Clueless or Savvy? Mapping SDG Awareness Using Structural Equation Modeling at a Philippine Countryside University

Dave D. Lota

International Relations Office, Romblon State University

dlota@rsu.edu.ph

ORCID: 0009-0009-7386-6511

Garry Vanz V. Blancia

Research, Development, and Innovation, Romblon State University

garryvanzblancia@gmail.com

Jayson Reeves C. Mani

International Relations Office, Romblon State University

jaysonmani@rsu.edu.ph

Gianinna Elaine M. Labicane

International Relations Office, Romblon State University

gianinnalabicane@gmail.com

Edrafel Claudeen M. Manoy

International Relations Office, Romblon State University

ecmanoyi@rsu.edu.ph

Norilyn A. Gaa

Graduate Education and Professional Studies, Romblon State University

norilyngaai@rsu.edu.ph

Abstract

The integration of Sustainable Development Goals (SDGs) into university life is both a commendable and essential endeavor for shaping a generation equipped to address pressing global challenges. This study highlights the mapping of the SDGs level of awareness in a Philippine country-side state university, the interrelationship between its dimensions. Areas such as teaching-learning application/office operations, engagement with SDG-related activities, Integration in campus environment, and Research and development, were the focus of this investigation. Further, this also surveyed about the visibility of the SDGs and the barriers encountered by the Romblon State University community in addressing SDG awareness. Results revealed that the SDGs level of awareness in the university was generally "High" and SDG 4 & 5 were seen to be the most visible. Lack of awareness and understanding about the SDGs was also seen as a major barrier encountered in addressing SDG awareness. Structural equation modeling also presented a promising result which has seen research and development to have a very strong positive effect (R^2 =0.837) on integration of SDG in campus environment. There were also variations in the responses of the teaching and non-teaching personnel in terms of the SDG visibility indicating an opportunity to promote a more inclusive and comprehensive approach to SDG engagement across all university functions.

Keywords: *Sustainable development goals, SDG awareness, country-side university, SDG engagement, SDG visibility*

Introduction

The United Nations' Sustainable Development Goals represent a comprehensive and ambitious global agenda aimed at addressing the world's most pressing challenges by 2030 (Crespo et al., 2017). The significance of these goals extends beyond mere awareness; they necessitate practical actions and collaborative efforts across various sectors to ensure a sustainable future for both current and future generations, specifically highlighting the critical role of education as a tool for empowerment and societal transformation. In the Philippines, institutions of higher education are increasingly recognized as pivotal players in advocating for the SDGs, prompting universities to reassess their curricula, research initiatives, and community engagement strategies to align with this global framework, a shift that reflects a broader understanding of the university's responsibility in advancing sustainable development. Moreover, the need for comprehensive integration of the SDGs into academic settings calls for an evaluation of existing awareness levels among university stakeholders, as studies illustrate that educational institutions are rethinking their teaching and research programs considering these goals, thereby re-engaging with their social responsibilities and environmental stewardship (Fia et al., 2022; Segovia & Galang, 2002).

Universities worldwide are increasingly recognizing their unique position to shape future leaders and professionals who will be instrumental in achieving the SDGs, prompting a re-evaluation of their educational frameworks and outreach initiatives to better reflect this commitment to sustainability and responsible citizenship (Kleespies & Dierkes, 2022). Furthermore, the evidence suggests that an alarming number of higher education institutions struggle with effectively incorporating the SDGs into their curricula

and operations, indicating a pressing need for targeted strategies to enhance awareness and engagement among faculty and staff, thereby promoting a culture of sustainability that permeates all aspects of the university's activities. (Fia et al., 2022; Fernández-Sánchez et al., 2014; Filho et al., 2019; and Kleespies & Dierkes, 2022)

The emphasis on improving sustainability initiatives within university campus operations reinforces the need for educational institutions to closely examine their knowledge base and integration strategies, ensuring that their contributions to sustainable development are meaningful and impactful (Amaral et al., 2020). Moreover, the understanding that universities serve as engines of transformational sustainability highlights the necessity for proactive leadership at all levels within these institutions, fostering a shared purpose that navigates the complexities of sustainable development and the SDGs, ultimately positioning them as vital contributors to global efforts (Purcell et al., 2019).

In this context, Romblon State University has undertaken a research initiative to assess the current level of knowledge about the SDGs within its university community, comprising faculty and staff across various colleges and institutes, including the College of Engineering and Technology, College of Education, College of Arts and Science, College of Business and Accountancy, and the Institute of Information Technology. This initiative not only aims to identify the awareness and engagement of faculty and staff with SDG-related activities but also seeks to uncover potential barriers to effective integration within the university's academic framework, a necessary step towards ensuring that higher education institutions effectively contribute to the achievement of the 2030 Agenda.

Review of Related Literature

SDG Integration in Higher Education

The integration of the United Nations Sustainable Development Goals (SDGs) into higher education institutions (HEIs) represents a transformative paradigm in the way academic institutions define their roles in society. The 2030 Agenda for Sustainable Development, particularly Goal 4 (Quality Education), urges educational systems to promote lifelong learning and inclusive, equitable education that empowers individuals to contribute meaningfully to a sustainable future. In response, HEIs worldwide are reorienting their curricula, research agendas, governance structures, and community engagement strategies to reflect the SDGs.

Globally, this shift is evident in a growing number of institutions adopting sustainability charters, sustainability offices, and cross-disciplinary courses centered on sustainable development. Albuquerque et al. (2023) underscore that while many HEIs are progressively embedding SDGs into academic programs and operations, the level of integration varies significantly, depending on institutional leadership, available resources, and existing educational frameworks. Integration often ranges from isolated courses on environmental sustainability to institution-wide sustainability strategies embedded in policies and quality assurance systems.

A notable example is the University of South Florida, where Hansen et al. (2021) documented innovative practices such as SDG mapping in syllabi, sustainability reporting through customized dashboards, and interdepartmental collaborations.

However, such efforts are frequently hampered by structural limitations, including fragmented implementation, lack of staff training, limited funding, and insufficient monitoring and evaluation systems. Similarly, Maguire et al. (2024) explored SDG inclusion in Ireland's tourism and hospitality programs, revealing that while sustainability is widely acknowledged as a theme, its actual integration into course content and pedagogical design remains superficial. Faculty competence and training were identified as crucial factors in ensuring deeper incorporation of SDGs into teaching.

From a policy and institutional governance perspective, Leal Filho et al. (2022) argue that SDG integration requires a holistic transformation that extends beyond curriculum innovation to include campus operations, procurement practices, energy usage, and stakeholder partnerships. This aligns with the concept of the "whole institution approach," which envisions universities as living laboratories for sustainability, promoting SDG awareness through both formal and informal channels.

In the Philippines, the Commission on Higher Education (CHED) has issued several policy directives encouraging HEIs to align with global sustainability goals. However, implementation across institutions remains uneven. Lota et al. (2025) highlight that select universities, particularly state universities and colleges (SUCs), are making strides toward integrating health-related SDGs by adopting interdisciplinary teaching approaches, engaging in community-based health initiatives, and promoting research on local health systems and vulnerabilities. This strategic alignment supports the localization of SDG 3 (Good Health and Well-being) and reflects a growing awareness of HEIs' role in advancing national development priorities.

Baraero-Era (2024) notes that although some Philippine HEIs are active participants in international sustainability assessment tools such as the Times Higher Education Impact Rankings and UI GreenMetric, there are significant disparities in participation across regions. These gaps are attributed to differences in institutional capacity, leadership commitment, and access to training and development opportunities. Furthermore, many HEIs still lack explicit references to sustainability or the SDGs in their mission and vision statements, which weakens the alignment of institutional identity with sustainable development imperatives.

Armas and Jose (2024) emphasize the untapped potential of HEI-based innovation ecosystems and startup incubators in contributing to SDG-aligned solutions. Their study advocates for increased policy support to encourage entrepreneurial initiatives that address local environmental, social, and economic challenges. They argue that fostering a culture of innovation within HEIs is essential to catalyze action across multiple SDGs, particularly in areas like clean energy, sustainable agriculture, and climate resilience.

Measuring SDG Awareness Among Faculty and Staff

One of the foundational elements for successful SDG integration in HEIs is awareness among faculty and staff. High levels of SDG awareness and understanding directly influence curriculum reform, research priorities, and the institutional culture of sustainability. When faculty and administrators are knowledgeable about the SDGs,

they are more likely to initiate interdisciplinary research, infuse sustainability topics into existing courses, and promote sustainable practices within their departments.

According to Nhamo et al. (2024), a survey of university faculty in Zimbabwe revealed that while many respondents demonstrated high levels of awareness about the SDGs, this did not always translate into effective action or integration into teaching and institutional planning. This gap suggests that awareness alone is insufficient—support mechanisms, training programs, and accountability structures are essential to ensure that awareness leads to meaningful engagement.

In the Philippine context, studies such as Omisore et al. (2017) and Salvia et al. (2018) have been cited in local assessments to show that faculty and staff often have limited exposure to the full breadth of the SDGs. Many HEIs focus only on environmental goals (e.g., SDG 13: Climate Action) without considering the interconnectedness of other goals such as poverty reduction (SDG 1), gender equality (SDG 5), and decent work (SDG 8). Therefore, comprehensive capacity-building efforts that cover all 17 goals are necessary.

Romblon State University, for instance, has piloted efforts to raise SDG awareness through translation of the 17 Goals into local languages (Asi, Onhan, and Ini), SDG-themed events such as *Pride for the Planet*, and the integration of SDG awareness indicators into research proposal templates and performance evaluation tools. These initiatives demonstrate that localized and culturally grounded strategies can enhance faculty engagement and institutional ownership of the sustainability agenda.

Moreover, measuring SDG awareness through surveys, focus groups, and participatory workshops enables institutions to track progress, identify gaps, and tailor interventions. Indicators such as frequency of SDG-themed activities, inclusion in learning modules, and staff training attendance can be used as performance metrics to support continuous improvement.

Barriers to SDG Integration

Despite the recognition of SDG integration's importance, numerous barriers hinder its holistic implementation in universities. Traditional educational paradigms that prioritize discipline-specific knowledge over interdisciplinary and transdisciplinary approaches present significant obstacles (Krstić et al., 2020; Hansen et al., 2021). Institutional inertia, characterized by resistance to new frameworks, also limits the integration of SDGs into curricula, research, and university operations (Sonetti et al., 2020).

A case study from the University of South Florida found that even when institutions adopt sustainability strategies, fragmented implementation often prevents meaningful impact (Hansen et al., 2021). Similarly, a study by Pactwa et al. (2024) on European universities revealed that only 43.8% of strategic plans explicitly reference the SDGs, highlighting inconsistencies in policy implementation.

In the Philippine context, challenges include limited funding, regulatory complexities, and inadequate faculty training on sustainability topics (Armas & Jose, 2024). Baraero-Era (2024) found that while many universities participate in sustainability

assessments, systemic gaps in alignment with the SDGs persist. Furthermore, integrating sustainability topics into specialized curricula, such as business and economics programs, remains inconsistent (Vrečko et al., 2024).

To address these barriers, universities must adopt comprehensive awareness-raising initiatives and interdisciplinary collaboration strategies. Studies suggest that fostering faculty engagement through structured programs, incentives, and cross-disciplinary cooperation can significantly improve SDG integration (Maguire et al., 2024; Murillo-Vargas et al., 2020).

Research Objectives

This study answered the following questions:

1. To assess the perceived level of Sustainable Development Goal (SDG) awareness among the RSU community in terms of the following dimensions:
   a. Teaching-learning application (faculty)/office operations (non-teaching);
   b. Community extension and engagement with SDG-related activities;
   c. Integration in campus environment and physical facilities;
   d. Research and development?
2. To identify which SDGs are most visible and commonly addressed within the Romblon State University (RSU) community.
3. To determine the barriers encountered by the RSU community in promoting and sustaining SDG awareness and integration.
4. To examine the interrelationships among the different dimensions of SDG awareness, specifically:

a. Teaching-learning application (faculty)/office operations (non-teaching);

b. Community extension and engagement with SDG-related activities;

c. Integration in campus environment and physical facilities;

d. Research and development?

Research Methodology

Research Design

This study used a descriptive-quantitative research design. This was utilized to determine the SDGs level of awareness in Romblon State University. This research method was profoundly used by various researchers such as Novieastari et al. (2022) and Omisore et al. (2017). This was conducted from August 1-20, 2024 among academic faculty and non-teaching personnel in Romblon State University.

Participants and Procedures

A total of 218 (150 teaching and 68 non-teaching personnel) responded from the survey, were a total of 140 responses were deemed usable as also indicated as acceptable sample size based on Raosoft software calculation. participants who submitted their intent to participate in the survey were chosen through convenience sampling. This sampling method was also used in the study of Telles et al. (2023), Oyebade et al. (2023) and Orou (2022), who also took structural equation modeling as their statistical method.

Before the data gathering, the researchers sought approval of the university president, deans, directors of different units, and informed consent of the respondents.

In the data gathering, the instrument was converted into google forms for easy dissemination, until data saturation was achieved.

Data Analysis

After retrieval and data saturation, excel and SPSS version 25 was used. Descriptive statistics such as mean, percentage and standard deviation was used in the analysis of the data. Structural Equation Modeling was undertaken to determine the interrelationship between the dimensions of the SDG awareness.

Results

With the global demand of mainstreaming the Sustainable Development Goals of the United Nations, the level of awareness among citizens and members of different organizations, especially in Romblon State university has been considered as primordial step in creating more focused initiatives and relevant programs. Table 1 shows the level of SDG awareness in Romblon State University focusing on the areas: Teaching-learning application/office operations; Engagement with SDG-related activities; Integration in campus environment, Research and development.

Table 1

The Level of Sustainable Development Goals' Awareness in Romblon State University

Teaching-Learning Application (Faculty)/Office Operations (Non-Teaching)	Mean	*SD*	DI
1. Teaching-learning experience or the course integrates any of the SDGs.	4.68	1.06	VH
2. SDGS are discussed and presented inside the classroom.	3.58	0.73	H
3. SDGS are incorporated in assignments or tasks.	3.93	1.29	H
4. The university provides resources to integrate SDGs in teaching.	4.16	1.61	H

	Mean	SD	DI
5. The university provides teacher trainings related to SDGs.	2.79	1.74	M
6. There are opportunities for non-teaching staff to contribute to SDG-related efforts at the university.	4.75	0.95	VH
7. Daily activities in work support SDGs.	3.73	0.73	H
Total	**3.94**	**1.15**	**H**

Engagement with SDG Related Activities	**Mean**	**SD**	**DI**
1. The university has policies and initiatives related to SDGs.	4.42	1.08	H
2. RSU community participates in SDG related initiatives or programs.	4.47	1.01	H
3. Community and university partnership to promote SDGs is evident.	4.48	1.08	H
4. There is a collaboration between the university and external organizations / NGOs in terms of SDG initiative	4.70	0.79	H
Total	**4.52**	**0.99**	**VH**

Integration in Campus Environment	**Mean**	**SD**	**DI**
1. The college/campus encourages integrating SDGs into practices and projects.	4.46	0.53	H
2. There are opportunities for innovative projects related to the SDGs within your college/campus.	4.95	0.30	VH
3. The college/unit incorporates sustainability in terms of financial practices and programs.	4.82	0.70	VH
4. The university has efforts to reduce environmental impacts.	4.20	0.48	H
5. The university's infrastructures (buildings, facilities, etc.) align with SDG principles.	4.22	0.50	H
6. The university communicates the SDG related initiatives among its stakeholders	3.85	0.57	H
Total	**4.42**	**0.51**	**H**

Research and Development	**Mean**	**SD**	**DI**
1. The university conducts SDG related research projects.	3.06	1.12	M
2. The university provides sufficient funding and resources for SDG-related research.	4.15	0.38	H
3. RSU faculty and staff collaborate on research project related to SDG.	3.49	1.04	H
Total	**3.57**	**0.85**	**H**

Legend: 4.5-5.0= Very High (VH),
3.5-4.49= High (H)
2.5- 3.49=Moderate (M)
1.5-2.49=Low (L)
0-1.49=Very Low (VL)

The integration of Sustainable Development Goals (SDGs) at Romblon State University (RSU) demonstrates notable patterns across several key areas of university operations, evaluated through mean scores and standard deviations (SD) using a 5-point Likert-type scale. Following the interpretive thresholds proposed by Lindner and Lindner (2024), values ranging from 4.51 to 5.00 indicate *Very High* agreement, 3.51 to 4.50 as *High*, 2.51 to 3.50 as *Moderate*, 1.51 to 2.50 as *Low*, and 0.00 to 1.50 as *Very Low*. This approach enhances transparency and replicability in interpreting survey results, especially in education and social science contexts.

In the Teaching-Learning Application (Faculty)/Office Operations (Non-Teaching) category, the integration of SDGs in teaching-learning experiences is rated very high (M = 4.68, SD = 1.06), indicating that courses strongly incorporate SDGs. However, teacher training related to SDGs is rated moderate (M = 2.79, SD = 1.74), suggesting that faculty development in this area could be improved. Overall, this category has a high level of SDG integration (M = 3.94, SD = 1.15).

In the Engagement with SDG-Related Activities, the university demonstrates a strong commitment, with high ratings in policies and initiatives (M = 4.42, SD = 1.08), community participation (M = 4.47, SD = 1.01), and external collaborations (M = 4.70, SD = 0.79). The total score for this category is very high (M = 4.52, SD = 0.99), underscoring the university's proactive engagement with SDGs at both internal and external levels.

The Integration in Campus Environment also reflects a high level of SDG incorporation, particularly in promoting innovative projects (M = 4.95, SD = 0.30) and

sustainable financial practices (M = 4.82, SD = 0.70). However, the communication of SDG initiatives to stakeholders is slightly lower, though still high (M = 3.85, SD = 0.57). The overall score for this area is high (M = 4.42, SD = 0.51). In the Research and Development category, the university's performance is moderate in conducting SDG-related research projects (M = 3.06, SD = 1.12) but high in providing funding and resources (M = 4.15, SD = 0.38). The overall rating for research activities is high (M = 3.57, SD = 0.85), indicating room for further enhancement in SDG-related research initiatives.

Table 2 illustrates the visibility of various Sustainable Development Goals (SDGs) within the RSU community, comparing teaching personnel and non-teaching personnel. Respondents were not limited to select only one SDG as they are allowed to check as many SDG that they are aware of depending on its visibility in the RSU system.

Table 2

Sustainable Development Goals' Visibility in the RSU Community

Sustainable Development Goals (SDGs)	Teaching Personnel (*f*)	Non-Teaching Personnel (*f*)
SDG 1: No Poverty	21	3
SDG 2: Zero Hunger	15	5
SDG 3: Good Health and Well-being	48	27
SDG 4: Quality Education	75	17
SDG 5: Gender Equality	60	32
SDG 6: Clean Water and Sanitation	31	16
SDG 7: Affordable and Clean Energy	19	7
SDG 8: Decent Work and Economic Growth	27	13
SDG 9: Industry, Innovation, and Infrastructure	27	7
SDG 10: Reduced Inequalities	21	3
SDG 11: Sustainable Cities and Communities	13	3
SDG 12: Responsible Consumption and Production	11	11
SDG 13: Climate Action	21	4
SDG 14: Life Below Water	9	2
SDG 15: Life on Land	12	2

SDG 16: Peace and Justice Strong Institutions	23	6
SDG 17: Partnerships for the Goals	31	13
Total	**464**	**171**

Table 2 illustrates the visibility of various Sustainable Development Goals (SDGs) within the RSU community, comparing teaching personnel and non-teaching personnel. Respondents were not limited to select only one SDG as they are allowed to check as many SDG that they are aware of depending on its visibility in the RSU system.

Among teaching personnel, SDG 4: Quality Education is the most prominent, with a frequency of f = 75, followed by SDG 5: Gender Equality (f = 60) and SDG 3: Good Health and Well-being (f = 48). This data suggests that these goals are highly prioritized within the teaching staff. Other SDGs, such as SDG 6: Clean Water and Sanitation (f = 31) and SDG 17: Partnerships for the Goals (f = 31), also show moderate visibility. In contrast, SDGs like SDG 14: Life Below Water (f = 9) and SDG 15: Life on Land (f = 12) have lower engagement levels among teaching personnel.

For non-teaching personnel, the overall visibility of SDGs is less pronounced. The most visible SDGs are SDG 5: Gender Equality (f = 32) and SDG 3: Good Health and Well-being (f = 27), indicating that these areas are somewhat integrated into the activities of non-teaching staff. However, SDGs such as SDG 1: No Poverty (f = 3), SDG 10: Reduced Inequalities (f = 3), and SDG 15: Life on Land (f = 2) show minimal visibility, reflecting a lower level of engagement. Overall, the total frequency of SDG engagement is higher for teaching personnel (f = 464) compared to non-teaching personnel (f = 171), suggesting that there may be opportunities to enhance SDG-related involvement among non-teaching staff.

Table 3

Barriers encountered by the RSU community in Addressing SDG Awareness

Barriers encountered	Frequency (*f*)	Percentage (%)
1. Lack of awareness and understanding about the SDGs	121	22.66
2. Insufficient funding and resources	87	16.29
3. Political conflicts and instability	50	9.36
4. Inequality and injustice	30	5.62
5. Lack of collaboration and cooperation	75	14.04
6. Environmental degradation and climate change	49	9.18
7. Corruption and unethical practices	52	9.74
8. Lack of effective policies and implementation	70	13.11
Total	**534**	**100%**

Table 3 outlines the barriers faced by the RSU community in addressing Sustainable Development Goal (SDG) awareness, highlighting a range of challenges. The most significant barrier is a *lack of awareness and understanding about the SDGs*, with a frequency of *f* = 121, accounting for 22.66% of the responses. This suggests that a considerable portion of the community may not fully grasp the importance or specifics of the SDGs, which could hinder effective engagement. Another major barrier is *insufficient funding and resources* (*f* = 87, 16.29%), indicating that financial constraints are a significant obstacle to advancing SDG-related initiatives.

Other notable barriers include *lack of collaboration and cooperation* (*f* = 75, 14.04%) and *lack of effective policies and implementation* (*f* = 70, 13.11%). These issues suggest that internal organizational challenges, such as coordination and policy execution, also impede progress. Barriers like *corruption and unethical practices* (*f* = 52,

9.74%) and *political conflicts and instability* (*f* = 50, 9.36%) further highlight systemic issues that could undermine efforts to promote SDG awareness. Overall, these barriers reflect a complex array of challenges, with the total responses summing up to *F* = 534, indicating a multifaceted approach is necessary to overcome these obstacles and enhance SDG awareness within the RSU community.

Figure 1

Structural Equation Modelling of the Interrelationships between SDG awareness dimensions
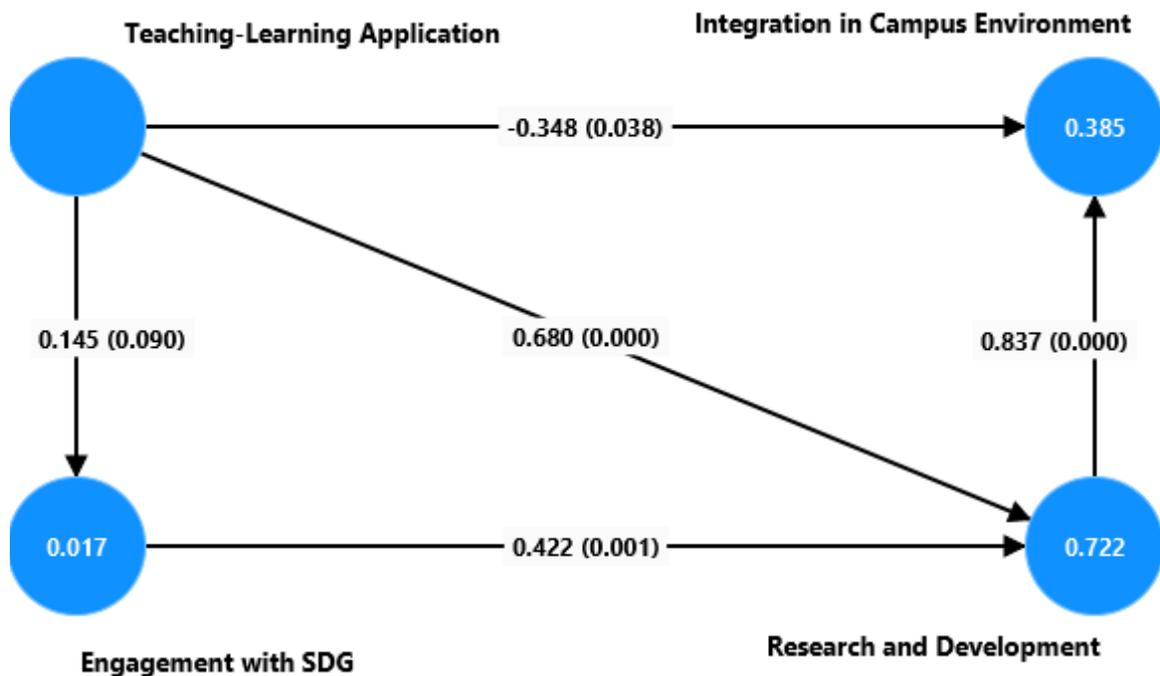

Figure 1 presents the structural equation model depicting relationships between four key dimensions of SDG awareness namely: Teaching-Learning Application, Engagement with SDG (Sustainable Development Goals), Research and Development, and Integration in Campus Environment.

The model shows several direct and indirect relationships. Teaching-Learning Application has a negative direct effect (-0.348) on Integration in Campus Environment, but a strong positive effect (0.680) on Research and Development. Engagement with SDG has a positive direct effect (0.422) on Research and Development. Research and Development, in turn, has a very strong positive effect (0.837) on Integration in Campus Environment. There is also a small positive relationship (0.145) between Teaching-Learning Application and Engagement with SDG. *P*-values indicate statistical significance for most relationships ($p < 0.05$), except for the link between Teaching-Learning Application and Engagement with SDG ($p = 0.090$).

Discussion

The integration of Sustainable Development Goals (SDGs) into university life is essential for preparing students to address global challenges. Universities play a crucial role in advancing SDGs and fostering a sustainable future by cultivating a culture of learning, innovation, and global awareness. The study reveals that RSU has made significant progress in integrating SDGs across various operational areas, particularly in teaching and learning, where sustainability concepts are well-incorporated into the curriculum. However, there's room for improvement in teacher training related to SDGs, aligning with research highlighting the importance of faculty development in sustainability education (Lozano et al., 2019).

RSU demonstrates strong engagement with SDG-related activities, especially in university policies, community participation, and external collaborations. This commitment to broader societal impact is crucial for higher education institutions in driving sustainable development (Findler et al., 2019). The university also excels in

integrating SDGs into its campus environment, particularly in promoting innovative projects and implementing sustainable financial practices. This holistic approach is essential for comprehensive SDG implementation in universities (Filho et al., 2019). However, the research and development category reveals a potential gap between resource allocation and research output, indicating an area for growth.

The visibility of SDGs varies among teaching and non-teaching personnel, with SDGs 4, 5, and 3 being most prominent among teaching staff. This focus aligns with the core mission of educational institutions but suggests a need for broader engagement with other SDGs. The main barriers to SDG awareness at RSU are lack of understanding and insufficient resources, echoing global challenges in SDG implementation in higher education (Salvia et al., 2019). The structural equation model implies that institutions should leverage teaching-learning applications to drive research and development, which in turn promotes campus integration. It also highlights the importance of incorporating sustainability principles into research agendas. While RSU shows strong commitment to SDG integration, opportunities for improvement exist in research output, comprehensive SDG visibility, and addressing awareness barriers.

Conclusions and Recommendations

The integration of the Sustainable Development Goals (SDGs) into higher education institutions is recognized globally as a transformative strategy to cultivate sustainability competencies among future generations. This study provides a comprehensive assessment of SDG awareness and integration at Romblon State University (RSU), revealing both commendable achievements and key areas requiring strategic attention.

The findings affirm RSU's strong institutional commitment to sustainability, as evidenced by the high level of SDG integration in curriculum and instructional content. This alignment reflects the university's proactive stance in embedding sustainability principles into academic discourse, which is crucial for equipping students with knowledge of pressing global issues. However, the moderately rated faculty training programs indicate a gap in capacity building, highlighting the need for sustained professional development efforts to empower educators with the requisite skills and pedagogical tools to effectively deliver sustainability education.

The study further underscores RSU's dynamic engagement with SDG related activities beyond the classroom, including active community extension programs, stakeholder partnerships, and university wide policies that support sustainable development. Such initiatives demonstrate the institution's awareness of its broader social responsibilities and its effort to foster meaningful community impact. Likewise, RSU's integration of sustainability in campus operations such as the adoption of resource efficient practices and support for eco innovation illustrates a deliberate effort to institutionalize the SDGs within the university's operational ecosystem.

Despite these strengths, the research also identifies areas that merit further development. In the domain of research and development, while resources and institutional support are evidently in place, there is a moderate level of SDG aligned research output. This suggests a disconnect between funding availability and actual implementation of research initiatives that directly contribute to the global sustainable development agenda. Strengthening this linkage is vital to enhancing RSU's academic contribution to sustainability knowledge production.

Furthermore, the variability in SDG awareness between teaching and non teaching personnel signals the need for a more inclusive and whole of institution approach to sustainability. A fragmented understanding or uneven participation across university sectors can hinder the holistic advancement of sustainability goals. Promoting cross functional engagement and fostering a unified institutional culture centered on sustainability will be essential in addressing this concern.

The predictive analysis of interrelationships among the dimensions of SDG awareness such as teaching and learning, community engagement, campus environment, and research suggests that these elements are deeply interconnected. A systems based approach that leverages the synergies across these domains will likely yield the most effective outcomes in institutionalizing the SDGs within RSU's operations and identity.

While the study offers valuable insights, it is limited by its reliance on self reported data, which may be subject to social desirability bias and perceptual variance among respondents. The study also focuses primarily on the perspectives of faculty and staff, excluding student views and external stakeholder feedback that could offer a more holistic evaluation of RSU's SDG efforts.

Future research may benefit from adopting mixed methods or longitudinal designs to measure changes in awareness, behavior, and impact over time. Qualitative case studies could provide deeper understanding of best practices, while student centered investigations may illuminate gaps in sustainability learning outcomes. Additionally, studies comparing RSU's performance with other higher education

institutions, both domestically and internationally, would offer benchmarking opportunities and actionable insights for institutional improvement.

References

Amaral, A R., Rodrigues, E., Gaspar, A R., & Gomes, Á. (2020, March 1). A review of empirical data of sustainability initiatives in university campus operations. *Elsevier BV, 250*, Article119558-119558. https://doi.org/10.1016/j.jclepro.2019.119558

Cebrián, G., Pubill, M J I., & Mulà, I. (2020). Competencies in education for sustainable development: Emerging teaching and research developments. *Multidisciplinary Digital Publishing Institute, 12*(2), 579–579. https://doi.org/10.3390/su12020579

Crespo, B., Míguez-Álvarez, C., Fariña, M E A., Alonso, M C., & Míguez, J. (2017). The sustainable development goals: An experience on higher education. *Multidisciplinary Digital Publishing Institute, 9(*8), Article1353-1353. https://doi.org/10.3390/su9081353

Fernández-Sánchez, G., Bernaldo, M O., Castillejo, A., & Manzanero, A M. (2014). Education for sustainable development in higher education: State-of-the-art, barriers, and challenges. *Laureate Education, 4*(3), 3-3. https://doi.org/10.18870/hlrc.v4i3.157

Fia, M., Ghasemzadeh, K., & Paletta, A. (2022). How higher education institutions walk their talk on the 2030 agenda: A systematic literature review. *Palgrave Macmillan, 36*(3), 599–632. https://doi.org/10.1057/s41307-022-00277-x

Filho, W L., Shiel, C., Paço, A., Mifsud, M., Ãvila, L V., Brandli, L., Molthan-Hill, P., Pace, P., Azeiteiro, U M., Vargas, V R., & Caeiro, S. (2019). Sustainable development goals and sustainability teaching at universities: Falling behind or getting ahead of the pack?. *Elsevier BV, 232*, 285-294. https://doi.org/10.1016/j.jclepro.2019.05.309

Findler, F., Schönherr, N., Lozano, R., Reider, D., & Martinuzzi, A. (2019). The impacts of higher education institutions on sustainable development: A review and conceptualization. *International Journal of Sustainability in Higher Education, 20*(1), 156–177. https://doi.org/10.1108/IJSHE-07-2017-0114.

Kleespies, M W., & Dierkes, P W. (2022, June 29). The importance of the Sustainable Development Goals to students of environmental and sustainability studies—a global survey in 41 countries. *Palgrave Macmillan, 9*(1). https://doi.org/10.1057/s41599-022-01242-0.

Krstić, M., Filipe, J., & Chavaglia, J. (2020, August 15). Higher education as a determinant of the competitiveness and sustainable development of an economy. *Multidisciplinary Digital Publishing Institute, 12*(16), Article6607-6607. https://doi.org/10.3390/su12166607.

Lozano, R., Barreiro-Gen, M., Lozano, F. J., & Sammalisto, K. (2019). Teaching sustainability in European higher education institutions: Assessing the connections between competences and pedagogical approaches. *Sustainability, 11*(6), 1602. https://doi.org/10.3390/su11061602.

Maiorescu, I., Sabou, G. C., Bucur, M., & Zota, R. D. (2020). *Sustainability barriers and motivations in higher education – A students' perspective. Amfiteatru Economic, 22*(54), 362–375. https://doi.org/10.24818/EA/2020/54/362.

Novieastari, E., Pujasari, H., Rahman, L. O. A., Ganefianty, A., & Rerung, M. P. (2022). Knowledge, perception, and awareness about Sustainable Development Goals (SDGs) among students of a public university in Indonesia. *International Journal of Health Promotion and Education, 60*(4), 195–203. https://doi.org/10.1080/14635240.2022.2066557.

Omisore, A. G., Babarinde, G. M., Bakare, D. P., & Asekun-Olarinmoye, E. O. (2017). Awareness and knowledge of the Sustainable Development Goals in a university community in southwestern Nigeria. *Ethiopian Journal of Health Sciences, 27*(6), 669–676. https://doi.org/10.4314/ejhs.v27i6.12.

Seko, M. O., Laré, N., Ossebi, W., Fokou, G., Dao, D., & Bonfoh, B. (2022). Determinants of intention to consume dibiterie meat towards the risks of non-communicable diseases in the Dakar region, Senegal. *Sustainability, 14*(17), 11000. https://doi.org/10.3390/su141711000.

Lindner, J. R., & Lindner, N. (2024). *Interpreting Likert type, summated, unidimensional, and attitudinal scales: I neither agree nor disagree, Likert or not. Advancements in Agricultural Development, 5*(2). https://doi.org/10.37433/aad.v5i2.351.

Oyebade, A., Adeola, O., Akinmurele, T., Taiwo, O., Oginni, A., Adekunle, I., & Gbadamosi, M. (2023). Patients' perception of quality of tuberculosis healthcare service in South West Nigeria. *International Journal of Community Medicine and*

Public Health, 10(4), 1375–1382. https://doi.org/10.18203/2394-6040.ijcmph20230913.

Purcell, W M., Henriksen, H., & Spengler, J D. (2019, October 24). Universities as the engine of transformational sustainability toward delivering the sustainable development goals. *Emerald Publishing Limited, 20*(8), 1343-1357. https://doi.org/10.1108/ijshe-02-2019-0103.

Ramaswamy, M., Marciniuk, D., Csonka, V., Colò, L., & Saso, L. (2021, July 16). Reimagining internationalization in higher education through the united nations sustainable development goals for the betterment of society. *SAGE Publishing, 25*(4), 388-406. https://doi.org/10.1177/10283153211031046

Salvia, A. L., Leal Filho, W., Brandli, L. L., & Griebeler, J. S. (2019). Assessing research trends related to Sustainable Development Goals: Local and global issues. *Journal of Cleaner Production, 208*, 841–849. https://doi.org/10.1016/j.jclepro.2018.09.242.

Schulz, A., Shriver, C., Patka, A., Greiner, C., Seleb, B., Hull, R W., Sullivan, C., Klein, J T., & Moore, R. (2023, July 3). *Intradisciplinary growth of sustainability-minded engineers through conservation technology.* Cold Spring Harbor Laboratory. https://doi.org/10.1101/2023.07.03.546429.

Segovia, V M., & Galang, A P. (2002). Sustainable development in higher education in the Philippines. *Emerald Publishing Limited, 3*(3), 288-297. https://doi.org/10.1108/14676370210434741

Sengupta, E., Blessinger, P., & Yamin, T S. (2020). *Introduction to University Partnerships for Sustainable Development (pp 3-13).* Emerald Publishing Limited. https://doi.org/10.1108/s2055-364120200000020004.

Sonetti, G., Barioglio, C., & Campobenedetto, D. (2020). Education for sustainability in practice: A review of current strategies within Italian universities. Multidisciplinary Digital Publishing Institute, 12(13), Article5246-5246. https://doi.org/10.3390/su12135246.

Telles, S., Sharma, S. K., Gandharva, K., Prasoon, K., & Balkrishna, A. (2023). Yoga practice and choices of foods, physical activity, and leisure: A convenience sampling survey from India. *International Journal of Yoga, 16*(1), 20–26. https://doi.org/10.4103/ijoy.ijoy_195_22.