Research Paper

Sustainability Awareness and Behavior of Management Accounting Students: Basis for Course Activity Development

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Abstract

Sustainability refers to both the planet's health and humanity's future well-being, encompassing actions humans take to prevent the depletion of natural resources. Education for Sustainable Development (ESD) plays a vital role in course curricula by helping students develop critical thinking, decision-making, socio-emotional, and behavioral skills. This study examined the awareness and behavior of BS Management Accounting (BSMA) students regarding the three pillars of sustainability as well as the relationship between sustainability education and their awareness and behavior. Using the Knowledge-Attitudes-Practices (KAP) and Knowledge-Attitude-Behavior (KAB) frameworks, this quantitative descriptive research collected data from 349 out of 399 BSMA students (87.47% participation rate) enrolled during SY 2023–2024 at the University of Saint Louis, Northern Philippines. The results revealed that students were generally aware of sustainability and exhibited positive attitudes toward sustainable practices. Enrollment in the SASA 1013 course significantly increased sustainability awareness, but neither year level nor course enrollment had a significant impact on actual sustainability behavior. This study offers insights into the relationship between students' sustainability awareness and their behavior across the three sustainability pillars. The novelty of this research lies in its focus on BSMA students and the specific role of the SASA 1013 course in fostering sustainability awareness. The study concludes with recommendations for curriculum development and policy initiatives to further promote students' long-term sustainability awareness and behavior.

Keywords: *Course Activity Development; Education for Sustainable Development; Management Accounting; Sustainability Awareness; Sustainability Behavior*

INTRODUCTION

In the twenty-first century, achieving sustainability has emerged as a crucial issue worldwide. The integration of environmental health, social equity, and economic vitality to create a thriving, healthy, diverse, and resilient community for the present and future generations has become a burning topic involving individuals, communities, organizations, countries, and the world as a whole. The concept of sustainability continues to gain interest among businesses and other sectors of the corporate world. As a response to issues regarding sustainability, the Securities and Exchange Commission Philippines mandated publicly listed companies to report on sustainability and measure and monitor the contribution of PLCs to the universal goals of sustainability.

Accordingly, empowering youth through education emerges as a critical tool for promoting sustainable development. Education has transformative potential in encouraging young involvement, skill acquisition, and self-reliance, all of which are necessary for nation-building and sustainable development. Moreover, the mediation of education on sustainability is an effective way to promote sustainable development by nurturing individual knowledge and attitudes toward sustainability. Numerous studies have highlighted the significance of education in supporting sustainable development. Acknowledging the centrality of education to sustainable development, India's National Education Policy 2020 (Panditrao & Panditrao, 2020) has sought to align its objectives with the Sustainable Development Goals outlined by the United Nations (Singh et al., 2024). This policy recognizes the need to impart learners with the knowledge, skills, and values required to contribute to a more sustainable future. The policy emphasizes the integration of

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sustainability principles across all levels of education, with a focus on developing students' critical thinking, problem-solving, and action-oriented competencies.

Nonetheless, the implementation of sustainable education continues to face barriers from teachers' perspectives. Research has highlighted a range of hurdles, including lack of training, limited resources and resistance to change, which impede the effective integration of sustainability concepts into classrooms (Parry & Metzger, 2023).

To increase economic prosperity, protect natural resources, and social stability, an action plan was developed by UNESCO under the 2030 Agenda for Sustainable Development, which was soon adopted by different countries, including the Philippines. This incorporates SDG4—which emphasizes promoting quality education—It aims at ensuring that every learner can acquire the knowledge and skills needed for this purpose. Further, the Commission on Higher Education strategic plan for 2011-2016 contains a roadmap to reform higher education institutions (HEIs) and includes an initiative by the Philippines in response to UNESCO's 21st Agenda, which will integrate Education for Sustainable Development (ESD) into higher education. For years, the ESD has implemented practical strategies based on previous initiatives that have promoted environmental conservation, climate mitigation and adaptation as key to sustainable development among HEIs in the country (Balanay & Halog, 2016).

Despite these efforts, studies investigating students' sustainability behavior and awareness have revealed that students' awareness and behavior toward sustainability differ. While some have expressed positive attitudes toward the societal, economic, and educational aspects of sustainable development (Abu-Al Ruz et al., 2018), others have expressed low awareness, notably of environmental conservation and renewable resources (Alsaati et al., 2020). Conflicts develop in students' interest in sustainability education, with some studies emphasizing enthusiasm for environmental concerns and others indicating a lower tendency toward sustainability learning (Kholi and Poohyanmehr, 2015).

In light of this, the study focused on determining the level of awareness and behavior of BSMA students along the 3 pillars of sustainability and the relationship between education for sustainability and students' sustainability awareness and behavior. This study also presented activities or programs that can influence students' awareness and behavior to further develop the SASA 1013 course. Beyond knowledge and understanding environmental and social issues, education for sustainability also aims to affect attitudes, change behaviors, and promote competencies needed to shape a sustainable future (Kleespies & Dierkes, 2022). The critical question is, what type of education is necessary for us to pursue our various cultural and context-specific paths toward sustainability?

LITERATURE REVIEW

Theoretical Framework

This study employs the Knowledge-Attitude-Behavior (K-A-B) model to explore the relationship between knowledge, attitudes, and behaviors regarding sustainability. This model posits that knowledge influence attitudes that shape behaviors. This model emphasizes the interconnections among awareness, intention, and willingness, translating them into actionable knowledge and behaviors.

Knowledge is defined as information derived from credible sources and is recognized as factual (Trevethan, 2017). However, confusion arises as "knowledge" and "awareness" are frequently used interchangeably in the literature. Multiple dictionaries equate the two, leading to ambiguity. Sammalisto et al. (2016) highlighted sustainability knowledge as critical for understanding its importance and guiding actions. Awareness, described by Reinhardt et al. (2015) as background information on a subject, encompasses cognitive abilities to perceive and assess

situations. Ahmed et al. (2019) and Nketsiah et al. (2023) further elaborated that awareness enables informed decision-making and effective performance. To maintain clarity, this study uses "knowledge" and "awareness" synonymously.

The KAP model serves as a structured survey tool to evaluate what individuals know (knowledge), believe (attitudes), and do (practices) about specific topics (Nguyen et al., 2019; Andrade et al., 2020). KAP data can reveal knowledge gaps, behavioral patterns, and barriers to understanding, facilitating problem-solving (World Health Organization, 2008). Previous research emphasizes the connection between knowledge, attitudes, and practices (Valente et al., 1998), with education acting as a catalyst for increasing awareness and influencing attitudes. Kholi (2015) and Al-Naqbi and Alshannag (2018) found that enhanced environmental education raises public awareness and fosters positive attitudes toward sustainability.

Although knowledge is a significant factor influencing sustainability skills, emotional and affective factors also play crucial roles in students' daily behavioral choices (Olsson et al., 2022). Attitudes help individuals adapt to their environment and are subject to change, particularly during adolescence (Visser & Krosnick, 1998). Education shapes these attitudes, making it essential for promoting sustainable development education (Chen et al., 2022). Several studies highlight the correlation between sustainability knowledge and attitudes (Merino et al., 2020), although some argue that attitudes may not always align with objective knowledge (Guan et al., 2018).

The K-A-B model serves as a theoretical framework for evaluating how knowledge shapes attitudes and subsequently influences behavior (Baranowski et al., 2003). Esa (2010) revealed a strong link between knowledge and attitudes toward sustainable development, suggesting that increased knowledge fosters-positive attitudes. Balakrishnan et al. (2020) further demonstrated that sustainability education in higher education cultivates a sense of responsibility among students. However, awareness must translate into behavioral change for it to be meaningful, with intention being a critical factor that influences actions (Mahat et al., 2017).

Sustainability and Sustainable Development

Sustainability is a multifaceted concept that lacks a universally accepted definition, reflecting diverse perspectives across disciplines. The UCLA Sustainability Committee (n.d.) defines sustainability as the integration of environmental health, social equity, and economic vitality to create resilient communities for current and future generations. This definition aligns with Ben-Eli (2018) view, which emphasizes the integrity of the biosphere and the well-being of humans. Sustainability refers to practices that prevent the depletion of natural resources, ensuring an ecological balance that sustains modern societies. From a philosophical standpoint, Thompson (2016) describes sustainability in terms of "resource efficiency," where a sustainable system can meet present needs without compromising future generations' ability to meet their needs. The U.S. Environmental Protection Agency (EPA, 2022) further elaborated that sustainability involves creating conditions for productive harmony between humans and nature, supporting both current and future well-being. Ben-Eli (2018) encapsulated this as a dynamic equilibrium between a population and its environment, aiming for growth without causing irreversible harm.

Sustainable development emerges as a pathway to achieve sustainability guided by three pillars: environmental, social, and economic sustainability. This complexity requires an interdisciplinary approach to gain deeper insights into life structures (Maidou et al., 2019). Gericke et al. (2018) argued that sustainability is not a linear process but rather an extensive endeavor requiring multidimensional understanding and analysis. At its core, sustainability focuses on approaches that safeguard future generations' resource availability, emphasizing principles that support enduring resource use. O'Driscoll et al. (2013) characterize sustainability as a set of abilities or capabilities necessary to maintain related resources. Sustainable development is

defined by various scholars, including Abu-Al Ruz et al. (2018), Balakrishnan et al. (2020), and Al-Naqbi and Alshannag (2018), as development that meets current needs without compromising future generations' capacity to meet their needs. This concept has gained traction globally, as it addresses the preservation of present resources for future use and has become a critical concern for nations and organizations alike (Abu-Al Ruz, 2015). Pooyanmehr (2015) highlights the interconnectedness of environmental challenges and social issues like poverty and inequality, illustrating that sustainable development serves as a bridge between socioeconomic and environmental concerns.

Three Pillars of Sustainability

Environmental Education

Sustainability is a multifaceted concept that varies across disciplines and lacks a universally accepted definition. The UCLA Sustainability Committee (n.d.) defines sustainability as the integration of environmental health, social equity, and economic vitality to create resilient communities for present and future generations. Ben-Eli (2018) emphasizes the importance of the biosphere's integrity and human well-being, viewing sustainability as practices that prevent resource depletion and maintain ecological balance. Philosophically, sustainability is seen as "resource efficiency" (Thompson, 2016), where a system meets current needs without compromising future generations' abilities to do the same. The U.S. The Environmental Protection Agency (EPA, 2022) highlighted the goal of creating productive harmony between humans and nature. Sustainable development emerges as a pathway toward sustainability, structured around three pillars: environmental, social, and economic. This complexity requires interdisciplinary approaches for deeper understanding (Maidou et al., 2019). Environmental education (EE) plays a vital role in fostering sustainability awareness and behavior. This approach teaches individuals and communities to adapt to environmental challenges while increasing public knowledge. Research indicates that students recognize the value of EE in promoting resource conservation and protection, leading to positive attitudes toward sustainability (Kholi, 2015; Erhabor and Don, 2016). Engagement in EE can drive behavioral change as students become more dedicated to environmental issues (Zsóka et al., 2013), although perceptions of campus sustainability initiatives can sometimes negatively affect participation (Badea et al., 2020).

Economic Education

Economic education combines the fields of education and economics, focusing on how individuals and societies manage resources to satisfy their needs and desires. Economics is defined as the scientific study of actions taken to meet various desires with limited resources, whereas education is a crucial human endeavor that prepares individuals for their future roles. Economic education is vital for fostering effective leadership in sustainable development because it enhances human capital, a key driver of economic growth. Emediegwu and Clement (2016) supported this by demonstrating a positive relationship between educational investment and economic growth in Nigeria. Economic behavior encompasses the production, distribution, and consumption of goods and services (Oktafikasari & Mahmud, 2018). Nitasari (2020) found that economic education significantly influences students' economic behavior, with increased education leading to better understanding and management of everyday economic challenges. However, Atstāja et al. (2017) reported that academic staff in the Baltic States had a pessimistic view of the impact of economics courses on sustainable development. Berglund (2020) emphasized that students perceive the social, environmental, and economic aspects of sustainable development (SD) differently based on context, illustrating that SD is a dynamic concept rather than a static one. This highlights the importance of integrating SD into educational experiences so that students can engage with it in

various ways rather than treating it as a standalone subject. Most upper-secondary students recognize the economic's critical role in achieving sustainable development, indicating the need for curricula that connect economic principles to real-life challenges. Without this integration, students may view their education as disconnected from the realities outside of school, potentially diminishing its relevance and impact.

Social Education

Social education provides opportunities for students to explore and examine issues and topics associated with self-awareness, health care, interpersonal relationships, and contemporary social, cultural, economic, and political issues. In the study by Abu-Al Ruz et al. (2018), the students believed that society should promote equal opportunities for women and men, maintain peace in the world, provide free healthcare, and maintain contracts with other cultures. However, they do not agree that society should assume responsibility for the welfare of individuals and families. In terms of sustainability knowledge, Ovais (2023) concluded that, regarding the variable of sustainability behavior, the social dimension had the most influence. It is also observed that knowledge of sustainability' environmental impacts lead to a greater impact on society because humans can analyze changes in environmental conditions.

Education for Sustainable Development

Education is a crucial tool for empowering individuals, fostering sustainable development, promoting environmental protection, economic viability, and social justice for future generations (UNESCO, 2019). Access to education enables youth to innovate and improve their communities, as evidenced by Ekpiken and Ukpabio (2015), who highlighted the positive impact of vocational training on youth's contribution to sustainable development in developing countries. Integrating sustainability into education enhances self-perceived knowledge and encourages proactive sustainability actions (Sammalisto et al., 2015). Education for Sustainable Development (ESD) is an integral component of educational curricula designed to enhance critical thinking, decision-making, and socio-emotional skills in learners. ESD focuses on fostering reflection rather than seeking definitive answers to sustainable development challenges. This approach allows students to evaluate diverse perspectives and encourages participatory decision-making and social learning, ultimately empowering them to act sustainably (Pauw et al., 2015). ESD encompasses three sustainability pillars: environmental, social, and economic. This approach addresses critical issues such as poverty, climate change, and biodiversity loss. However, Perrault and Clark (2017) noted that many students primarily associate sustainability with environmental factors, neglecting social and economic dimensions. Therefore, universities must integrate all three pillars into their curricula through training and workshops to promote comprehensive awareness of sustainability (Moganadas et al., 2020). Despite students' passions for sustainability, Pooyanmehr (2015) identified a knowledge gap in the practical application of sustainability concepts. Erskine and Johnson (2012) found that students often show limited interest in participating in sustainable development initiatives. Pauw et al. (2015) emphasized that ESD goals cannot be realized if students cannot translate their awareness into action. Hence, educational institutions must consider which aspects of ESD contribute effectively to sustainability.

Universities play a pivotal role in sustainable development by investing in initiatives that empower students. Implementing ESD through competitions and mandatory sustainability courses can stimulate student engagement in conservation and sustainability practices (Mahat & Idrus, 2016; Alsaati et al., 2020; Onyango et al., 2017). Olsson et al. (2022) demonstrated that experiential learning in ESD significantly enhances students' engagements in sustainability. To raise awareness and knowledge about sustainability, universities should conduct research, connect with industries

and disseminate findings to stakeholders through conferences and publications. Therefore, integrating sustainability principles into university curricula is essential for students to navigate and address sustainability challenges effectively (Onyango et al., 2017).

Sustainability Awareness and Behavior among Students

The field of sustainability underscores the need for individuals and organizations to comprehend the environmental impacts of their activities and the associated social and economic dynamics (Garbie, 2015). This understanding is closely tied to the concept of "sustainability awareness," which Oriade et al. (2021) defined as the knowledge and perception of sustainability and its challenges. Various terms, such as "environmental literacy" and "green awareness," are often used interchangeably with sustainability awareness, which can be cultivated through knowledge of sustainable practices (Garbie, 2015; Salsabila et al., 2019). Research indicates that sustainability awareness is critical for improving attitudes and behaviors toward environmental stewardship, helping to mitigate issues like climate change (Hamid et al., 2017; Gericke et al., 2018). Chen et al. (2022) highlight "sustainability literacy," which encompasses knowledge, attitudes, and behaviors linked to UN Sustainable Development Goals. Understanding the interplay between knowledge, attitudes, and behavior is essential for effective sustainability education.

Sammalisto et al. (2016) define "sustainability knowledge" as crucial for recognizing sustainability's role in actions, while Olsson et al. (2022) emphasized that knowledge encompasses more than factual information; it includes understanding environmental, social, and economic sustainability. Despite possessing knowledge, individuals may not always translate it into sustainable attitudes or behaviors, as noted by Mahat et al. (2017) and Heeren et al. (2016). Olsson et al. (2018) argued that emotional and attitudinal factors also significantly influence behaviors related to sustainability. The complexity of attitudes toward sustainability is explored by Luthans (2021), who categorizes them into informational (awareness of sustainability), behavioral (actions taken), and emotional aspects (feelings about sustainability). According to Chen et al. (2022), attitudes significantly influence behavior, and Ovais (2023) concluded that behavioral change is unlikely without changes in attitudes.

Behavior is a focal point in sustainability research because changes in behavior are essential for achieving Sustainable Development Goals (Chen et al., 2022). UNESCO defines sustainability behavior as actions that promote human well-being and sustainable development. Various factors, such as consumption patterns and decision-making processes, play a role in shaping behavior. Formal education has a substantial impact on students' sustainability awareness, yet many students lack sufficient knowledge of sustainability and its implementation in professional contexts (Sammalisto et al., 2016; Pooyanmehr, 2015; Alsaati et al., 2020). Raising awareness of sustainability dimensions is essential for achieving systematic sustainability goals. Zainordin et al. (2017) highlighted the gap between students' knowledge of sustainable development concepts and their willingness to implement them, while Chen et al. (2022) noted that increased knowledge does not necessarily lead to sustainable behavior.

Furthermore, high environmental awareness alone does not guarantee pro-environmental behavior because individuals may need stronger motivation to act sustainably (Kukkonen et al., 2018; Klöckner, 2013). Koçoğlu and Koçoğlu (2017) found discrepancies between high environmental awareness and sustainable purchasing habits, indicating that knowledge and sensitivity are not sufficient for meaningful behavioral change (Bülbül et al., 2020; Mei et al., 2016). Targeted efforts to increase sustainability awareness can facilitate behavioral change (Too & Bajracharya, 2015). However, the relationship between different aspects of sustainability awareness and sustainable behavior remains poorly understood. More research is needed to clarify how awareness influences student involvement in sustainability activities and how these factors

interact with various types of sustainable behaviors, such as waste prevention and sustainable transportation.

RESEARCH METHOD

The researchers employed a quantitative research design employing descriptive research methods. This approach was selected because it allows systematic collection of numerical data, which is essential for understanding and describing behavioral and awareness patterns. A quantitative descriptive method is appropriate for this study because it enables the researchers to objectively measure the levels of sustainability awareness and behavior among BSMA students and summarize these data in statistical terms. The method is ideal for fulfilling the study's purpose because it provides a detailed snapshot of students' sustainability awareness and behavior without attempting to influence or control any variables. Moreover, quantitative methods offer a structured way to analyze large datasets and draw conclusions that are generalizable to the broader student population, thus enhancing the study's reliability and validity. The study was conducted at the University of Saint Louis Tuguegarao, at the Bishop Constant Jurgens Campus in the Philippines. This institution was chosen because of its commitment to fostering sustainability and ethical responsibility among its students. As a prominent university in the Northern Philippines, the University of Saint Louis provides a suitable environment to examine students' sustainability awareness and behavior. The university's focus on sustainability-related initiatives and education makes it an ideal setting for exploring how future business professionals will engage with sustainability concepts, particularly in the areas of environmental, social, and economic development.

The study involved 349 BSMA students from the University of Saint Louis during the School Year 2023-2024, with a participation rate of 87.47%. This large sample size ensures that the findings are representative of the student population and can be generalized to other academic settings. A questionnaire adapted from Gericke et al. (2018) was used to assess sustainability awareness and behavior. The Sustainability Consciousness Questionnaire (SCQ-S) contained 39 items measured on a 4-point Likert scale, covering environmental, social, and economic aspects of sustainable development. To ensure the questionnaire's reliability and validity, a Content Validity Index (CVI) was conducted, confirming that it effectively addressed all sustainability dimensions. The standardized Likert scale and its alignment with established sustainability frameworks further ensured the credibility and applicability of the data collected. After obtaining permission from the Vice-President for Academics through the Academic Dean of the School of Accountancy, Business, and Hospitality, the researchers administered the questionnaires. The data collection was done via Google Forms, ensuring convenience for the respondents and facilitating a smooth data-gathering process. The collected data were analyzed using descriptive statistics, specifically mean values, to determine respondents' awareness levels and behavior across the three pillars of sustainability—environmental, social, and economic.

A 4-point Likert scale was used to categorize the responses into four levels for sustainability awareness and behavior. For example, awareness was measured from Highly Aware to Highly Not Aware, and behavior was categorized from Highly Positive to Highly Negative. These scales clearly distinguished how students understood and acted on sustainability principles. To determine the relationship between the level of sustainability awareness and respondents' behavior, Pearson's Correlation Coefficient (Pearson-r) was employed. This tool helped quantify the strength and direction of the relationship between awareness and behavior across the three sustainability pillars. The interpretation of the correlation coefficient values follows a standard framework, ranging from very weak to very strong correlations, providing insight into how closely related the two variables are. Additionally, to assess whether there were significant differences in

sustainability awareness and behavior among respondents' profiles, the researchers used the Independent Sample T-test. This test allowed for comparison between groups, such as male and female respondents or students of different academic years, to determine whether any demographic factors influenced sustainability awareness and behavior.

The researchers took all necessary steps to ensure ethical compliance throughout the study. Informed consent was obtained from all respondents, and issues of confidentiality, privacy, and anonymity were upheld according to the guidelines outlined by Kang and Hwang (2023). Personal information was safeguarded, and all data were used solely for the purposes of this research. By adhering to these ethical standards, the researchers ensured the integrity of the study and built trust with the participants.

FINDINGS AND DISCUSSION

The table 1 presents the distribution of students across different year levels and their enrollment status in the course SASA 1013. As can be seen from the table, out of the 349 students, 41% came from the fourth-year level. This suggests that their feedback may be influenced by their extensive experience in the program. Followed the third-year level at 25.20%, which indicates their engagement in more specialized coursework and practical experiences that could affect their curriculum perspectives. Then, there are 20.60% respondents from the second-year (20.60%) and first-year (13.20%) levels, likely still adjusting to the academic environment and lacking comprehensive insights into the program. As for the SASA enrollment, 64.50% of the respondents completed the course. Their experiences will be crucial in evaluating the course's effectiveness and identifying areas for improvement. Although 35.50% of the respondents did not, this highlights a potential barrier to enrollment that warrants further investigation. Understanding the reasons for this could provide insights into scheduling conflicts, course content, and student interest.

Table 1. Profile of Respondents

Profile Variables		Frequency	Percentage
Year Level	First-year level	46	13.20
	Second-year level	72	20.60
	Third-year level	88	25.20
	Fourth-year level	143	41.00
	Total	349	100.00
SASA 1013 enrollment	Taken	225	64.50
	Not Taken	124	35.50
	Total	349	100.00

As seen in Table 2, the overall mean of the sustainability awareness is 3.45, indicating that the respondents are aware of terms of sustainability. Regarding sustainability awareness along the 3 pillars of sustainability, the highest mean score was for the environmental category with a mean score of 3.50, followed by the social and economic categories with a mean score of 3.42. This implies that along the 3 pillars of sustainability, respondents are highly aware of the environment.

Under the environmental category, respondents demonstrated a high level of awareness, particularly regarding the importance of preserving ecosystems for sustainable development, with a mean score of 3.58. This implies that the respondents possess a notable depth of understanding and consciousness, particularly regarding the critical role played by preserving and safeguarding biological diversity in fostering sustainable development. This contradicts the study of Alsaati et al. (2020), who found that university students in the Eastern Province of Saudi Arabia lack knowledge about sustainability. Alsaati et al. (2020) and Onyango et al. (2017) suggested that introducing

obligatory sustainability courses on campuses, demonstrating, and promoting student activities that promote the conservation of natural resources, as well as educating students about how to improve their sustainability literacy and behavior could be other possible solutions for higher education institutions that would enable them to gain a better degree of sustainability knowledge and act more responsibly.

Table 2. Level of Sustainability Awareness Among the Respondents Along The 3 Pillars of Sustainability

Sustainability Awareness	**Mean**	**Qualitative Description**
Environmental		
1. Reducing water wastage is necessary for sustainable development.	3.54	Highly Aware
2. Preserving land-based, aquatic, and marine ecosystems, and animals is necessary for sustainable development.	3.56	Highly Aware
3. Sustainable development demands that we humans reduce all sorts of waste.	3.47	Aware
4. Preserving the ecosystem is necessary for sustainable development (safeguarding biological diversity).	3.58	Highly Aware
5. Sustainable development requires a shift to renewable natural resources.	3.41	Aware
6. For sustainable development, afforestation is important.	3.43	Aware
Categorical Mean	3.50	Highly Aware
Social		
7. Improving people's chances for a long and healthy life contributes to sustainable development.	3.44	Aware
8. A culture where conflicts are resolved peacefully through discussion is necessary for sustainable development.	3.42	Aware
9. People who exercise their democratic rights are necessary for sustainable development (for example, they vote in elections, involve themselves in social issues, and express their opinions).	3.32	Aware
10. Reinforcing girls' and women's rights and increasing equality around the world is necessary for sustainable development.	3.36	Aware
11. Respecting human rights is necessary for sustainable development.	3.48	Aware
12. To achieve sustainable development, all the people in the world must have access to good education.	3.45	Aware
13. Having respect for other cultures is necessary for sustainable development.	3.44	Aware
14. For sustainable development, major infectious diseases such as HIV/AIDS and malaria must be stopped.	3.37	Aware
15. For sustainable development, people need to be educated on how to protect themselves against natural disasters.	3.51	Highly Aware
Categorical Mean	3.42	Aware
Economic		
16. Sustainable development requires companies to act responsibly toward their employees, customers, and suppliers.	3.18	Aware
17. Sustainable development requires a fair distribution of goods and services among people around the world.	3.47	Aware
18. Wiping out poverty in the world is necessary for sustainable development.	3.30	Aware

Sustainability Awareness	Mean	Qualitative Description
19. Sustainable development demands that people understand how the economy functions.	3.40	Aware
20. Sustainable supply chains play a key role in ensuring economic resilience and longevity.	3.44	Aware
21. Concepts such as circular economy, carbon pricing, and green finance promote economic sustainability.	3.42	Aware
Categorical Mean	3.42	Aware
Over-all Mean	3.45	Aware

In the social category, respondents showed a high level of awareness regarding the importance of education to protect themselves against natural disasters for sustainable development with a mean score of 3.51. This indicates that respondents understood the benefits of education when it comes in the context of disaster preparedness and response. In light of this, Abu-Al Ruz et al. (2018) found that students believed that societies should promote equal opportunities for women and men, maintain peace in the world, provide free healthcare, and maintain contracts with other cultures.

Lastly, under the economic category, respondents are aware that fair distribution of goods and services among people in the world is required for sustainable development, with a mean score of 3.47. This suggests that the respondents have a clear understanding of fairness in resource allocation, wherein they acknowledged the importance of the equitable distribution of goods and services to foster social justice, equality, and to promote the well-being of all individuals regardless of their socioeconomic status or geographical location. Similarly, it was found in the study of Berglund (2020) that despite having different perspectives and points of view, most upper-secondary students are aware of the significance of the economy for sustainable development. Overall, the results show that the respondents are aware in terms of sustainability awareness across different areas, indicating a solid foundation for further education in fostering sustainable practices.

Table 3 presents the findings related to sustainability behavior, revealing an overall mean score of 3.14, indicating a generally positive attitude toward sustainability practices among respondents. When examining the three pillars of sustainability—social, economic, and environmental—results show that the social category received the highest mean score of 3.20, followed closely by the economic category at 3.19, while the environmental category scored 3.04. This suggests that respondents are particularly interested in the social aspects of sustainability.

Table 3. Sustainability Behavior of the Respondents Along The 3 Pillars

Sustainability Behavior	Mean	Qualitative Description
Environmental		
1. I never waste water.	2.93	Positive
2. I recycle as much as I can	2.99	Positive
3. I pick up rubbish when I see it out in the countryside or in public places.	2.88	Positive
4. I do think about how my actions may damage the natural environment	3.22	Positive
5. I always separate food waste before putting out the rubbish when I have the chance.	3.12	Positive
6. I have changed my personal lifestyle in order to reduce waste (e.g., throwing away less food or not wasting materials).	3.09	Positive

Sustainability Behavior	Mean	Qualitative Description
Categorical Mean	3.04	Positive
Social		
7. When I use a computer or mobile to chat, text, play games, and so on, I always treat others as respectfully as I would in a face-to-face interaction.	3.26	Positive
8. I work on committees (e.g., the student council, and the cafeteria committee) at my school.	2.57	Positive
9. I treat everyone with the same respect, even if they have another cultural background than mine.	3.45	Positive
10. I support an aid organization or environmental group.	3.25	Positive
11. I show the same respect to men and women, boys and girls.	3.47	Positive
Categorical Mean	3.20	Positive
Economic		
12. I buy my groceries in public market over the mall to save more money	3.08	Positive
13. I often purchase second-hand goods over brand new as an alternative to reduce cost.	2.97	Positive
14. I avoid buying goods from companies with a bad reputation for looking after their employees and the environment.	3.15	Positive
15. Saving a portion of my allowance can help me build a financial cushion and plan for future expenses.	3.37	Positive
16. I do things that help poor people like participating in the Service Learning Program (SLP).	3.38	Positive
17. I often consider the environmental impact in my purchasing decisions, such as opting for products with eco-friendly certifications or choosing brands known for their sustainable practices.	3.21	Positive
18. I frequently engage in activities that promote economic sustainability, such as supporting local businesses, investing in renewable energy companies, or advocating for fair trade practices.	3.15	Positive
Categorical Mean	3.19	Positive
Over-all Mean	3.14	Positive

In the environmental category, respondents scored 3.22 regarding their awareness of how their actions might negatively impact the natural environment. This indicates a proactive attitude as they acknowledge the potential harm and express a willingness to take responsibility for their environmental impact. This finding aligns with Kholi (2015), who noted that environmental education fosters knowledge about environmental protection and the cautious use of natural resources. It is further supported by Erhabor and Don (2016), who argued that environmental education cultivates a positive environmental attitude among students. In the social pillar, respondents demonstrated a commendable mean score of 3.47 regarding their treatment of different genders, indicating a strong commitment to gender equality and respectful behavior toward all individuals, regardless of gender. This is consistent with the work of Shih and Wang (2021), who emphasized the importance of integrating gender issues into educational curricula to promote equality and combat discrimination. Lastly, respondents scored 3.38 in the economic category, reflecting a positive attitude toward assisting those in poverty and demonstrating compassion and engagement in actions that uplift those less fortunate. This aligns with Paraschiv (2017), who concluded that university students' participation in rural education for poverty

alleviation is beneficial for social practice and development goals.

Table 4 shows the significant differences in the level of sustainability awareness when grouped by profile. The table indicates that year level does not show a significant difference with respondents' sustainability awareness; however, enrollment in the SASA 1013 course demonstrates a significant difference. This shows that respondents who have completed the course exhibit a higher level of sustainability awareness compared to those who have not. This suggests that sustainability education plays a crucial role in fostering sustainability awareness among respondents, potentially through the curriculum or educational approach. Although year level alone does not seem to significantly influence sustainability awareness, course enrollment appears to have a meaningful effect on respondents' awareness levels. These findings emphasize the importance of targeting sustainability education initiatives within educational institutions and students' responsible behavior. In line with the study conducted by Kholi (2015), a high percentage of respondents agreed that environmental education provides information and knowledge about environmental protection and preservation to students. It also demonstrates that the majority of students have a positive attitude toward the environment and its conservation, as well as an interest in the field of environmental education. Sustainability education helps students increase awareness and develop a positive attitude toward implementing sustainable practices. These ideas can also be supported by Wijesinghe et al. (2015) study, which revealed that environmental consciousness derived from classroom teaching significantly impacts students' attitudes toward environmentally friendly designs. Also, Dhayalan et al. (2019) emphasizes that environmental education contributes to environmental awareness and thereby develops favorable attitudes toward the environment.

Table 4. Test of Significant Difference in the Level of Sustainability Awareness when grouped according to the Profile

Variables				t/f-value	p-value	Description
Year Level				2.309	.076	Not significant
SASA enrollment	1013	Taken	3.5193	-2.144	.033	Significant
		Not Taken	3.3150			

Table 5 shows the significant differences in sustainability behavior when groups according to profile. The results indicate that neither year level nor enrollment in the SASA 1013 course exerts a significant influence on sustainability behavior. The t/f value of 1.116 and p-value of .343 for year level indicates that whatever the year level of individuals does not affect their level of Sustainability Behavior. Same with the SASA 1013 enrollment, with a t/f value of -1.511 and p-value of .132 signifies that regardless of their enrollment in the course does not affect the level of their Sustainability Behavior. Arguably, the conscious effort of the students is proportional to the intensity of environmental education, even though their attitudes are not fully reflected in their actions (Zsóka et al., 2013). However, several studies have argued that sustainability education has a significant impact on students' economic behaviors. This means that the more education students receive, both theoretically and practically, the more influence they will have on their economic behavior (Nitasari, 2020). Mahat et al. (2017) also stated that a lack of knowledge and understanding may hinder sustainability behaviors. Given this situation, Badea et al. (2020) asserted that there is an urgent need for more integration in tailoring education to better address sustainability challenges and effectively motivate student behavior.

Table 5. Test of Significant Difference in Sustainability Behavior when grouped According to Profile

Variables	t/f-value	p-value	Description
Year Level	1.116	.343	Not significant
SASA 1013 enrollment	-1.511	.132	Not significant

Table 6 provides an in-depth analysis of the relationship between respondents' levels of sustainability awareness and behaviors exhibited within the framework of the three sustainability pillars. The findings provide persuasive evidence of a statistically significant relationship between sustainability awareness and sustainability behavior across these pillars because the p-value is below .05 level of significance, thus rejecting the hypothesis. This implies that when people become more aware of the importance of sustainability, they are more likely to adopt more positive behavioral patterns that promote sustainable environmental stewardship, social responsibility, and economic equality. These findings highlight the importance of raising awareness as a catalyst for generating and maintaining good behavioral changes required to advance sustainability goals across all sectors of society.

Table 6. Test of Significant Relationship Between Level of Sustainability Awareness and The Behavior of the Respondents Along The 3 Pillars of Sustainability

Variables	r-value	p-value	Description
Level of Sustainability Awareness	.848	.000	Significant
Sustainability Behavior			

Regarding Sammalisto et al. (2015), sustainability integration leads to increased self-perceived knowledge, which influences sustainability actions. In contrast, Chen et al. (2022) stated that increasing knowledge does not necessarily lead to sustainable behaviors. Individuals may gain knowledge, understanding, and skills, but they still lack the disposition to use them. Heeren et al. (2016) suggested that sustainability knowledge is a guiding principle in decision-making but does not alone cause behavioral change. Furthermore, Ovais (2023) claimed that students have a high comprehension of sustainability knowledge, but this knowledge is least reflected in their behavior.

Proposed Course Activity Development

Education for Sustainability

This is a vital endeavor that weaves sustainability education into various academic programs, enriching students' comprehension of sustainability principles across disciplines. This initiative aims to cultivate students who embody critical and strategic thinking, ethical awareness, and responsible action. By empowering learners with the knowledge, skills, and values necessary to grasp the interconnectedness of social, economic, and environmental systems, this educational approach fosters a holistic understanding of sustainability. Implementation can occur within the classroom, where instructors engage students through comprehensive discussions on sustainability, supplemented by instructional materials that facilitate deeper exploration of the topic. Through this integrative approach, students are not only equipped to understand sustainability but also to act as informed stewards of the environment and society.

Project Urban Greening

This initiative is aimed at enhancing school campuses through the promotion of green spaces and creating opportunities for hands-on learning experiences in environmental education. This project seeks to engage students in experiential learning activities, such as gardening and biodiversity studies, which can significantly enhance their cognitive function, concentration, and

overall academic performance. The implementation of this activity will occur during the course through a service-learning program. Initially, the instructor will seek permission from the university to identify suitable areas around campus for the project. Once approved, students are organized into groups, with each group assigned a specific area to cultivate and explore. Through this collaborative effort, students will not only contribute to the greening of their campuses but also develop a deeper appreciation for the environment and its sustainability.

Project Magsasaka para sa Mag-aaral

An initiative designed to engage students, particularly those with parents or relatives in the sale of agricultural produce, while providing vital assistance to their families. The primary objective of this project is to offer students a unique learning opportunity to gain first-hand experience in entrepreneurship, agricultural practices, and business management. By supporting local farmers—many of whom are their own parents—students help bolster the sustainability of the local agricultural economy, promote food security, and encourage environmentally friendly farming practices. This activity will be implemented during the course through a service-learning program, which will take place on the university campus. The instructor will first seek permission from the university and the Community Engagement and CICM Advocacies (CECA) office. The following approval, students will be tasked with identifying participants in the activity and developing a comprehensive business plan detailing how they will execute the initiative. Through this hands-on experience, students not only support their families but also gain valuable skills and insights into the agricultural sector.

Case Studies

It serves as a vital tool for connecting theoretical concepts with real-world applications, offering students concrete examples of how sustainability principles are intertwined with accounting and auditing practices across various organizational contexts. The objective of this activity is to provide a multifaceted rationale that enriches students' learning experiences. Through an analysis of real-life scenarios, students gain valuable insights into the complexities and nuances of sustainability challenges faced by businesses in diverse industries. This activity can be implemented during or after classroom discussions and can also serve as an assessment to deepen students' understanding of sustainability issues. The facilitator will present a specific case for students to analyze, guiding them to discuss the sustainability issues at hand and assess their implications across economic, environmental and social dimensions. This hands-on approach not only reinforces theoretical knowledge and equips students with the critical thinking skills necessary to address real-world sustainability challenges.

Sustainability Awareness Symposiums

These are designed to engage students in meaningful discussions about sustainability issues by organizing events in collaboration with various groups and organizations, both within and outside the university. The primary objective of these symposiums is to educate students about critical sustainability challenges and inspire them to take proactive steps toward creating a more sustainable future. As a platform for knowledge sharing, these events encourage the exchange of ideas and foster dialog on essential topics, including environmental conservation, social equity, and economic resilience. The implementation of this activity will occur once during the course and occurs on the university campus. The facilitator will invite a guest lecturer to discuss the importance of sustainability accounting, providing students with valuable insights into how accounting practices can contribute to sustainability efforts. Through this interactive experience, students will not only enhance their understanding of sustainability but will also be motivated to become active participants in promoting sustainable practices within their communities.

Group projects – Conduct a Fictional Sustainability Audits

Group projects involving the conduct of fictional sustainability audits offer students a unique opportunity to bridge theoretical knowledge with practical application by working with imaginary companies. This activity allows students to experiment with various accounting methods and strategic audit techniques without the constraints or repercussions of real-world scenarios and fosters innovation in sustainability reporting and auditing practices. Implementation can occur during or after classroom discussions and can serve as both a learning exercise and an assessment tool for students. The facilitator will organize the students into groups and provide guidelines outlining the scenario of the fictional company, including specific aspects to address in their sustainability audit report. Through this collaborative effort, students will not only enhance their understanding of sustainability principles but also develop critical thinking and problem-solving skills as they create comprehensive sustainability audit reports.

CONCLUSION

The study on the sustainability awareness and behavior of Management Accounting students at the University of Saint Louis Tuguegarao reveals that students possess a solid understanding of sustainability, particularly environmental issues, and demonstrate positive behaviors, especially in social dimensions. Enrollment in SASA 1013 significantly enhances students' sustainability awareness, highlighting the importance of formal sustainability education. This research adds local insights to the existing literature by illustrating how targeted educational initiatives can improve students' engagements in sustainability practices. The findings support theoretical frameworks suggesting that increased sustainability awareness leads to positive behavioral changes, although they also indicate the need for more comprehensive models that consider individual motivations and systemic barriers. The study emphasizes the need for educational institutions to integrate sustainability education into their curricula and recommends that such courses be mandatory for management-related disciplines. Additionally, it suggests exploring hands-on projects and community engagement to further enhance students' sustainability behaviors. Future research should focus on identifying barriers that prevent students from translating awareness into action. This could include longitudinal studies to track changes in sustainability awareness and behavior over time. This understanding can help improve curriculum development and policymaking in higher education.

LIMITATION & FURTHER RESEARCH

Generally, respondents were aware of 3 aspects of sustainability (Environmental, Social, and Economics). Furthermore, along the 3 pillars of sustainability, respondents are highly aware, primarily of the environmental aspect. Regarding the level of sustainability behavior, respondents reported positive behavior along the 3 pillars of sustainability. This study implies that the higher the respondents' sustainability awareness, the more positive their behavior toward sustainability. Moreover, respondents who have participated in sustainability education or the SASA 1013 course demonstrate significantly greater levels of sustainability consciousness than those who have not. Although a student's year level does not substantially impact sustainability awareness, participation in sustainability education does. These findings highlight the relevance of sustainability education activities within educational institutions in encouraging responsible behavior among students. Furthermore, the study found that enrolling in the SASA 1013 course had no significant impact on participants' sustainability behaviors. These findings reveal a lack of significant connections between participant profiles and their engagement in sustainable behaviors, emphasizing the necessity for additional studies on the factors that influence sustainable behavior. Given the study's findings, the researchers would like to recommend the following: (1)

The study suggests that universities play a vital role in enhancing and developing the SASA 1013 course to nurture knowledge and shape the attitudes of students toward sustainability. Educators may enhance the implementation of sustainability education and activities to deepen students' sustainability awareness and create an avenue for positively changing students' behavior. (2) Management Accounting students and students of other related programs may refer to this study on understanding the importance and concept of sustainability in their lives and future careers. (3) Communities, organizations, and groups that have an interest in sustainability may advocate for sustainability education to promote sustainable development. (4) Future researchers should encompass a broader analysis of sustainability awareness and behavior among students across various universities. (5) Conducting investigations on how sustainability education influences students' awareness and behavior and how it can offer valuable insights into the efficacy of sustainability initiatives in higher education settings. (6) To bridge the gap of this study, future research investigating factors that affect students' sustainability behavior is encouraged, and it is to further analyze the relationship of sustainability awareness and behavior. These recommendations aim to advance sustainability initiatives within the university context and contribute to the broader discourse on sustainability education and its impact on student awareness and behavior.

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