awareness and Sustainable Development Practices in the Curriculum.

The findings of the study revealed several significant relationships between the dimensions of environmental awareness and the sustainable development practices of senior high school students in Tablas Island, Romblon. These results affirm that environmental awareness, when properly integrated into the curriculum and reinforced by school activities, has a measurable influence on the eco-friendly practices of learners.

In terms of waste management awareness, significant positive correlations were observed with composting ($r = 0.330$, $p < .05$) and tree planting ($r = 0.337$, $p < .05$). These results suggest that students who are more conscious of proper waste management practices are likely to engage in sustainable activities that directly reduce waste and contribute to ecological restoration. Composting converts biodegradable waste into useful organic fertilizer, while tree planting enhances carbon sequestration. Together, they reflect how simple awareness of managing waste responsibly can extend to more active participation in environmental initiatives. This aligns with contextual learning theory, which emphasizes that practical applications of classroom lessons enhance long-term behavior change.

With regard to pollution awareness, highly significant relationships were found with composting ($r = 0.382$, $p < .01$) and tree planting ($r = 0.365$, $p < .01$). These findings indicate that when students understand the dangers of air, land, and water pollution, they are more motivated to take preventive action through nature-based solutions. Tree planting, for instance, improves air quality and helps mitigate the effects of urban pollution, while composting reduces the volume of waste that contributes to environmental degradation. These results support the argument of Athanassiou and Zabaniotou (2008) that environmental education plays a pivotal role in shaping environmental values and guiding learners toward proactive ecological practices.

Table 11. The Relationship between Environmental Awareness and Sustainable Development Practices

Environmental Awareness	Sustainable Development Practice	r-value	p-value	Interpretation
Waste Management	Composting	0.33	$p < .05$	Significant relationship
Waste Management	Tree Planting	0.337	$p < .05$	Significant relationship
Pollution	Composting	0.382	$p < .01$	Highly significant relationship
Pollution	Tree Planting	0.365	$p < .01$	Highly significant relationship
Forest Conservation	Proper Waste Disposal	0.274	$p < .05$	Significant relationship
Climate Change	Proper Waste Disposal	0.291	$p < .05$	Significant relationship
Climate Change	Composting	0.415	$p < .01$	Highly significant relationship
Climate Change	Tree Planting	0.279	$p < .05$	Significant relationship

In terms of forest conservation awareness, a significant correlation was found with proper waste disposal ($r = 0.274$, $p < .05$). This finding suggests that students who value the preservation of forest ecosystems also recognize the importance of preventing pollution through appropriate waste disposal. Similar patterns were discussed by Kumar and Patil (2017), who emphasized that forest protection and waste management are complementary elements of sustainable education. By ensuring that waste is managed responsibly, the likelihood of contaminating nearby ecosystems is reduced, indirectly supporting forest conservation efforts (Food and Agriculture Organization [FAO], 2016).

Finally, climate change awareness demonstrated significant relationships with proper waste disposal ($r = 0.291$, $p < .05$), composting ($r = 0.415$, $p < .01$), and tree planting ($r = 0.279$, $p < .05$). Among these, the strongest association was with composting, suggesting that climate literacy is a powerful driver of waste-to-resource initiatives. Students who recognize the impacts of climate change are more likely to engage in activities that mitigate greenhouse gas emissions — such as proper waste management and carbon sequestration through tree planting (UNESCO, 2017; Sharma, 2016).

These results affirm the findings of Sharma (2016), who emphasized that climate education fosters environmental responsibility and encourages youth participation in sustainability practices. As noted by UNESCO (2017) and Sivamoorthy, Nalini, and Kumar (2013), awareness alone is insufficient unless reinforced through experiential learning and institutional support.

Overall, the significant correlations confirm that environmental awareness translates into practice when supported by adequate facilities and leadership. This reinforces Tilbury's (2011) view that environmental education should combine knowledge, values, and skills to enable learners to act responsibly toward sustainable development.

Conclusion and Recommendation

Across Tablas Island, senior high school students are showing encouraging signs of environmental consciousness. Many of them understand the importance of protecting forests, managing pollution, and responding to the challenges of climate change. Their awareness is not just theoretical; students are actively participating in school-based initiatives such as tree planting, composting, and proper waste disposal. These practices reveal that environmental education has taken root in the classroom, helping young people translate what they learn into meaningful action. Yet, beneath this positive trend lies a quiet struggle: while collective activities are thriving, individual and household habits such as recycling, energy conservation, and the regular

use of compost remain inconsistent. This gap suggests that awareness, while essential, is only the first step toward true sustainability. Students need continuous reinforcement through hands-on experiences, strong mentorship, and community partnerships to help them live out the values they already understand.

Translating these insights into action calls for renewed commitment from schools, policymakers, and local leaders. Schools can play a stronger role by weaving practical environmental activities into the daily rhythm of learning—through eco-clubs, waste segregation systems, or school gardens that model sustainability in action. Policymakers, meanwhile, must ensure that Republic Act No. 9512 and the goals of Sustainable Development Goal 4.7 are realized not just on paper but in classrooms and communities. Collaboration among DepEd, DENR, LGUs, and civic organizations can provide the necessary training, resources, and policy support to make this possible. Beyond programs and campaigns, students also need inspiration and accountability systems that reward innovation, monitor impact, and celebrate small victories in environmental stewardship. When awareness is nurtured by practice and reinforced by policy, the next generation of Tablas learners can become not only informed citizens but also genuine advocates of sustainable development and ecological care.

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