

Environmental Sustainability in Action: Student Narratives on Practicing Green Habits beyond the Classroom

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ABSTRACT

This qualitative study explored how college students from Zamboanga Peninsula, Philippines, who are members of environmental-related organizations, narrate their lived experiences in applying sustainability practices in real-life contexts. It also examined their motivations, challenges, and strategies in maintaining these habits beyond academic requirements. Through in-depth interviews with sixteen purposively selected college students, the research found that sustainable behaviors are driven by deeply internalized values, reinforced by classroom learning, and supported by social and community influences. Themes such as the conscious reduction of single-use plastics, lifestyle shifts toward zero-waste and plant-based living, and the use of proactive strategies for habit formation emerged. Despite challenges like limited access to resources and peer pressure, students sustained their efforts through personal commitment, peer accountability, and future-oriented thinking. This study emphasizes that environmental education must extend beyond awareness to foster identity formation, community support, and systemic access to sustainable choices.

Keywords: *Environmental Sustainability, Student Narratives, Environmental Education, Green Habits*

1. Introduction

Over the past decade, environmental sustainability has increasingly emerged as a critical priority worldwide due to accelerating climate change, biodiversity loss, and natural resource depletion. This global urgency has extended deeply into educational policies and practices, reflecting the consensus that fostering pro-environmental behaviors must begin early and continue into higher education ^[1]. Within this landscape, higher education institutions hold a unique responsibility and opportunity to influence the values, attitudes, and behaviors of young adults. They serve not only as centers for knowledge acquisition but also as crucial sites for shaping students' capacity to translate theory into meaningful real-world action ^[2-3].

Research consistently shows that active engagement with sustainability education, such as participation in school gardens, sustainability campaigns, or community projects, results in marked improvements in environmental awareness, empathy for ecological issues, and a strengthened intention to adopt green habits ^[4-5]. These hands-on experiences foster not only cognitive understanding but also affective and behavioral domains, essential for long-term sustainability commitment. The multi-

dimensional nature of sustainability education thus underscores the importance of bridging formal knowledge with everyday environmental practice.

Qualitative investigations have detailed the positive effects of experiential sustainability education on students' personal and communal responsibilities. For example, nursing students engaged in carbon-footprint awareness exercises reported an enhanced understanding of air and soil pollution issues, which translated into personal initiatives such as diligent waste segregation and increased reliance on public transportation ^[6]. Similarly, Taiwanese students involved in social media and community-based sustainable food initiatives described these platforms as motivational and instrumental in shaping ongoing green habits ^[7].

Within higher education, students active in environmental advocacy organizations often cite moral obligation, peer influence, and curricula designed with action-orientation as major drivers of their sustainable behaviors ^[8]. Additionally, transformative programs grounded in design-thinking and experiential learning have demonstrated success in empowering students to overcome psychological or contextual barriers, enabling them to initiate sustainability projects ^[9]. Despite high awareness levels, research from Bangladesh and the UAE reveals that students' actual green habits vary significantly, influenced by institutional supports and socio-cultural factors, reflecting the complex interplay between knowledge, motivation, and environmental context ^[10-11].

While this rich body of literature underscores the benefits of structured educational interventions and formal sustainability curricula, there remains a significant gap in understanding how students narrate their personal, lived experiences of practicing sustainability outside of formalized programs. Much of the research focuses on institutional projects or campus initiatives, leaving underexplored the voluntary, informal green habits that students engage in during their daily lives. Critical questions persist regarding the internal motivations that drive students, the challenges they encounter, and the strategies they employ to maintain these behaviors in contexts less scaffolded by institutional frameworks.

Emerging studies, such as those by Fontan et al. ^[12] pointed out the importance of social interaction and digital activism in supporting environmental behaviors, yet they also highlight that the mechanisms of personal integration of green habits require further examination. Understanding students' narrative constructions of their environmental actions can provide richer insight into how sustainability is internalized and enacted beyond academic settings.

This qualitative inquiry aims to address this gap by exploring student narratives surrounding their experiences with environmental sustainability practices beyond the classroom. Specifically, the study is guided by two main objectives: (1) to explore how students narrate their real-life practices of environmental sustainability, and (2) to examine the motivations, challenges, and strategies that shape their commitment to practicing green habits in informal and personal contexts.

Focusing on the voices and personal stories of students, this study aims to go beyond abstract ideas and traditional classroom lessons. It explores how environmental sustainability is not just something students learn about, but something they experience in their daily lives. Through their real-life actions, challenges, and reflections, the study reveals a deeper and more meaningful understanding of what it means to care for the environment. Rather than relying only on formal education, it highlights how students live out sustainability in ways that are personal, practical, and often overlooked in standard lessons.

Through this narrative-centered approach, the study contributes to a more holistic understanding of sustainability education, emphasizing that genuine ecological commitment extends beyond classroom

instruction to become a part of students' daily identities and actions. Such understanding can inform more effective sustainability programming that embraces the full spectrum of students' ecological engagements, from institutional learning to voluntary practice

2. Literature

Environmental sustainability education has gained significant attention as a means to foster responsible behaviors among students both inside and outside the classroom. A growing body of research underscores the importance of experiential learning, motivation, and supportive environments in shaping students' commitment to green habits. While many studies focus on formal educational interventions, recent scholarship also explores the informal, voluntary practices students engage in beyond academic settings. This review synthesizes findings from diverse contexts, highlighting key themes related to educational approaches, motivational drivers, barriers faced by students, and the influence of cultural and digital factors. These interconnected aspects, the review provides a comprehensive foundation for understanding how students narrate and enact environmental sustainability in their daily lives.

2.1 Environmental Sustainability Education and Student Engagement

Many studies highlight how sustainability education in academic settings can foster environmental awareness and green habits among students. Schoenfeld-Tacher et al. ^[2] emphasized that higher education plays a pivotal role in developing students' pro-environmental values, bridging theoretical knowledge with practical application. Similarly, Fisher-Maltese and Zimmerman ^[4] found that active participation in school gardens significantly increased students' environmental empathy and motivation for sustainability practices. Berezowitz, Bontrager Yoder, and Schoeller ^[5] confirmed that hands-on projects improve not only environmental knowledge but also behavioral intentions toward sustainability. Furthermore, Borja, César, Cunha, and Kiperstok ^[13] found that students who received environmental education developed stronger pro-environmental attitudes. Similarly, Evans and Stevenson ^[14] highlighted that experiential learning through school gardening and action-based projects boosts student commitment. These studies collectively suggest that direct engagement—whether through experiential learning, projects, or advocacy—enhances students' sustainability commitment ^[2-5]. However, Cotton and Winter ^[15] cautioned that while sustainability literacy improves cognitive awareness, it does not always translate into behavior without supportive institutional culture and personal motivation.

2.2 Motivations Behind Student Green Practices

Understanding what motivates students to adopt green habits is critical. Fung & Adams ^[8], reported that moral obligation and community influence were key motivators for college students engaging in environmental advocacy. Haigh ^[16] highlighted the importance of intrinsic values and identity alignment in fostering sustained ecological behavior.

A study by O'Brien, Selboe, and Hayward ^[2] explored youth climate activism and found that social justice concerns often fuel student activism, connecting environmental issues with broader ethical considerations. Across these studies, personal values, moral commitment, and peer/community influences consistently motivate students ^[8,2]. Takshe et al. ^[11] noted that in some contexts, institutional encouragement and situational factors can outweigh personal motivation, indicating variability in drivers based on culture and environment.

Clayton ^[17] explained that emotional connectedness to nature and eco-identity are predictors of pro-environmental behavior. Schultz and Kaiser ^[18] supported this by linking intrinsic motivation to long-

term behavioral change. Kollmuss and Agyeman ^[19] proposed a comprehensive model showing how knowledge, values, and situational factors interact to shape actions. Students are also driven by peer influence and community involvement, as demonstrated by Evans and Stevenson ^[14].

2.3 Challenges and Barriers to Practicing Green Habits

Research indicates several barriers students face in sustaining green behaviors. Haque ^[10] found that despite high awareness, inconsistent institutional support and environmental constraints often hinder actual practice of green habits. a study by Nyqvist et al. ^[20] titled "The learning environment and supportive supervision promote learning and are based on the relationship between students and supervisors" discusses how supportive learning environments and supervision positively influence learning outcomes. While this study focuses on the relationship between students and supervisors, it underscores the importance of supportive environments in educational settings. Moreover, Barr ^[21] identified structural limitations, including cost and convenience, that restrict consistent practices. These findings are echoed by Barr and Gilg ^[22], who showed that personal habits often conflict with environmental ideals. Additionally, research in the field of self-determination theory highlights that supportive environment, which fulfill basic psychological needs such as autonomy, competence, and relatedness, are crucial for fostering intrinsic motivation. These environments can be found both at home and in school settings ^[23]. Further, identified digital distractions and competing academic pressures as challenges that reduce students' time and energy for sustainability efforts. Many studies recognize external barriers, such as institutional limitations and social environment, alongside internal challenges like lack of self-regulation ^[10, 20].

The digital age offers new avenues for promoting sustainability behaviors. Fontan et al. ^[12] explored how social interaction and digital activism motivate students to sustain environmental habits, noting that online platforms provide community and knowledge sharing. Sustainable Consumption in Lin ^[7] documented that exposure to sustainability content on social media positively influenced students' food choices. However, Pérez-Juárez et al., ^[24] warned about the paradox where digital distractions can simultaneously hamper sustained attention, complicating the picture of technology's role.

2.4 Informal, Cultural, and Voluntary Sustainability Actions Beyond Academics

Sustainability is often practiced in informal contexts, influenced by cultural values and voluntary efforts. Evans and Stevenson ^[14] documented how community gardens fostered engagement outside the classroom. Barr and Gilg ^[22] observed household practices like recycling and energy conservation rooted in personal ethics and routines.

While much literature focuses on formal education, studies such as those by Berezowitz et al. ^[5]. A study highlighted the importance of informal student-led initiatives and voluntary actions. Design-thinking programs encourage students to take ownership of sustainability projects outside the classroom, fostering creativity and agency ^[9].

Similarly, studies in Bangladesh and UAE show that students' informal practices often depend on situational strength and community support, reflecting diverse patterns of green habit adoption beyond structured curricula ^[10-11].

The cultural context heavily influences sustainability attitudes and behaviors. Haigh ^[16] and Sipos, Battisti, and Grimm ^[25] stressed that education must be culturally responsive to resonate with students' values and experiences. Takshe et al. ^[11] found that Middle Eastern students' green behaviors were shaped by social norms and religious values, while Sustainable Consumption in Lin ^[7] highlighted East Asian students' collective cultural orientations as supportive of sustainability.

2.5 Behavioral Change and Habit Formation Theories in Sustainability

Several studies discuss theories underpinning behavior change in sustainability. Mazar et al.,^[26] demonstrated that habit formation and self-regulation strategies significantly improve students' ability to maintain green habits. Dreyer, Sonnenberg, & Van der Merwe^[27] argued that sustainable behavior must be embedded within daily routines and supported by environmental cues. Schultz and Kaiser^[18] argued that behavior change requires reinforcement and social validation. Clayton^[17] and Kollmuss and Agyeman^[19] emphasized emotional engagement and self-identity in establishing green behaviors.

The effectiveness of sustainability education often hinges on institutional factors. Guthrie and Wigfield^[28] suggested that concept-oriented reading instruction improves motivation and skills, a principle extendable to sustainability education. Roberts et al.^[29] emphasized that structured support and collaborative learning environments help students engage more deeply with sustainability topics.

The body of existing literature robustly supports the importance of sustainability education, highlights the variety of motivations and challenges students face, and recognizes the vital role of informal and voluntary green habits. This study extends these insights by centering student narratives on their lived experiences beyond formal programs, aiming to fill a gap in understanding the personal meanings, strategies, and obstacles involved in practicing environmental sustainability in daily life.

3. Methodology

3.1. Research design

This study employed a qualitative narrative research design to explore how students articulate and make sense of their real-life experiences in practicing environmental sustainability beyond the classroom. Narrative inquiry is particularly appropriate for capturing personal stories and lived experiences, providing depth and context that other methods may overlook^[30]. It allows researchers to understand how individuals construct meaning from their experiences, especially in complex social or environmental contexts.

According to Creswell and Poth^[32], qualitative research is ideal when the aim is to explore a phenomenon through participants' perspectives in a natural setting. In this case, student narratives about green habits were collected through semi-structured interviews, allowing flexibility and depth in responses. The approach was guided by the belief that human behavior, particularly sustainability-related actions, is shaped by internal motivations, social interactions, and environmental awareness—all of which can be meaningfully expressed through personal storytelling.

Furthermore, as Braun and Clarke^[31] argue, qualitative designs are valuable in uncovering patterns in meaning, especially when analyzing reflective and emotionally driven topics such as environmental behavior. The narrative approach, coupled with thematic analysis, enabled the researcher to identify recurring motivations, barriers, and strategies within student stories, giving voice to their sustainability journeys.

3.2. Population and sampling

The target population of this study consisted of 16 college students who are active members of an environmental-related student organization from Zamboanga Peninsula, Philippines. This group was selected based on their voluntary engagement in sustainability efforts beyond the classroom, making them well-positioned to provide rich, experience-based narratives aligned with the study's objectives.

The study utilized purposive sampling, a non-probability sampling technique commonly used in qualitative research to select information-rich cases^[33]. This method ensures that participants can

meaningfully contribute to the exploration of the research questions by virtue of their lived experiences in environmental advocacy and sustainability. To qualify for participation, students had to meet the following criteria: (1) they must be currently enrolled as college students; (2) they must be active members (for at least one semester) of an environmental or sustainability-related organization; (3) they must have engaged in sustainability practices outside formal classroom requirements (e.g., community clean-ups, waste reduction habits, advocacy campaigns); and (4) They must be willing to participate in a semi-structured interview and share personal narratives.

These criteria ensured that participants had both exposure to sustainability education and practical experience in applying environmental values in everyday contexts. According to Gentles et al. ^[34], clearly defined inclusion criteria are essential in qualitative research to maintain focus and ensure the credibility and transferability of findings. The sample size of 16 participants is deemed sufficient for narrative inquiry, where depth and richness of data are prioritized over numerical generalizability ^[35].

3.3. Instrument

This study utilized a semi-structured interview guide as the primary data collection instrument. Semi-structured interviews are widely used in qualitative research because they allow for a flexible yet focused exploration of participants' experiences, ensuring consistency across interviews while also accommodating rich, narrative responses ^[36].

The interview guide was designed based on the research objectives and included open-ended questions that prompted participants to reflect on their personal experiences, motivations, challenges, and strategies in practicing environmental sustainability beyond the classroom. Questions were crafted to elicit descriptive and explanatory responses that captured the depth of participants' engagement with green habits. Follow-up probes were also used to encourage elaboration, clarify meanings, and gain deeper insights.

Prior to data collection, the interview guide was reviewed by two experts in qualitative research and sustainability education to ensure content validity and alignment with the study's goals. The instrument was pilot-tested with two students not included in the final sample to check clarity, question flow, and interview duration. Adjustments were made based on feedback to enhance the instrument's coherence and sensitivity to participants' contexts.

Using semi-structured interviews allowed the researcher to explore the complex, situated nature of sustainability practices while preserving the authenticity of participants' voices ^[37]. Furthermore, it supported the narrative approach of the study by encouraging storytelling and personal reflection, which are essential in understanding how individuals make sense of their ecological behaviors ^[38].

The **Table 1** below presents the instrument of this inquiry:

Table 1. Instrument of the study.

Objectives	Interview questions	Participants
To explore the lived experiences of students in applying environmental sustainability practices beyond the classroom.	1. Can you share experiences where you applied an environmentally sustainable habit in your daily routine?	College students who are members of Campus Environmental-related Organizations
	2. What sustainable practices have you personally committed to, and how did you start them?	
	3. How have your classroom learnings about sustainability influenced your choices and habits outside school?	

To examine the ways teacher educators model gender-responsive behavior within and beyond the classroom.	1. What motivates you to continue practicing green habits even when it's not required or graded? 2. What challenges do you face in trying to live sustainably, and how do you overcome them? 3. What personal strategies or support systems help you stay consistent in your environmental efforts?
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1.4. Data gathering procedure

The data collection for this study followed a systematic and ethical process designed to ensure the credibility and depth of the participants' responses. Upon obtaining approval from the ethics review board and securing informed consent from all participants, the researcher coordinated with the moderator of the environmental club to identify and invite 16 student members who met the inclusion criteria. Participants were briefed about the research objectives, their rights, and the confidentiality of their responses.

The primary method of data collection was one-on-one, semi-structured interviews, conducted either in person or via a secure online platform, depending on participant preference and availability. Interviews lasted between 30 to 60 minutes and were scheduled at a time convenient for each participant. Each session began with a brief rapport-building segment before proceeding to open-ended questions designed to explore students' personal experiences, motivations, challenges, and strategies in practicing environmental sustainability beyond the classroom.

All interviews were audio-recorded with the participants' permission to ensure accuracy and allow for detailed transcription. Field notes were also taken to capture non-verbal cues, contextual information, and emerging observations. Immediately after each interview, recordings were transcribed verbatim. Participants were then given the opportunity to review their transcripts for accuracy (member-checking), a technique that enhances credibility and participant validation in qualitative research ^[39].

The process continued until data saturation was reached—that is, when no new themes or insights emerged from subsequent interviews ^[40]. The transcribed data were then organized and prepared for thematic analysis, following established qualitative protocols.

3.5. Data analysis

The data obtained from the semi-structured interviews were analyzed using thematic analysis, a method known for its systematic approach in identifying, interpreting, and reporting patterns or themes within qualitative data. This approach, as outlined by Braun and Clarke ^[41], was particularly well-suited for this study because it allows for a rich, detailed, yet nuanced account of student narratives regarding their environmental sustainability practices.

The analysis began with a process of deep familiarization, wherein the researcher repeatedly read through all interview transcripts and accompanying field notes to develop an intimate understanding of the content. This immersion enabled the identification of meaningful patterns and subtleties in participants' experiences. Following this stage, the researcher manually generated initial codes by highlighting significant statements and responses that related to the research objectives. These codes served as the building blocks for later theme construction, allowing for a structured organization of data according to emerging ideas.

Once coding was complete, the researcher carefully examined the data for recurring concepts and grouped similar codes together to form potential themes. These preliminary themes were then rigorously

reviewed against the entire dataset to ensure they were coherent, internally consistent, and clearly distinguishable from one another. The refinement process included rechecking the original data to verify the accuracy and representativeness of each theme.

Each finalized theme was then clearly defined and named, focusing on the underlying story it revealed about the participants' environmental habits, motivations, and challenges. These themes were contextualized within the scope of the research questions and supported by direct quotations from participants to preserve authenticity and voice.

To enhance the credibility and trustworthiness of the analysis, several strategies were implemented. One was member checking; wherein selected participants were asked to verify the accuracy of their interview transcripts and to provide feedback on the interpretations drawn from their narratives. Triangulation across participant responses was also used to identify consistencies and divergences, thereby enriching the depth of interpretation ^[42].

Finally, the themes were written up as part of the findings, integrating direct excerpts from interviews and making connections to relevant literature to provide a comprehensive and meaningful interpretation of how students practice and experience environmental sustainability beyond the classroom.

3.6. Ethical considerations

This study strictly adhered to ethical standards in conducting qualitative research involving human participants. Prior to data collection, the researcher sought and received approval from the institutional research ethics board to ensure that the study complied with established ethical guidelines. All participants were given a clear and comprehensive informed consent form, which explained the purpose of the study, the voluntary nature of their participation, and their right to withdraw at any point without any consequences. Participants were also informed that their responses would be used solely for academic purposes and that all data would be treated with strict confidentiality.

To protect the privacy and identity of the participants, all names and identifiable information were replaced with pseudonyms during transcription and analysis. Audio recordings and transcripts were stored securely in password-protected digital folders accessible only to the researcher. The interview process was designed to minimize discomfort and was conducted in a respectful and non-coercive manner, ensuring that participants felt safe and heard throughout.

Moreover, participants were reminded that there were no right or wrong answers and that their honest reflections were valuable regardless of their stance or experiences. They were also given the opportunity to ask questions before, during, and after the interview process, promoting transparency and mutual trust. As an added layer of ethical assurance, member checking was conducted with selected participants, allowing them to review the accuracy of their statements and to affirm that their perspectives were interpreted appropriately.

Overall, the study prioritized the dignity, autonomy, and well-being of each participant, recognizing their narratives not merely as data, but as meaningful contributions to the understanding of student-led environmental sustainability efforts.

4. Results

Research Objectives 1. To explore the lived experiences of students in applying environmental sustainability practices beyond the classroom

Question No. 1. Can you share experiences where you applied an environmentally sustainable habit in your daily routine?

1.1 Conscious Reduction of Single-Use Plastics

13 out of 16 participants, a major recurring experience shared by the majority of respondents was their deliberate avoidance of single-use plastics in daily life. This behavior was often rooted in an internalized sense of responsibility cultivated through their involvement in environmental organizations. Students described carrying reusable utensils, tumblers, and cloth bags as part of their routine—even when it was inconvenient. This theme shows how personal lifestyle shifts were deeply influenced by environmental awareness gained through organizational activities. The students' commitment also extended to influencing others in their personal spheres.

“When I go out to eat, I bring my own utensils and water bottle even if my friends tease me for carrying so many things. I remember how many plastic utensils we collected during our campus clean-up drive, and that image stuck with me. I realized I cannot be an advocate in school and ignore the problem when I am outside. It’s about integrity. It may seem like a small act, but when it becomes a habit, it becomes part of who you are.”

“Every time I order food, I message the seller not to include plastic utensils and straws. It used to be awkward, but now I find it empowering. It feels like my little protest against the system. I also convinced my family to use refillable containers when we buy cooking oil and laundry soap. At first, they found it weird, but now they say it saves money, too.”

1.2 Sustainable Commuting and Transportation Choices

10 out of 16 students described altering their transportation habits by walking, biking, or commuting through eco-friendlier options. The decision was often described as a conscious sacrifice—sometimes of convenience—but was viewed as a moral and environmental responsibility. This theme illustrates how students negotiated between lifestyle convenience and environmental responsibility, often making difficult but purposeful choices. Their narratives reflected a desire to embody the values they promoted in their organizations.

“I used to take tricycles even for short distances, but after our seminar on carbon emissions, I started biking to school. At first, it was tiring and I had to adjust my schedule. But over time, it became my quiet time before class. I even calculated how much fuel I saved and the impact on my carbon footprint. Now I feel guilty when I ride unnecessarily.”

“I do not have a car and I do not plan to get one anytime soon. I prefer using the jeepney or even walking. Sometimes my classmates say I’m ‘trying too hard,’ but I explain that if I speak about sustainability and do not live it, what’s the point? The choice to commute consciously is my way of showing consistency.”

1.3 Household-Based Sustainability Practices and Influence on Family

9 out of 16 students described how their involvement in environmental groups extended to creating change at home. They took the lead in starting household practices like waste segregation, composting, and reducing energy consumption. This theme reveals how students acted as agents of change in their families. Their knowledge and advocacy did not stay within the walls of the school or organization but became catalysts for long-term change in their households.

“At home, I introduced the idea of using eco-bricks for non-biodegradable plastics. I taught my younger siblings how to segregate trash properly, and now it’s a family habit. We even started composting food waste, although it took some time to learn how to do it right. What makes me proud is that these were changes I brought to our home.”

"My family used to throw everything in one trash bin. After I joined the Zero Waste campaign on campus, I made separate bins at home and labeled them. At first, my parents did not take it seriously, but after I showed them videos and explained the logic, they started to get involved. Now, my mother reuses containers, and my father stopped burning leaves."

Question No. 2. What sustainable practices have you personally committed to, and how did you start them?

2.1 Commitment to Plant-Based or Reduced-Meat Diets

11 out of 16 participants shared that they had either fully shifted to plant-based diets or consciously reduced their meat consumption due to its environmental impact. Their decisions were often influenced by seminars, online documentaries, and organizational discussions about the carbon footprint of the livestock industry. The shift was gradual for most and came with both internal struggles and social resistance. This theme shows that for many students, dietary change was not just a nutritional decision but a deep moral commitment tied to ecological awareness and personal accountability. Their narratives reveal ongoing reflection, adaptation, and values-driven discipline.

"I never thought I could stop eating meat because I grew up in a family where every meal had chicken or pork. But after attending a climate talk hosted by our organization, where a speaker discussed how livestock farming contributes to greenhouse gas emissions, I started questioning my habits. I began with Meatless Mondays, and now I only eat meat on rare occasions. It was not easy, especially during family gatherings where people would question my choice, but I remind myself that sustainability requires sacrifice and consistency. It is my way of taking responsibility for my impact."

"I did not go vegan overnight. It started with curiosity after we screened 'Cowspiracy' in one of our club meetings. I started researching and slowly replaced meat with plant-based alternatives. At first, I was worried about nutrition and cost, but I learned how to cook with lentils, tofu, and local vegetables. It became a journey of self-discovery as well. It made me more conscious about food justice, not just the environment."

2.2 Zero-Waste and Low-Waste Lifestyle Integration

10 out of 16 participants discussed the lifestyle shift they made toward a zero-waste or low-waste approach, which included reducing consumption, eliminating single-use items, and practicing reuse and upcycling. These changes were often inspired by organizational workshops, social media influencers, and personal observation of the waste problem in their communities. This theme highlights how firsthand experiences and emotional encounters with environmental degradation sparked serious personal change. The students' efforts extended beyond personal habit, often involving advocacy and community education.

"The turning point for me was when we did a waste audit on campus. Seeing the actual amount of plastic we used in just one day shook me. I started bringing reusable containers for takeout, making my own shampoo bars and toothpaste, and refusing anything wrapped in plastic unless absolutely necessary. At first, it was overwhelming and people thought I was just being extra. But over time, I found joy in learning to make things by hand, supporting local eco-stores, and even holding workshops for my barangay. It is not perfection; it is persistence."

"My commitment to zero-waste living began after we visited an urban landfill as part of our organization's field trip. The sight was traumatic—the smell, the volume, the people scavenging—and I told myself I never want to contribute to that again. Since then, I've started making small switches, like using menstrual cups instead of disposable pads, buying in bulk, and saying no to freebies. I log my waste weekly and try to go a whole day without producing trash. It is hard, but I feel more in control and aligned with my values."

2.3 Active Energy Conservation and Mindful Consumption

9 out of 16 students also emphasized their long-term commitment to conserving energy and being more mindful of their consumption patterns. These efforts included unplugging appliances when not in use, choosing secondhand items, limiting gadget use, and encouraging others to adopt the same practices. For many, these habits were adopted after reflecting on their carbon footprint and becoming aware of resource scarcity. This theme captures how ecological values influenced not just environmental actions but broader lifestyle and financial decisions. The students' stories emphasize the intersection between ethics, resource conservation, and personal growth.

“We had a seminar about climate justice where we discussed energy poverty and the reality that many communities still do not have access to electricity. That stuck with me. Since then, I made it a personal rule to unplug everything when not in use, turn off unnecessary lights, and buy only what I need. I also stopped using air-conditioning at night and use a fan with a timer instead. I even talked to our landlord about installing solar panels and switching to LED bulbs. These habits started as small acts, but now they are part of my identity.”

“I used to be a shopaholic—I would buy things I did not need, especially fast fashion. After our zero-waste fashion talk, I made a conscious decision to quit impulse buying. Now, I only buy clothes from thrift stores or swap with friends. I keep a spending journal and ask myself before buying: ‘Do I really need this?’ I feel less wasteful and more empowered. It is not about depriving myself but being mindful and intentional.”

Question No. 3. How have your classroom learnings about sustainability influenced your choices and habits outside school?

3.1 Classroom Knowledge as a Catalyst for Reflection and Action

12 out of 15 respondents described their classroom discussions and lessons about sustainability as eye-opening experiences that deepened their awareness and served as a foundation for practical change. These students spoke of lectures, reports, and campaigns in class that introduced them to global environmental problems and local solutions, which later became personal causes or behaviors. This theme highlights that classroom content—when participatory and personally reflective—can become a springboard for sustained action. These students began to see themselves as responsible agents rather than passive learners.

“Before taking my environmental science class, I did not think much about my own impact. We learned about carbon footprints and did an activity where we calculated ours. I was shocked by how much waste I produced just from daily routines. After that, I made specific changes—like walking to school, refusing plastic straws, and making my own eco-bricks. What I learned in class stayed with me and made me look at my actions more critically.”

“One assignment I still remember was when we had to audit our home energy use and suggest ways to reduce it. That activity made me realize that I was leaving my laptop and lights on all the time. I started being more disciplined—now I even encourage my siblings to unplug chargers and avoid long showers. That one class task ended up shaping how I run our home.”

3.2 Influence of Group Projects and Environmental Clubs on Behavioral Change

10 out of 15 respondents pointed to group projects, student-led campaigns, or involvement in school-based environmental clubs as highly influential in shaping their sustainability choices. These learning environments encouraged students not only to gain knowledge but also to collaborate on actionable initiatives, such as zero-waste drives, awareness campaigns, and community clean-ups. These collaborative experiences created a sense of accountability and belonging that extended beyond the classroom. This theme underscores how social learning, peer collaboration, and leadership opportunities in classroom-

based contexts can reinforce sustainable habits and empower students to carry them into their personal lives.

"I joined our Green Advocates club partly because our teacher encouraged us after a sustainability module. Being part of the group made everything more real—suddenly, sustainability was not just something to read about. We did campus clean-ups, planted trees, and hosted workshops for younger students. At home, it changed how I speak to my parents about food waste and recycling. It gave me the confidence to act on what we learned in class."

"Group projects in our Environmental Issues class really opened my eyes. We had to design and present a sustainable lifestyle model. It made me think deeply about my everyday decisions—what I eat, wear, and throw away. Since then, I have become more committed to tracking my waste and even started composting at home. It was not just an academic exercise—it was a life-changing challenge."

3.3 Realization of Interconnectedness and Global Responsibility

7 out of 15 students described a philosophical shift brought on by their classroom experiences. These students spoke less about specific activities and more about a growing awareness of their interconnectedness with others and the environment. Their learning in class, particularly about climate change, ecological footprints, and the concept of sustainability justice, helped develop a more global and long-term perspective. This theme illustrates how classroom learning can spark ethical and emotional commitments that go beyond mere compliance. These students internalized sustainability not just as an academic topic, but as a personal and moral responsibility.

"We had this discussion in class about the Anthropocene and the role of humans in shaping the Earth's future. That really stayed with me. It made me see how small actions can have big ripple effects. I now try to think globally—even when I throw something away or choose what to eat, I ask, 'How does this affect the planet?' It is about living with intention and care."

"In class, we learned about how climate change affects vulnerable communities first. That stuck with me. I realized that my wasteful habits or excessive energy use could contribute to someone else's suffering. Since then, I try to be more conscious—not out of guilt, but because I believe I have a role in making things better."

Research Objectives 2. To examine the personal motivations, challenges, and strategies students encounter in maintaining green habits in their daily lives.

Question No. 1. What motivates you to continue practicing green habits even when it is not required or graded?

1.1 Intrinsic Sense of Responsibility Toward the Environment

13 out of 15 respondents shared that they continue practicing green habits because of a deep, personal sense of responsibility. This motivation often came from awareness gained through prior learning, family upbringing, or life experiences that made environmental protection feel like a moral duty. These students expressed that they do not need external rewards or academic incentives because they view sustainable behavior as a non-negotiable part of being a responsible human being. This theme emphasizes that internalized values, not external validation, often drive sustained green behaviors. Students who personally identify with environmental causes are more likely to continue sustainable habits voluntarily.

"Even if there is no grade involved, I still avoid using plastic and sort my trash properly. I feel like it is just part of being a decent person. I have seen how dirty our rivers have become, and I think if I

contribute even a small act, that is already something. I cannot unsee the problems we talked about in class—it is part of my values now."

"I do not need to be told what to do when it comes to saving the environment. It is just something that feels right. My mom always taught me to reuse and recycle, and when I studied environmental science, everything clicked. Now I do it because I genuinely care. Even if others do not, I want to make sure I am doing my part."

1.2 Influence of Role Models and Community Accountability

10 out of 15 students cited the influence of role models—such as parents, teachers, or peers—and their social environment as a driving force in maintaining green habits. Knowing that others were watching or that they belonged to a group that upheld sustainable principles gave them a sense of accountability. These students spoke of family expectations, peer norms, or shared goals within environmental organizations that made quitting unsustainable. This theme highlights the power of social influence and collective identity in reinforcing green behaviors, especially when environmental values are shared and visible in the community.

"My best friend is super eco-conscious. She carries her tumbler and reusable bag everywhere, and just being around her makes me more mindful. Even when no one is grading me, I keep doing these habits because we hold each other accountable. It is like a lifestyle we both commit to."

"Being in our environmental club keeps me on track. We have this unspoken rule of practicing what we preach, so if I am seen using single-use plastics, it feels like I am betraying our advocacy. That social pressure actually helps me stay committed. It is motivating to be around people who believe in the same cause."

1.3 Hope for the Future and Desire for Impact

10 out of 15 students said their continued practice of green habits stems from a sense of hope that their actions, however small, can contribute to larger change. These students acknowledged that environmental problems are massive, but they find motivation in the idea that individual behavior—when multiplied—can help shape a better future. Some also mentioned how seeing younger siblings or children influenced them to become role models. This theme illustrates how future-oriented thinking and the desire to leave a positive legacy can serve as a strong motivator, especially when students view their choices within a larger social and environmental framework.

"Sometimes I get tired, like when I have to look for places to refill my bottle instead of just buying one. But I keep going because I know every bit helps. I think of my future kids, or even just my younger cousins, and I do not want them to grow up in a world worse than ours. That thought alone pushes me to keep doing what I can."

"There are moments when I feel like my small efforts do not matter. But then I see stories online about how collective action works—like people banning plastics or building community gardens. It reminds me that I am not alone, and that fuels me. I continue because I want to be part of the solution."

Question No. 2. What challenges do you face in trying to live sustainably, and how do you overcome them?

2.1 Lack of Access to Sustainable Alternatives

11 out of 15 respondents emphasized the difficulty of accessing sustainable resources, such as refilling stations, affordable eco-friendly products, or accessible public transportation. Many shared how their intentions often clash with real-world limitations, especially in areas where environmental options are either unavailable or unaffordable. These barriers created frustration and forced students to compromise

their ideals at times. This theme shows that systemic and logistical limitations often hinder students' sustainable goals. Despite the desire to live eco-consciously, access and affordability remain major barriers.

"I try to avoid single-use plastics, but sometimes it is not possible. If I forget my tumbler or containers, there are no options in nearby stores or cafeterias. Even biodegradable packaging is expensive. I want to be consistent, but the system makes it hard. I just do my best and try not to be too hard on myself when I fail."

"Transportation is another problem. I want to reduce my carbon footprint, but public transport here is unreliable and not always safe. Sometimes I have to take a car or grab, which goes against what I believe in. I try to walk more when possible or take trips with friends to carpool."

2.2 *Peer Influence and Social Pressure*

11 out of 20 participants shared how peer influence can become a challenge, especially when sustainability is not a priority in their social circles. They spoke about being teased, misunderstood, or feeling like outsiders for refusing disposables or speaking up about environmental issues. These situations often made it difficult to stay consistent with their values. This theme underscores the emotional and social strain that comes from resisting peer norms. Students need courage and strong internal motivation to stay true to their principles when surrounded by indifference.

"I have been called 'too extra' for bringing my own utensils or reusable straw. Some people roll their eyes like I am being dramatic. It gets to me sometimes, and I feel tempted to just go with the flow. But I remind myself why I started and focus on the bigger picture."

"When we hang out, most of my friends do not care about sustainability. They order takeout with lots of packaging, or leave the lights and aircon on. I used to stay quiet, but now I speak up a little, or just quietly do my part. I try not to preach, but to lead by example."

2.3 *Time Constraints and Mental Exhaustion*

9 out of 15 students revealed that practicing green habits demands extra time and effort—something they often struggle with due to academic workloads, family responsibilities, and personal stress. Even those with strong motivation admitted that mental exhaustion sometimes leads them to revert to more convenient but less sustainable choices. This theme highlights the internal conflict between intention and capacity. Students are aware of what they want to do, but time and energy constraints often challenge consistency.

"There are times when I am just too tired to prepare a packed meal or walk to a refilling station. After long classes or exams, I just want convenience, even if it means using plastic. I feel guilty afterward, but I remind myself that I am trying. Perfection is not the goal—progress is."

"Being sustainable takes planning. You have to bring your eco-bag, check labels, and sometimes travel farther for better options. When I am swamped with schoolwork or feeling drained, I do not have the mental energy to keep it up. But I bounce back the next day and try again."

Question No. 3. What personal strategies or support systems help you stay consistent in your environmental efforts?

3.1 *Habitual Planning and Conscious Decision-Making*

12 out of 15 students reported that intentional habit-building—such as preparing ahead of time, tracking their habits, and setting small achievable goals—helps them maintain consistency in their green practices. For these students, planning is not only about convenience but also about making sustainability

second nature. This theme shows how intentional and proactive behaviors, reinforced over time, allow students to internalize sustainability as a lifestyle rather than an occasional effort.

"I always pack my eco-bag, utensils, and water bottle in my bag the night before. That way, I have no excuse when I go out. Over time, it became part of my routine. I do not have to think about it anymore; it is just something I do—like brushing my teeth."

"I use a habit-tracker app where I log things like refusing plastic or composting leftovers. It keeps me accountable and reminds me that even small wins count. It feels good to check things off and see my progress."

3.2 Peer Support and Community Encouragement

9 out of 15 students identified the importance of being part of an environmentally conscious group—either through student organizations, family support, or friendship circles. These communities provided not only motivation and shared responsibility but also emotional encouragement when faced with setbacks. This theme emphasizes how social environments can nurture consistent behavior. When students feel part of a supportive ecosystem, they are more likely to sustain their environmental commitments.

"Our org always reminds us why we started. We do monthly cleanups, post infographics, and encourage each other to stay consistent. It feels like we are all in this together, so I do not feel alone in my efforts."

"My roommate is also into eco-living, so we challenge each other to use less plastic or reduce our electricity. We share tips and celebrate progress. Having someone who understands makes all the difference."

5. Discussion

The findings of objective 1 reveal that students' sustainability practices beyond school walls are intentional, consistent, and value-driven. These behaviors are not superficial gestures but sustained habits rooted in identity, moral obligation, and the influence of educational and social experiences.

First, the most prominent behavior shared by students was the conscious reduction of single-use plastics, with 13 out of 16 participants integrating reusables into their daily routines. This habit was not practiced out of convenience but as a deliberate act of environmental responsibility, often motivated by their involvement in clean-up drives and awareness campaigns. Students described how those hands-on experiences gave them a sense of personal accountability. This echoes Fisher-Maltese and Zimmerman ^[4], who found that active participation in school gardening built emotional empathy, which translates into real-life sustainable actions. Likewise, Clayton ^[17] emphasized the role of eco-identity and emotional connection to nature as powerful drivers of consistent pro-environmental behavior. The students' persistence in using reusable items, even when teased or inconvenienced, indicates that these choices had become internalized, not just externally motivated.

Second, 10 participants described making conscious commuting choices, opting to walk, bike, or take public transportation instead of more convenient but environmentally costly options. These actions reflect not only environmental awareness but also a willingness to sacrifice comfort for consistency with personal values. This supports Haigh's ^[16] argument that sustainable behavior becomes enduring when aligned with a person's values and identity. The narratives suggest that after learning about carbon emissions and climate responsibility, students re-evaluated their everyday transportation habits—showing what Kollmuss and Agyeman ^[19] call the integration of knowledge, emotional engagement, and social pressure in shaping sustained actions.

Third, many students brought sustainability practices into their households, initiating habits like composting, waste segregation, and energy conservation. These accounts suggest that students are not passive recipients of environmental education—they are agents of change within their families. This affirms what Evans and Stevenson ^[14] observed: that when students engage in meaningful sustainability efforts in school, they are more likely to replicate and advocate for those behaviors at home. Moreover, this kind of household-level influence aligns with Barr and Gilg ^[22] who argue that environmental practices often emerge from personal ethics and are sustained through everyday routines and community reinforcement.

Fourth, 11 students committed to plant-based or reduced-meat diets, with decisions shaped by seminars, documentaries, and discussions about the environmental impact of livestock farming. These changes were described as gradual but deeply intentional, reflecting both moral awareness and discipline. Students also acknowledged social resistance from family or peers, but remained consistent. This pattern supports Schultz and Kaiser ^[18], who noted that intrinsic motivation and personal conviction are strong predictors of long-term behavioral change, especially in contexts that require sacrifice or face opposition.

Fifth, the shift toward a zero-waste or low-waste lifestyle—reported by 10 students—was often catalyzed by powerful visual experiences, such as waste audits or landfill visits. These emotional encounters sparked a need to reduce personal consumption and educate others. This confirms Clayton's ^[17] assertion that emotional reactions to environmental issues often precede behavioral change. Additionally, the influence of digital platforms, where students learned from eco-influencers or zero-waste advocates, aligns with Fontan et al. ^[12] who found that online communities and knowledge sharing can strengthen sustainable behaviors by providing models and encouragement.

Sixth, students emphasized energy conservation and mindful consumption, often rooted in classroom lessons about climate justice and global inequalities. They described how understanding energy poverty and resource scarcity inspired them to unplug appliances, limit gadget use, and shift their consumption habits. This outcome reflects how sustainability education can foster not just awareness but a sense of global responsibility. The transformation from lesson to lifestyle supports Berezowitz et al. ^[5], who found that when learning tasks involve personal reflection and application, they are more likely to influence behavior.

Lastly, most students noted that their sustainability choices were directly influenced by what they learned in class, particularly through experiential assignments, group projects, and active involvement in campus organizations. Activities like carbon footprint tracking or home energy audits became turning points. This finding aligns with Cotton and Winter ^[15] who observed that knowledge alone isn't enough—students need engaging, reflective, and empowering experiences to internalize sustainable values.

The results of the second objective reveal a nuanced picture of how students sustain their environmental practices: largely driven by internal values and social contexts, while navigating real-life obstacles through proactive strategies and supportive communities.

To begin, the most prominent motivation cited by students was their intrinsic sense of responsibility to protect the environment. Thirteen out of fifteen respondents mentioned that they practice sustainability not because it is required, but because it aligns with their values and identity. Many linked this sense of duty to early exposure from family or formative educational experiences. This internal motivation aligns with what Schultz and Kaiser ^[18] observed—that intrinsic values are key predictors of long-term behavior. Similarly, Clayton ^[17] emphasized how a strong eco-identity, once formed, often sustains action even without external rewards. The students' firm stance—that sustainability is "just part of being a decent person"—shows the moral grounding of their behavior.

In addition, the influence of role models and peer accountability emerged as a strong motivational factor. Ten respondents said that being around like-minded individuals or belonging to eco-conscious groups helped them stay consistent. This supports Evans and Stevenson ^[14] who highlighted that peer collaboration and shared action foster sustainable behavior by creating collective accountability. When sustainability becomes a shared norm, students feel a deeper responsibility—not just to the environment, but to their community. This sense of mutual reinforcement makes the behavior feel less like an individual burden and more like a group identity.

Another key motivation was a hope for the future and a desire to make a positive impact. Ten students said that envisioning a better world for younger generations or contributing to larger change helped them push through the difficulties. These reflections resonate with O'Brien, Selboe, and Hayward ^[3], who emphasized that youth activism is often driven by future-oriented thinking and moral alignment. Even when results are not immediately visible, students remained hopeful, drawing strength from the idea that collective small acts matter.

However, sustaining green habits also came with significant challenges. The most common was the lack of access to sustainable alternatives—shared by 11 students. Despite their commitment, students expressed frustration over limited refilling stations, high prices of eco-friendly goods, and poor public transportation. This supports Haque ^[10] and Barr ^[21], who found that structural barriers—such as cost and convenience—can limit behavioral follow-through, regardless of awareness. The students' experiences show that motivation alone is insufficient without a supportive system, a concern echoed in Takshe et al. ^[11] who highlighted the role of institutional and environmental context.

Another challenge was peer pressure and social discomfort. Eleven students shared how they were ridiculed, misunderstood, or felt isolated because their friends were indifferent to sustainability. This echoes the findings of Kollmuss and Agyeman ^[19], who noted that even with strong values, social norms can inhibit action. The emotional labor of going against the grain—especially in youth culture—requires not only motivation but also resilience. Many students managed this by quietly modeling behavior rather than confronting peers, showing a mature approach to advocacy.

A third challenge was time and mental exhaustion. Nine students admitted that when overwhelmed, they sometimes reverted to convenience—even if it conflicted with their principles. This internal conflict mirrors the findings of Clayton ^[17], who pointed out that sustainable behavior requires cognitive and emotional effort. The daily grind of school, family, and mental health can clash with sustainability, making consistency difficult. Yet, most students acknowledged these moments without guilt and returned to their practices when able—showing that flexibility, not perfection, keeps them committed.

To cope with these challenges, students described several strategies. The most effective was habitual planning and conscious decision-making, reported by 12 respondents. They prepared the night before, used habit trackers, or set realistic goals. This confirms what Mazar et al. ^[26] found—that building sustainability into routines through habit formation increases follow-through. When behaviors become automatic, they demand less mental energy, reducing the likelihood of burnout or relapse.

Another important support was peer and community encouragement. Nine students said being part of a group that shared their values—whether friends, family, or clubs—made a significant difference. This reflects Fontan et al. ^[12] who emphasized the role of social groups and online communities in reinforcing sustainable behavior. The shared efforts provided both emotional validation and accountability, helping students stay on track even when personal motivation wavered.

The findings from both objectives underscore that students' sustainable actions beyond the classroom are not merely extensions of school requirements but are deeply rooted in personal values, social influences, and a sense of environmental responsibility. From reducing plastic use and choosing sustainable transport to overcoming peer pressure and systemic limitations, students demonstrate that environmental commitment is both a personal and communal journey. Their stories reveal that while formal education sparks awareness, it is the internalization of values, the presence of supportive communities, and practical habit-building that sustain long-term green behaviors. These insights affirm that empowering students through meaningful learning experiences and enabling environments—both in and out of school—is essential in nurturing a generation that not only understands sustainability but lives it with intention and resilience.

6. Conclusion

This study set out to explore the lived experiences, motivations, challenges, and strategies of college students in sustaining environmentally responsible habits beyond the classroom. Drawing from the narratives of 16 students actively engaged in environmental organizations, the findings revealed that sustainability is not merely an academic concept for these youth—it is a deeply personal, evolving commitment that manifests in various domains of daily life.

Students demonstrated a strong internalization of environmental values, evidenced by consistent behaviors such as avoiding single-use plastics, shifting transportation habits, introducing sustainable practices at home, and adopting mindful consumption patterns. These actions were often initiated or reinforced by classroom lessons, organizational involvement, and exposure to environmental campaigns and seminars. Importantly, the influence of these formal and informal learning experiences extended well beyond compliance, fostering reflection, ethical awareness, and a redefinition of daily routines.

Motivations for sustaining these habits stemmed from an intrinsic sense of moral responsibility, social accountability, and a future-oriented hope that personal actions could drive broader environmental change. At the same time, students faced tangible challenges—lack of access to sustainable alternatives, peer pressure, and mental fatigue—highlighting the systemic and social barriers that can undermine even the most committed individuals. Yet, through proactive strategies such as habit planning, peer support, and community engagement, many found ways to stay consistent in their green efforts.

In sum, the study concludes that students' sustainability practices beyond the classroom are shaped not only by knowledge, but also by identity, values, community, and context. These findings reinforce the idea that fostering environmental responsibility among the youth requires more than education—it demands a supportive ecosystem that nurtures behavior change, personal reflection, and long-term engagement. By amplifying student voices and recognizing sustainability as a lived narrative, this research contributes valuable insight to educators, policymakers, and advocates seeking to bridge the gap between environmental education and real-world ecological action.

Conflict of interest

The authors declare no conflict of interest.

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