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Sustainable Development Goals in Higher Education: How Education Shapes Society at Ifugao State University, Philippines

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About Article

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ABSTRACT

This study examined undergraduate students' familiarity with the Sustainable Development Goals (SDGs) at Ifugao State University (IFSU) and explored how higher education practices reflect and reproduce broader social structures. Using a convergent mixed-methods design, data were collected from 320 undergraduate students across multiple disciplines through a structured survey and open-ended responses to capture both breadth and depth of perspectives. Quantitative findings indicated a moderate level of SDG awareness among students (AWM = 4.33), characterized by general recognition of the goals' global purpose and the 2030 agenda, but limited ability to comprehensively identify or explain all 17 SDGs. Awareness of the university's institutional commitment to the SDGs was likewise moderate, including perceptions of sustainability integration into institutional goals (AWM = 4.36) and policies (AWM = 4.41). Students' awareness was largely shaped by visible institutional cues such as posters, official announcements, and research priorities rather than sustained academic engagement. Qualitative results reinforced these patterns, revealing that SDG-related discussions were rarely embedded in classroom instruction, particularly in technical and discipline-specific courses. Engagement with the SDGs thus remained largely symbolic and event-driven, rather than curricular and transformative. Interpreted through a socio-political lens, the findings suggest that while universities publicly align with global sustainability frameworks, entrenched disciplinary boundaries and traditional academic structures limit meaningful pedagogical integration. The study concludes that awareness alone is insufficient to advance sustainability education. For the SDGs to become transformative learning tools, higher education institutions must strengthen curricular integration, enhance faculty capacity in sustainability-oriented pedagogy, and expand experiential and applied learning opportunities that translate institutional commitments into substantive student engagement.

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1. INTRODUCTION

The Sustainable Development Goals were established by the United Nations in 2015 as part of the Sustainable Development Agenda for 2030. These 17 goals, which are interlinked, provide a global framework to deal with the most urgent problems of the world, such as poverty, inequality, climate change, loss of biodiversity, peace, and justice (Osborn *et al.*, 2015). The SDGs have inherited the vision of the Millennium Development Goals (MDGs) and now stress the need for an integrated approach to development by embracing the concepts of economic, social, and environmental sustainability (Bue & Klasen, 2013; Wiedmann *et al.*, 2015). The SDGs as a world agenda challenge and invite all the nations to be part of the process of working together for a sustainable future (Costanza *et al.*, 2016).

The significance of education is very much reflected in the fulfillment of the SDGs. The higher education institutions, specifically, are the ones to initiate these changes and the principles of sustainability through awareness and teaching, research, and community engagement. According to research, the students' understanding of sustainable development is improved and their ability to participate in the world's goals is enhanced by the introduction of SDG-related topics into university courses (SDSN Australia/Pacific, 2017). Consequently, the role of universities is not only to produce knowledge but also to cultivate responsible, future-oriented leaders (Kanuri *et al.*, 2016).

The SDGs are not equally acknowledged and accepted by the academic world, even though there is a rising worldwide interest. For example, the study by Kapu Arachchilage and Keerthipala (2024) conducted in Australian universities revealed that faculty members were generally aware of the SDGs, but their integration within the curricula varied from one subject area to another. In a similar vein, Malik *et al.* (2019) found that the inclusion of sustainability in technology education in Pakistan not only opened students' eyes but also increased their interest. Sunthonkankopang and Murphy (2019) wrote about the pre-service teacher education that future teachers acknowledged the importance of sustainable development but in the case of their practical application, they were still facing barriers this situation resembling the concerns raised by Penzenstadler (2013) regarding the erratic inclusion of sustainability into the curriculum.

In the Philippines, there is a lack of empirical research examining the level of awareness of the Sustainable Development Goals (SDGs) among university students. Nevertheless, due to the country's susceptibility to climate change, socio-economic disparities, and loss of biodiversity, the development of sustainability literacy through higher education is considered very important (Malekpour *et al.*, 2017; Yoon, 2012). Philippine universities can be instrumental in facilitating the student transformation from passive to active agents of change through the integration of sustainable development policies in academic programs.

Ifugao State University (IFSU), a public higher education institution in the Philippines, has proved its dedication to the Sustainable Development Goals (SDGs) with a variety of programs that center around education, research, and community participation. IFSU not only takes part in national development by aligning local initiatives with global sustainability goals but also caters to the specific needs of its neighboring communities.

This research explores the extent to which students at Ifugao State University are aware of the Sustainable Development Goals. It is expected that the results will serve as a basis for the development of curriculum, planning of institutions, and educational policies by pointing out the factors that need improvement and the ways in which the SDG involvement in tertiary education can be increased.

2. LITERATURE REVIEW

Higher education institutions (HEIs) are increasingly positioned as critical actors in advancing the Sustainable Development Goals (SDGs) through curriculum design, research agendas, and institutional governance. Universities are expected to cultivate sustainability literacy by equipping students with the knowledge, skills, and values necessary to address complex global challenges (Kanuri *et al.*, 2016; SDSN Australia/Pacific, 2017). Despite this mandate, empirical evidence indicates that student engagement with the SDGs remains uneven and highly dependent on institutional and disciplinary contexts.

Studies focusing on undergraduate populations consistently report moderate levels of SDG awareness. Students generally demonstrate familiarity with the overarching aims of the SDGs but possess limited understanding of their specific targets and interrelationships. Malik *et al.* (2019) found that among technology education students, sustainability awareness and motivation improved when SDG concepts were explicitly integrated into coursework, highlighting the importance of curricular embedding. In contrast, Malekpour *et al.* (2017) observed that while students recognized sustainability initiatives at the campus level, these were often perceived as peripheral to formal academic learning.

Existing literature also emphasizes the role of institutional visibility in shaping student awareness. Promotional materials, campus events, and official communications are frequently identified as primary sources of SDG exposure (Kapu *et al.*, 2024). However, such visibility does not necessarily translate into sustained academic engagement, particularly in disciplines where sustainability is not directly linked to course content. Penzenstadler (2013) notes that uneven curricular integration across disciplines contributes to fragmented and superficial student understanding of sustainability concepts.

Although sustainability awareness has been widely studied among faculty members and pre-service teachers (Sunthonkankopang & Murphy, 2019), empirical research focusing on undergraduate students across diverse academic fields remains limited. This gap is especially evident in developing-country and regional university contexts, where institutional constraints and disciplinary traditions may further shape student engagement.

In the Philippine higher education context, research on students' SDG awareness is scarce and tends to prioritize institutional policies over lived classroom experiences. Addressing this gap, the present study examines undergraduate students' awareness of the SDGs at Ifugao State University (IFSU) and analyzes how institutional practices and curricular structures

shape that awareness. By applying a mixed-methods approach informed by a socio-political perspective, the study contributes empirical evidence on the distinction between symbolic SDG alignment and meaningful curricular integration in a regional state university setting.

3. METHODOLOGY

3.1. Research design

This study employed a convergent mixed-methods research design, which was considered appropriate for assessing the awareness of undergraduate students at Ifugao State University (IFSU) regarding the Sustainable Development Goals (SDGs). According to Creswell (2014), mixed-methods research involves combining quantitative and qualitative data to provide a more comprehensive understanding of a research problem. Descriptive research, as defined by Leedy and Ormrod (2013), is a design used to describe the characteristics of a population or phenomenon under study. In this context, the study sought to describe the level of awareness among IFSU students across different campuses and academic programs regarding the SDGs. The use of descriptive research was suitable because it enabled the collection of detailed information about the students' knowledge and perceptions of the SDGs without manipulating the study environment or variables.

3.2. Participants

The participants of the study consisted of undergraduate students enrolled at Ifugao State University (IFSU). The sample was drawn from all colleges of IFSU-Potia, and the students ranged from first-year to fourth-year levels across various academic programs. A total of 320 students were used in the study.

3.3. Sampling

The study used random sampling to select students. Random sampling was chosen because it provided every student with an equal chance of being selected, thus ensuring fairness in the selection process and reducing the potential for bias. The sample represent the diverse academic programs and year levels within the IFSU student body.

3.4. Data collection methods

This study employed a convergent mixed-methods approach to collect both quantitative and qualitative data, providing a comprehensive understanding of the undergraduate students' awareness of the Sustainable Development Goals (SDGs) at Ifugao State University (IFSU).

The quantitative data were collected using a structured survey questionnaire adapted from the study by Nirosha Dilhani Kapu Arachchilage *et al.* (2013), which was modified to fit the specific context and needs of this research. The survey instrument consisted of Likert-scale items organized into three key sections:

- Section A - General awareness of the SDGs
- Section B - University's commitment and communication regarding the SDGs
- Section C - Integration and importance of the SDGs in university objectives

The qualitative data were collected through open-ended survey questions that allowed students to elaborate on their views, experiences, and perceptions related to the university's SDG initiatives. These qualitative responses were analyzed using coding methods guided by Saldaña (2013), which provided systematic strategies for identifying recurring themes, patterns, and insights.

By combining both quantitative and qualitative data, this mixed-methods approach ensured a richer and more nuanced understanding of the students' level of awareness and engagement with the SDGs, while also addressing the research objectives in a robust and comprehensive manner.

3.5. Statistical treatment of data

In this study, frequency counts, percentages, and weighted means were used to determine the level of awareness of students regarding the Sustainable Development Goals (SDGs). To interpret the computed weighted mean, the following scale was used.

Table 1. Weighted mean scale

Response	Mean Scale	Interpretation
5	4.51 – 5.00	Extremely Aware (EA)
4	3.51 – 4.51	Moderately Aware (MA)
3	2.51 – 3.51	Somewhat Aware (SWA)
2	1.51 – 2.50	Slightly Aware (SA)
1	1:00 – 1.50	Not at All Aware (NAA)

3.6. Ethical considerations

All participants were informed about the purpose of the study, their rights to decline participation, and their right to withdraw at any time without penalty. Participation was voluntary, and no personal identifying data were collected to ensure anonymity. Data were stored securely and only accessible to the research team. The survey and open-ended questions were approved by the university's Institutional Review Board (IRB) / ethics committee before distribution.

4. RESULTS AND DISCUSSION

Table 2. General awareness of students on SDGs

Indicators	Mean	Qualitative Description
I am aware of the Sustainable Development Goals (SDGs) introduced by the United Nations.	4.25	Extremely Aware
I am aware of all 17 SDGs and their specific objectives	4.34	Extremely Aware
I am aware that the SDGs aim to address global challenges and are essential for sustainable development.	4.30	Extremely Aware

I am aware that the SDGs are to be achieved by the year 2030	4.42	Extremely Aware
AWM	4.33	Extremely Aware

Legend: 4.21 – 5.00 Extremely Aware (EA) *1.81 – 2.60 Slightly Aware (SA)*
3.41 – 4.20 Moderately Aware (MA) *1.00 – 1.80 Not Aware At All (NAA)*
2.61 – 3.40 Somewhat Aware (SWA)

The findings on students' general awareness of the Sustainable Development Goals (SDGs) at Ifugao State University (IFSU) indicate a moderate level of awareness, with a weighted mean score of 3.72. This suggests that while a substantial portion of the student population is familiar with the broader concept of the SDGs such as their global purpose, origin from the United Nations, and the 2030 target year there is limited understanding of the specific content and objectives of all 17 goals. For instance, while 35.69% of students reported being extremely aware that the SDGs were introduced by the UN, only 25.48% indicated being extremely aware of all 17 goals and their corresponding objectives. This reflects a partial conceptual grasp rather than deep familiarity, pointing to a potential gap in content exposure within the university environment.

This moderate level of awareness suggests that IFSU students are receptive to the sustainability agenda but may lack structured opportunities to engage with each goal in detail. This may be attributed to how SDG concepts are currently integrated often broadly mentioned in institutional communications but insufficiently embedded in specific academic activities or disciplines. Such limited exposure potentially restricts students' ability to apply sustainability concepts in practical, community-based, or professional contexts.

To triangulate the quantitative results, qualitative responses gathered through open-ended questions were analyzed. Two primary themes emerged.

4.1. Theme 1. Surface-level exposure

Several students expressed that their knowledge of the SDGs was mostly acquired through social media or school events, rather than through coursework. Participants remarked,

S1. *"I've seen the SDGs posted around campus or mentioned during university week, but we don't really go over them in our classes."*

S2. *"We learn about sustainability during orientations or when it's mentioned in passing, but it's not really a topic that gets explained in depth."*

This reflects a pattern of awareness driven by institutional promotion rather than academic integration.

4.2. Theme 2. Disconnect from academic relevance

This captures the perception among students that SDGs are not closely linked to their specific academic programs or future professions. Students shared,

S12: *"I support the idea of sustainability, but the SDGs feel more related to social science courses. In engineering, we don't really talk about them."*

S11: *"It's hard to see how the SDGs apply to my field. Maybe if professors connected them more to our projects, we'd take them more seriously."*

These insights reveal that even when students value the goals conceptually, their relevance can be lost without intentional integration into discipline-specific contexts.

These findings align with studies by Kapu Arachchilage and Keerthipala (2024), who observed a similar pattern of general awareness but limited comprehension of SDG specifics among university students in Australia. Likewise, Sunthonkankopang and Murphy (2019) noted that while pre-service teachers acknowledged the value of sustainable development, many lacked the practical tools to translate that awareness into actionable understanding. SDSN Australia/Pacific (2017) emphasized the role of higher education institutions in bridging this gap by embedding the SDGs meaningfully into curriculum design, teaching practice, and student activities.

Taken together, the convergence of quantitative and qualitative data suggests that IFU students possess a foundational awareness of the SDGs but require more structured, contextualized learning to elevate their understanding. Strengthening SDG integration within courses and linking sustainability themes to students' academic disciplines and career paths can enhance both comprehension and long-term engagement.

Table 3. Awareness of students along university's commitment and communication on SDGs.

Indicators	Mean	Qualitative Description
I am aware of the specific plans my university/school/faculty has to contribute to achieving the SDGs.	4.50	Extremely Aware
I am aware that SDGs are discussed in meetings or official communications within my university/school/faculty.	4.43	Extremely Aware
I am aware of any deadlines set by my university/school/faculty for achieving specific SDG targets.	4.31	Extremely Aware
AWM	4.41	Extremely Aware

Legend: 4.21 – 5.00 Extremely Aware (EA) *1.81 – 2.60 Slightly Aware (SA)*
3.41 – 4.20 Moderately Aware (MA) *1.00 – 1.80 Not Aware At All (NAA)*
2.61 – 3.40 Somewhat Aware (SWA)

The results show that students at Ifugao State University (IFSU) exhibit an extremely high level of awareness regarding the university's commitment to and communication about the Sustainable Development Goals (SDGs), with an average weighted mean (AWM) of 4.41. This finding is based on three key indicators, all of which fall within the "Extremely Aware" category. Specifically, students demonstrated strong awareness of the institution's specific plans to contribute to the SDGs (mean = 4.50), the presence of SDG discussions in official university communications (mean = 4.43), and awareness of set deadlines or institutional targets related to SDG achievements (mean = 4.31). These results indicate that IFSU has made substantial efforts to communicate its sustainability agenda effectively and that such initiatives have reached a wide portion of the student body.

The quantitative findings suggest that institutional messaging around sustainability has been clear, consistent, and well-disseminated. However, to fully understand the nature of this awareness, qualitative data from open-ended survey responses were also examined. Two dominant themes emerged.

4.3. Theme 1. Visibility of institutional messaging

The first theme points to the high frequency and accessibility of SDG-related content in various formats. Students noted,

S4: *"Our department shares regular updates about SDG programs through email and social media. We see posters and announcements about them all the time."*

S7: *"We always hear about SDG initiatives during assemblies and school events it's part of our regular updates."*

These responses reflect an environment where sustainability communication is highly visible and institutionalized across platforms.

4.4. Theme 2. Selective engagement with information

This indicates that while awareness exists, it may not always be accompanied by in-depth understanding or sustained student involvement. For instance, some students admitted,

S7: *"We're informed that the school supports the SDGs, but we're not always clear on what those plans really mean or how they're measured."*

S5: *"Yes, they talk about SDGs in meetings, but I'm not sure how much of that actually affects what we do in class or in projects."*

These reflections suggest that while institutional communication is effective at the surface level, the translation of these messages into meaningful engagement with students' academic or extracurricular experiences may still be limited.

These findings are in line with previous research by SDSN Australia Pacific (2017), which emphasized that universities must go beyond raising awareness and ensure that communication is followed by integration and involvement. Similarly, Kapu Arachchilage and Keerthipala (2024) noted that while students are increasingly aware of university SDG commitments, many are unaware of the mechanisms through which these commitments are operationalized or evaluated. Chetty *et al.* (2014) also observed that clear, transparent communication strategies enhance institutional credibility, but long-term impact depends on how such strategies are connected to academic experiences and student agency.

The converged data suggest that IFSU has made commendable progress in promoting SDG awareness through visible and accessible institutional messaging. Nonetheless, for this communication to move from awareness to action, more efforts are needed to bridge the gap between institutional goals and students' personal or academic engagement with those goals. Enhancing transparency, linking communication to curriculum, and involving students in co-creating SDG initiatives may help close this gap.

Table 4. Awareness of students along integration and importance of sdgs in university Objectives

Indicators	Mean	Qualitative Description
1. I am aware of the importance my university places on achieving SDGs as part of its official objectives.	4.44	Extremely Aware
2. I am aware that SDG-related research themes are prioritized by my university.	4.41	Extremely Aware
3. I am aware that my university considers research on SDG related issues as highly important	4.24	Extremely Aware
AWM	4.36	Extremely Aware

Legend: *4.21 – 5.00 Extremely Aware (EA)* *1.81 – 2.60 Slightly Aware (SA)* *3.41 – 4.20 Moderately Aware (MA)* *1.00 – 1.80 Not Aware At All (NAA)* *2.61 – 3.40 Somewhat Aware (SWA)*

The results indicate that students at Ifugao State University (IFSU) are extremely aware of the integration and importance of the Sustainable Development Goals (SDGs) within the university's core objectives. With an average weighted mean (AWM) of 4.36, the responses across all three indicators reflect a high level of student recognition. Specifically, students reported strong awareness of the university's emphasis on achieving the SDGs as part of its official mission (mean = 4.44), the prioritization of SDG-related research themes (mean = 4.41), and the institutional value placed on research addressing SDG-relevant issues (mean = 4.24). These results suggest that IFSU's strategic alignment with the SDGs is clearly communicated and perceptible to the student body, especially in terms of research orientation and institutional priorities.

This high level of awareness indicates that the SDGs are not only present in administrative rhetoric but also visible in research focus and institutional discourse. However, to understand how students interpret this integration on a

practical level, qualitative responses were analyzed. Two major themes emerged from the responses.

4.5. Theme 1. Perceived research alignment

Under the first theme, many students expressed awareness that research at IFSU is increasingly aligned with sustainable development concerns. Student noted,

S8: *"I've seen thesis topics and research exhibits that clearly focus on environmental or social issues tied to the SDGs."*

S2: *"Our professors mention that we're encouraged to do research with impact especially in areas that support sustainable goals."*

These statements suggest that the institution's prioritization of SDG-linked research has been successfully internalized by students, at least in terms of general awareness.

4.6. Theme 2. Curricular disconnection

The interview reveals a more nuanced picture. Although students recognize the university's emphasis on SDG research, they sometimes perceive a gap between these institutional objectives and their daily classroom experiences. Participants shared,

S3: *"Even if we hear about SDG research goals, it doesn't always come up in our actual coursework or lectures."*

S7: *"Our university promotes sustainability a lot, but we rarely do class projects that directly relate to the SDGs unless it's part of a major requirement."*

These comments indicate that while the strategic priorities of the university are visible at the institutional level, they are not consistently reflected across course content or student learning experiences.

The findings of this study echo what other scholars have found. Bue and Klasen (2013) pointed out that while universities may proudly align themselves with the Sustainable Development Goals (SDGs), the actual connection to student learning often varies and can remain uneven. Kapu Arachchilage and Keerthipala (2024) similarly noted that although sustainability research is growing, students are not always given the chance to engage deeply with it unless it is tied directly to their course work. In the same way, SDSN Australia Pacific (2017) urged universities to move beyond simply promoting SDG initiatives at the institutional level and to embed sustainability across more programs so that students can experience its relevance in their day-to-day studies.

This study at IFSU shows a similar pattern. Students are highly aware of the university's strong commitment to the SDGs, especially in research and institutional messaging. Yet awareness alone is not enough. For this knowledge to truly matter, it must connect with students' lived experiences in the classroom, in projects, and in their own initiatives. When SDG themes are consistently built into coursework and learning activities, the university's sustainability vision can become part of every student's journey from what they study, to how they conduct research, to the culture they help shape on campus.

Looking at these findings through a socio-political lens makes one thing clear: education is never just about teaching facts or skills. It is shaped by the world around us and, in turn, shapes the world that students will help build. At IFSU, the influence of global and national priorities is evident. The presence of the SDGs in the university's mission shows how international frameworks can set the direction for what is valued in local education. In this way, education becomes a product of broader policies and agendas that trickle down into classrooms.

But education does not only reflect society it also helps reproduce its patterns. Many students, while aware of the SDGs, saw them as something "extra," particularly in technical programs where sustainability felt outside their main focus. This shows how education can unintentionally keep old divides in place like separating "technical" knowledge from "social" or "ethical" concerns instead of bridging them.

At the same time, IFSU's alignment with the SDGs highlights how education can legitimize certain worldviews. By centering sustainability, the university encourages students to see themselves as responsible citizens and future leaders for development. This is empowering, but it also comes with limits: the ideas are often framed within existing ways of thinking, leaving less space for students to question or imagine alternatives.

Finally, the gap between what the university promotes and what happens inside classrooms shows education's double edge. It can raise awareness and inspire students to think about their role in solving global challenges. Yet without deeper integration, it risks producing graduates who know about sustainability but lack enough practice to live it out meaningfully.

In short, the case of IFSU reminds us that education is never neutral. It is shaped by political, cultural, and social forces, and it also passes those forces on to the next generation. Education is both a mirror of society and a tool that carries forward its values, priorities, and hierarchies into the future.

CONCLUSION

This study shows that students at Ifugao State University are highly aware of the Sustainable Development Goals (SDGs), largely due to the university's institutional messaging and research priorities, yet this awareness often remains surface-level with limited connection to classroom learning and disciplinary contexts. Seen through a socio-political lens, education at IFSU reflects global and national frameworks that shape local priorities while also reproducing existing divides between technical and social knowledge, as well as between institutional rhetoric and practice. To move beyond symbolic alignment, education must be made more transformative by embedding SDG themes meaningfully into curricula, fostering critical engagement, and providing applied opportunities that allow students to see themselves not only as recipients of global agendas but as active participants in shaping a more sustainable and equitable society.

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