

# Awareness and Attitudinal Factors: Influencing Librarians' Engagement in the Implementation of Sustainable Development Goal (SDG) 4 on Quality Education

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**Abstract**— Librarians play a crucial role in the realization of the UN's Sustainable Development Goal(SDG) in terms of promoting access to information, literacy, and lifelong learning that empower communities and foster sustainable development. This descriptive-correlational study examined the librarians' level of awareness, attitude, and implementation of SDG in their respective campuses. It also assessed the influence of librarians' awareness and attitude on their engagement in implementing the Sustainable Development Goal(SDG) in academic libraries. The study was conducted in the main and satellite campuses of a state university in the province of Bukidnon. The participants included librarians, library aides, students, assistants, and para-professionals. This study employed an adapted survey questionnaire from the studies of Ejiche (2018) and Connaway et al. (2023). The data were analyzed using descriptive statistics and multiple linear regression. The findings of the study revealed that the librarians have high levels of awareness, positive attitude, and high level of engagement in the implementation of the Sustainable Development Goal(SDG) in their campuses. Regression analysis indicate that the librarians' awareness and attitude significantly influence their engagement in the implementation of SDG. The study concludes that fostering high awareness and cultivating a positive attitude among library personnel are critical factors in enhancing their active participation in achieving the SDG, highlighting the need for continuous professional development and institutional support to sustain and strengthen their contributions to sustainable development. Future librarians may explore other areas of the Sustainable Development Goal(SDG) where libraries can expand their impact and develop innovative programs and services.

**Keywords**— Attitude, awareness, librarians, Sustainable Development Goal (SDG)

## 1. INTRODUCTION

Sustainable Development Goal 4 (SDG 4) prioritizes education on the universal development agenda by emphasizing the need for inclusive, equitable, and quality education for all. Since adopting the goal in 2015, SDG 4 has guided governments, educational institutions, and stakeholders to broaden access to learning opportunities, integrate sustainable development into educational systems, and pursue disaggregated data to examine inequities that limit marginalized individuals and groups. In these cases of educational access, education can become a transformative process to create socially compromising persons committed to sustainability (UNDP, 2024; Serafini et al., 2022).

Libraries and librarians have an important place in implementing the SDG 4 through different means, such as access to information, literacy, and community spaces (Shesha & Singh, 2024). Libraries and librarians assist in realizing the SDG 4 through access to information for the goals, which provide ways to facilitate access to

close what are now gaps in access, and help the commitment towards understanding access to local information. Libraries and librarians also play valuable roles toward universal literacy, including media, information, and digital literacy skills, promoting digital inclusion through access to ICT and staff support for the development of new digital skills (Khalid Lahyani et al., 2024).

In the Philippine context, the role of libraries in advancing SDG 4 has become increasingly recognized. As the country continues to face challenges related to educational inequality, technological access, and rural marginalization, libraries have emerged as strategic partners in addressing these issues. Realizing that knowledge drives sustainable development, numerous libraries have initiated programs that directly support SDG 4—ranging from mobile library services and reading literacy campaigns to digital literacy workshops and after-school tutoring sessions. These efforts aim to empower disadvantaged communities, especially in

remote or underserved areas, by improving their access to educational resources (Kear & Garcia-Febo, 2020; Caragay et al., 2019).

Nevertheless, the challenges that librarians face in relation to developing SDG 4 hinder many of them from pursuing realistic sustainability programs in their institutions. For example, the study by Irinco (2023) identified a number of challenges including low financial, low institutional support, and low training opportunities for librarians to understand and transfer SDG-related programs into their services in a meaningful way. The study pointed out how while librarians recognize their contribution to SDG 4 promotion overall and in those limited instances, without any meaningful financial or administrative support, it is hard for them to carry out meaningful projects. Likewise, Tuble et al. (2020) called for a wider recognition from local authorities and communities of how public libraries can support SDG.

Previous studies primarily focused on large, established higher education institutions in the country directing that the existing literature gap on how librarians in smaller campuses were addressing sustainability goals. While an extensive literature related to sustainable development goals existed in major universities, there was a lot less literature examining the issues, strategies, and contributions librarians made in smaller academic institutions. With a literature gap established, the present study attempted to gauge the awareness, attitude, and engagement of librarians on the satellite and main campuses of a State University in the Province of Bukidnon, particularly since these campuses are smaller and often have restrictions not faced by larger campuses

(e.g., fewer resources, lower budget, or restricted capacities for professional development).

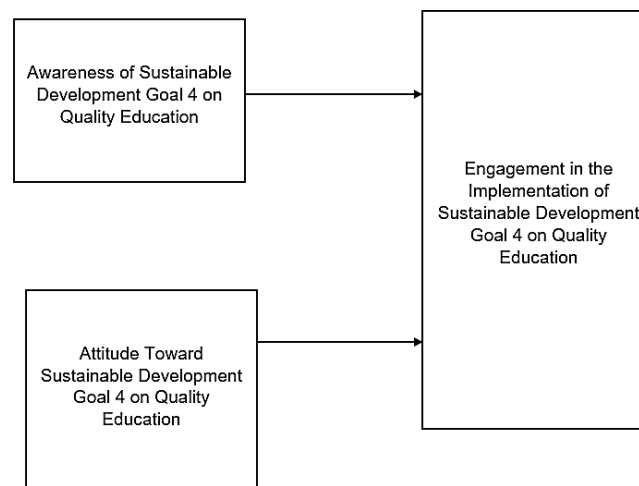
### *Objectives of the Study*

This study aims to understand how librarians in ON OF THE University in the Province of are involved in promoting sustainability. Specifically, we want to know how much they know about the United Nations Sustainable Development Goal (SDG) 4, how they feel about them, and how they put these goals into action in their libraries.

### *Framework*

This study argues that librarians' adoption of green computing practices is shaped by their awareness, understanding, and attitudes toward environmental sustainability. This assertion is especially pertinent in Northern Mindanao, where librarians exhibit differing degrees of involvement in green computing initiatives such as energy conservation, resource preservation, and effective e-waste management. The connection between awareness and action can be examined through two supporting theoretical frameworks: the Theory of Planned Behavior (TPB) and the Norm Activation Theory (NAT), which collectively offer a solid basis for comprehending environmentally responsible behavior in professional environments.

The Theory of Planned Behavior (TBP), developed by Icek and Ajzen in 1985, underpinned this study. According to this theory, an individual's attitude, subjective standards, and behavioral control influence their intentions, which in turn determine how likely they are to act in a certain way. Si et al. (2019) mentioned this idea, which sheds light on how TPB can be used in green consumption.



**Figure 1.** The Schematic Presentation of the Study

## Statement of the Problem

This study examined how librarians' awareness and attitude toward sustainability goals influence their successful implementation of SDG 4. Specifically, it answered the following research questions:

1. What is the extent of the librarians' awareness of sustainable development goals?
2. What is the extent of the librarians' attitude towards sustainable development goals?
3. What is the extent of the librarians' engagement in the implementation of sustainable development goals?
4. Do the librarians' awareness and attitude towards sustainable development goals significantly influence their engagement in the implementation of sustainable development goals?

## III. METHODOLOGY

### Research Design

The present study used a descriptive-correlational research design to explore the awareness or attitude librarians have toward implementing the Sustainable Development Goals. The Correlational Design fits the purpose of this study well because it is a non-experimental methodology that allows researchers to learn about the natural relationship between multiple variables without manipulation or control by the researcher. Stylistically, a descriptive-correlational research design examines the strength (or direction) of a positive or negative relationship between variables (Siedlecki, 2020). The design aligns with the study purpose of exploring librarians' awareness and attitude in implementing sustainable development goals, which may have implications on what is meant by their engagement. The descriptive-correlation design also has substantial alignment to ethical and practical contexts that are more complex, that reinforces the fit of exploring the evolving relationship of this multi-faceted interaction in academic libraries.

### Participants

The participants of the study were 68 library personnel employed in one of the State University in the Province of Bukidnon.

### Research Instruments

The primary instrument for data collection was an adapted questionnaire from other researchers who also examined librarians' role in the implementation of the transformative Agenda 2030 (Sustainable Development Goals). The first section of the questionnaire was

personal information on the librarians. This section is optional to the respondents to answer to identify their names, age, position (head librarian or library aide) and the number of years in the position. The second and third sections of the questionnaire are made on the basis of a five-point Likert scale that measure respondents' awareness of the Sustainable Development Goals. This section is adapted from a study by Ejiche (2018) that measured the awareness and attitude of librarians in a university in Africa. This section contained a series of statements that respondents had to check on the basis of their agreement and disagreement.

The last portion of the questionnaire was reformatted from another study (Connaway et al., 2023) which was a study of the role of the librarians in the area of engagement in the SDG which had modified the roles in the previous studies into items that the respondents could check regarding their engagement, and how they implemented it in their context. Also, the last part also used a five-point Likert scale for the respondents to indicate their level of agreement or disagreement. In short, respondents were expected to finish the questionnaire in 15 to 20 minutes; it depends on their level of being reflective, which assures that the instrument is comprehensive yet not too long.

## IV. RESULTS AND DISCUSSION

Table 1 presents the respondents' self-assessed awareness of the Sustainable Development Goals and their relevance to their professional roles.

As shown in the table, the respondents' awareness of the SDG yielded an overall mean of 4.03, accompanied by a standard deviation of 0.63. The data indicate that the librarians are knowledgeable about the SDG and their relevance to the library. This finding indicates that a significant majority of the surveyed librarians understand the Sustainable Development Goals and recognize their importance within the library context.

From the percentage distribution, it can be gleaned that majority of them (70.58%) assessed themselves as highly aware of the SDG, while 10.29% percent of them were very highly aware.

In particular, the statement, "I understand that libraries and librarians play a key role in increasing public awareness and access to information on the SDG," resulted in the highest mean of 4.23 (SD=0.83) and the interpretation that the librarians are highly aware of the SDG in the library operations.



**Table 1.** Mean Distribution of the Librarians' Awareness of Sustainable Development Goal 4 on Quality Education.

Range	Descriptive Rating	Interpretation	Frequency	Percentage
4.51-5.00	Strongly Agree	Very Highly Aware	7	10.29
3.51-4.50	Agree	Highly Aware	48	70.58
2.51-3.50	Slightly Agree	Moderately Aware	12	17.64
1.51-2.50	Disagree	Slightly Aware	1	1.47
1.00-1.50	Strongly Disagree	Not Aware	0	0.00
		Total	68	100.0
		Overall Mean	4.03	
		Interpretation	Highly Aware	
		SD	0.63	

Table 2 presents an overview of librarians' attitudes toward implementing the SDG in their respective institutions. Analyzing the data in the table, survey respondents among librarians reported considerable attitude in applying the Sustainable Development Goal into practice. The average response regarding their active involvement in implementing the SDG is 4.27,

with a relatively tight spread (standard deviation = 0.58), implying that, in general, these librarians believe they strongly support and show active practices to apply the SDG in their libraries' daily activities. This indicates a strong commitment by librarians to act on awareness and demonstrate a collaborative effort in accomplishing these global goals for the library profession sector.

**Table 2.** Mean Distribution of the Librarians' Attitude Towards Sustainable Development Goal 4 on Quality Education.

Range	Descriptive Rating	Interpretation	Frequency	Percentage
4.51-5.00	Strongly Agree	Very Highly Positive	9	3.23
3.51-4.50	Agree	Highly Positive	49	72.05
2.51-3.50	Slightly Agree	Moderately Positive	9	3.23
1.51-2.50	Disagree	Slightly Negative	1	1.47
1.00-1.50	Strongly Disagree	Very Negative	0	0.00
		Total	68	100.0
		Overall Mean	4.27	
		Interpretation	Highly Positive	
		SD	0.58	

Table 3 presents the librarians' assessment of themselves in terms of their engagement in the SDGs. The findings indicate that librarians show a reasonable amount of dedication and engagement in supporting the Sustainable Development Goals in their professional practices as shown in an overall mean of 3.72. Their engagement demonstrates a continuing habit of embedding sustainability principles and participating in sustainability initiatives whenever resources and opportunities arise. As to distribution, the data further show that majority (57.35%) of the respondents were

highly engaged in the implementation of the Sustainable Development activities of their institution, while a quarter (25%) of them were not that engage.

In particular, the indicator stating that "I facilitate access to information and resources that support SDG awareness and education," resulted in the highest mean of 3.89 (SD=0.90) and the interpretation that the librarian consistently participates in SDG-related initiatives and applies sustainability practices in library operations when possible.

**Table 3.** Frequency, Percentage and Mean Distribution of the Librarians' Engagement in the Implementation of Sustainable Development Goal 4 Quality Education.

Range	Descriptive Rating	Interpretation	Frequency	Percentage
4.51-5.00	Strongly Agree	Very Highly Engaged	7	10.29
3.51-4.50	Agree	Highly Engaged	39	57.35
2.51-3.50	Slightly Agree	Moderately Engaged	17	25.00
1.51-2.50	Disagree	Slightly Engaged	6	8.82

1.00-1.50	Strongly Disagree	Not Engaged	0	0.00
		Total	68	100.0
		Overall Mean	3.72	
		Interpretation	Highly Engaged	
		SD	0.80	

Table 4 Problem 4. Do the librarians' awareness and attitude towards sustainable development goals significantly influence their engagement in the

implementation of sustainable development goals initiatives?

**Table 4.** Regression Analysis on the Influence of respondents' Awareness and Attitude Towards Engagement in SDG 4 on Quality Education.

	Unstandardized Coefficients		t-value	p-value
	B	S. E.		
(Constant)	-.705	.492	-1.434	.157
Awareness	.561	.153	3.660**	.001
Attitude	.507	.165	3.074**	.003

R=.758  $R^2 = .574$  F=43.112\*\* p=.000 Significant

Fitted Regression Model

$$Y = -0.705 + 0.561(\text{Awareness}) + 0.507(\text{Attitude})$$

\*\*significant at 0.01 level

Awareness and attitude are fundamental influencers of behaviors and participation in any activity, including the Sustainable Development Goals (SDG). Table 4 illustrates the regression of the influence of librarians' awareness and attitude, and as it relates to their engagement and participation in activities linked to the SDGs.

The regression analysis whole model is significant (F=43.11, P=.000). Thus, the null hypothesis (Ho1), which states that librarians' awareness and attitude do not significantly influence their engagement, is rejected.

This means that higher levels of awareness and more positive attitudes among librarians are associated with greater engagement in implementing SDG-related initiatives. Taken singly, awareness is also significant increases by one unit, then engagement increases by 0.561 units with all else held predictor, indicating that as awareness Literature support. Similarly, attitude also has a significant influence on their engagement indicating a .507 increase on their engagement for every unit increase on their attitude (b= .507, t= 3.074\*\*, p=.003) coefficient of 0.507 and p-value of 0.003 provided evidence of a statistically significant positive effect on the dependent variable. In other words, increasing attitude by one unit predicts a 0.507-unit increase in the dependent variable. The constant or intercept value of the dependent variable was -0.705, has a p-value of

0.157, and is not statistically significant. Furthermore, if the values of both awareness and attitude are both at zero, their baseline estimates of the dependent variable would be no meaningfully different than zero. In general, both awareness and attitude were identified as important contributors to the outcome variable.

Given the results in the regression analysis, librarians, campus heads, and the administration of state universities have a chance to develop collaborative strategies to raise awareness and create a good attitude toward the Sustainable Development Goals (SDGs). For example, librarians at main and satellite campuses could try simple activities (SDG quiz contest, film showing, reading sessions- even more fun) and activities that can promote stakeholder engagement.

Additionally, they could encourage and support educators to design elements of their lesson plans or projects to have SDG theme coverage. Heads of schools could also be supportive of educators, espousing SDG awareness in school activities, even for events such as Foundation Day or Environmental Month, to include SDGs in student organizations' activities. Everyone associated with the university, including the main campus and satellite campuses, can organize to join in these simple and practical possibilities to address the goals for a better and more sustainable future.

Onto the findings of this study, Cortez et al.'s (2024) engaged with and found no statistically significant difference between level of awareness, and level of participation with the SDG strategies. Although the research respondents were aware of the Sustainable Development Goals, their level of awareness did not, in Cortez et al. (2024) study, result in an observable and measurable outcome of their level of awareness into actively participating in sustainability initiatives within their respective libraries.

Like Cortez et al. (2024), Malebajoa (2024) argued that in addition to awareness of and a positive attitude towards the SDGs, librarians need to actively implement and promote sustainability initiatives within their respective organizations. This means more than just being aware of the SDGs or promoting them; it also means being able to advocate them through your own library context through the integration of SDG values into library programs, services, and outreach and building partnerships that support a wider vision of sustainable development.

## V. CONCLUSION

Librarians have the appropriate level of consciousness and understanding about the Sustainable Development Goals (SDGs), allowing them to apply library services to sustainable development goals. Such understanding enables librarians to be a part of developing inclusive education, equitable information access, and community-based projects through library delivery.

Librarians' encouraging disposition suggests a deliberate intention to use the library as a vibrant, useful space for sustainable development and support the community's agenda at the same time.

Librarians are engaged in sustainability initiatives focused on the SDGs and work together to develop sustainable practices within library service, indicating an intention to align library services with wider development goals.

Librarians who have a greater depth of knowledge about the SDGs, and who are positive towards them, will subsequently be more inclined to get involved with activities or initiatives relating to sustainable development. Therefore, initiatives that encourage greater knowledge and promote positive attitudes will play a significant role in encouraging greater participation in the SDG.

The results of this study support the principles of the Triple Bottom Line (TBL) and the Theory of Planned Behavior (TPB) that are based on the presence of librarians' awareness and favorable opinions about sustainability that directly affect their compliance in initiating SDG initiatives. This indicates that individual intention and resulting action, influenced by librarian attitudes and perceived responsibilities, along with institutional commitment to academic sustainability with a social, environmental, and economic impact, are vital to sustainable action within academic libraries.

## VI. RECOMMENDATION

Based on the findings and conclusions generated in the study, the following recommendations are presented for consideration:

### 1. For Librarians

- 1.1 They are encouraged to continue learning about sustainable development goals by participating in workshops, webinars, or new resources. By staying current, they will be able to better link the goals to the daily work we do in libraries.
- 1.2 They may already be involved in developing and supporting programs related to the SDGs, such as reading programs, information drives, or discussions within the community. Small initiatives, such as promoting books or resources on caring for the environment, social action, or gender equality can have a large impact.
- 1.3 They can may apply simple sustainability practices by minimizing paper use, using less electricity, and employing recycling practices immediately in the library, while encouraging library users or coworkers to do the same. Libraries can become examples of green and responsible practices.
- 1.4 It is suggested that training should be provided for specific SDG 4 (Quality Education) programs, that addressed how it connects to library services, how to develop programs, enhance access to lifelong learning opportunities through library programs.

### 2. For Students:

- 2.1 They are encouraged to engage with the Sustainable Development Goals (SDGs), whether by reading about them, participating in school community activities, or watching documentaries. Learning about the SDGs can help students recognize that their actions—large and small—could potentially impact their school or community locally.

- 2.2 They may participate in and support library initiatives related to global causes such as education, the environment, and equality. This participation fosters a sense of awareness for students, as well as leadership attributes and a sense of service.
- 2.3 They may think about how to integrate some easy, sustainable habits into their lives, for instance, using reusable items, including bags and containers, conserving energy, and reducing waste (specific to using library resources).

### 3. For Campus Heads:

- 3.1 Campus heads may offer training, seminars, or other resources for librarians and staff to learn about Sustainable Development Goals (SDGs). Supporting librarians and staff's knowledge will help them incorporate SDGs into their work and library service.
- 3.2 Campus heads can promote and recognize librarians who are developing initiatives in support of SDGs and publicize those efforts. They could show support for librarians' programs through event attendance and budgetary support, even at a very minimal level, to support ongoing, meaningful programs.
- 3.3 Campus heads can model sustainability practices on campus, such as energy efficiency, establishing green office practices, and encouraging all campus divisions (including the library) to follow suit.

### 4. Future Researchers:

- 4.1 Future researchers may examine ways that integrating Sustainable Development Goals into library-based services may impact library users (students, faculty, and the wider community). Understanding the impact on users may provide information on how libraries can better serve their users while contributing to sustainable development.
- 4.2 Researchers may examine the barriers librarians experience when implementing practices related to sustainable development goals (SDGs) and sustainability initiatives. Identifying barriers, including resource constraints, will inform future researchers in developing recommendations to help make their initiatives more effective.
- 4.3 Future researchers may examine how libraries can be even more innovative in their sustainable development goal contributions, for example,

working with local communities, establishing partnerships with local organizations, or through new sustainable services. This type of research could expand the role of libraries and their services (SDG 17).

### 5. For Local Government Units (LGUs) and Non-Governmental Organizations (NGOs):

- 5.1 They are encouraged to establish partnerships with academic libraries to co-develop programs aligned with SDG 4 (Quality Education). Collaborations can include support for mobile libraries, book donation drives, literacy campaigns, and training sessions in underserved communities.
- 5.2 They may provide funding, logistical, and technical support for library-initiated programs that promote inclusive and equitable quality education. These could include reading sessions, digital literacy workshops, and educational outreach activities.
- 5.3 They may tap the expertise of librarians as community educators by inviting them to participate in community development projects, SDG awareness drives, or local planning activities related to education and lifelong learning.
- 5.4 Partnerships with libraries can help ensure community-based SDG initiatives are sustained, monitored, and reach grassroots beneficiaries, especially in geographically isolated and disadvantaged areas (GIDAs).

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