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## Research Article

### Assessing Environmental Law Awareness Among Bachelor of Elementary Education Students: A Study on Knowledge and Attitudes

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## ABSTRACT

The study aimed to investigate the level of knowledge and attitudes towards environmental laws among Bachelor of Elementary Education (BEED) students. A quantitative research design was utilized, and the primary data-gathering tool was a survey questionnaire. The study discovered that the BEED students had a generally poor level of knowledge, but their attitudes toward environmental laws were positive. The outcomes showed that only a few students were concerned about the environment and supported environmental protection, and a majority of them did not practice positive behavior. Despite knowing the penalties for violating environmental laws in the Philippines and the procedures for reporting environmental violations, many students continued their bad practices. Only a small proportion of them exhibited positive behavior or practices that supported environmental protection. Therefore, the BEED students at DEBESMSCAT, Cawayan, Campus had an insufficient and incomplete understanding of the environmental laws in the Philippines. The findings of the study highlighted the need to enhance the environmental education curriculum in the BEED program to improve the student's knowledge and attitudes toward environmental laws. As the students' knowledge and attitudes towards environmental laws could significantly impact their behavior and practices, it was essential to strengthen their comprehension of environmental laws and their role in environmental protection. The study emphasized the responsibility of academic institutions in promoting environmental education among students to ensure that they became environmentally responsible citizens in the future.

**Keywords:** Environmental law awareness, Environmental laws, Environmental behavior

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## Introduction

In the modern era, the environment has emerged as a significant but problematic talking subject. People are all aware that many of the natural resources being used are finite, and that when people do nothing, issues like air pollution and waste management won't go away (Picard, 2023). This issue is particularly pronounced in the Philippines, a fast-growing nation in Asia with diverse topography, a sizable population, and significant economic standing (ADB, 2009). The Philippines faces a range of environmental challenges that disproportionately affect the underprivileged. Ineffective management practices have resulted in the degradation of important biodiversity resources, while water and air pollution levels exceed accepted healthy standards. Greenhouse gas emissions from the power and transportation sectors continue to rise, and the country remains highly vulnerable to the impacts of environmental disasters (ADB, 2009; USAID, n.d.). The main culprits behind the threat to the Philippines' rich biodiversity are human activities, including illegal wildlife trade, deforestation, and forest degradation. Despite the commitment of the Philippine government to preserve the environment and manage natural resources through a comprehensive legal and regulatory framework (ADB, 2009), the enforcement of environmental laws remains a challenge. Several laws, such as the National Water and Air Pollution Control Commission Act, the Philippine Clean Air Act of 1999, the Wildlife Resources Conservation and Protection Act, and the Ecological Solid Waste Management Act of 2000, have been enacted to safeguard the environment (Robles, n.d.). However, limited financial resources, economic incentives, and management tools hamper the effective protection of high biodiversity areas (USAID, n.d.).

Within the Bicol region, there is a pressing need for accurate environmental statistics due to ongoing environmental challenges exacerbated by population growth, loss of agricultural land, soil erosion, air and water pollution, improper waste disposal, coral reef degradation, and mismanagement of coastal areas (Luceña, 2019). Similarly, in Masbate, the marine ecosystem faces threats from destructive practices

such as dynamite fishing and extensive commercial fishing, leading to the loss of marine life and the destruction of coral reefs (Villegas, 2020). Furthermore, poor sanitation, particularly the lack of access to sanitary restrooms, has been identified as a concern in Masbate (Esquerre, 2014). A study conducted in Cawayan, Masbate, on the nutritional causes of undernutrition, found that open defecation, poor sanitation, inadequate waste management, and limited access to safe water were significant contributors to undernutrition (Mattern, 2015). These causes are often rooted in unsustainable practices and inadequate environmental awareness among the local population.

While the Philippines has numerous environmental laws in place, a significant challenge lies in the lack of awareness and effective implementation at the local level. Municipalities and barangays often struggle to enforce these laws, resulting in the persistence of harmful environmental practices. Even educated individuals who are aware of the laws sometimes choose to ignore them, further exacerbating the problem. This knowledge gap becomes more concerning when considering individuals who are still learning or lack formal education, such as BEED (Bachelor of Elementary Education) students. Equipping these individuals with essential knowledge about environmental laws becomes crucial. Recognizing the negative environmental impact on young people, Grimmette (2014) advocated for environmental education programs that promote awareness, establish connections with the natural world, and transform young people's perceptions of the environment. In the Philippines, environmental education is integrated into the curriculum alongside subjects like social studies, geography, civics, life and physical sciences, and moral education (Didhan & Ofei-menu, 2012).

This study aims to assess the level of awareness and perception of environmental laws among BEED students in DEBESMSCAT, Cawayan Campus. Specifically, the objectives are to (1) determine the students' awareness and understanding of environmental laws, (2) assess the student's knowledge and attitudes toward environmental laws, and (3) evaluate the students' perceptions of environmental laws and their enforcement, as well as assess

their pro-environmental behavior. By examining the awareness and perception of environmental laws among future educators, this research seeks to contribute to the development of effective strategies for integrating environmental education into the curriculum and fostering environmental stewardship among the youth.

## Methods

### **Research Design and Sampling**

In this study, a descriptive design was employed. The main population of this study comprised all BEED students from freshmen to seniors. Since they intended to work as educators in the future, it was crucial that they were knowledgeable about environmental laws and thoroughly understood them, so they could pass that knowledge on to their future students. The study was conducted at DEBESMSCAT-Cawayan Campus, situated at Sitio Panorama, Poblacion, Cawayan, Masbate. A total of 169 students from the first year to the fourth year participated as respondents in this study. They were distributed as follows: 45 students from BEED 1A, 49 students from BEED 1B, 23 students from BEED 2A, 24 students from BEED 2B, 14 students from BEED 3, and 14 students from BEED 4. Their responses served as the main source of data used to complete this research study, which exclusively focused on BEED students. The researcher utilized simple random sampling to select the sample size, ensuring the involvement of the entire target population. This approach helped maintain the study's validity, and accuracy, and minimize bias in the gathered information.

### **Data Collection and Statistical Analysis**

The data was collected using survey questionnaires in both printed form and through Google Forms. Cronbach alpha was used to validate the questionnaire. The result of 0.804 indicates that the questionnaire has good internal consistency, which means that the items on the questionnaire are measuring the same underlying concept. The survey was administered during class hours, accompanied by a printed communication letter submitted to the instructors on duty. All students from each section answered the survey questionnaire in one place

at the same time, except for the BEED 4 students who were currently engaged in their practice teaching. The BEED 4 students completed the survey through Google Forms at different locations and times. The information obtained included the students' level of awareness and understanding of environmental laws, their knowledge, and attitudes toward environmental laws, their perceptions regarding environmental laws, their enforcement, and their pro-environmental behavior. Descriptive statistics were employed, including frequency counts, percentages, and means. Frequency counts were used to determine the number of occurrences of specific responses or categories within the dataset. This helped identify the distribution of responses and provided an understanding of the prevalence of different viewpoints or opinions among the BEED students. Percentages were calculated to express the relative frequency of specific responses or categories to the total number of respondents. This allowed for a more meaningful comparison of the data, highlighting the proportion of students holding certain perspectives or exhibiting specific behaviors related to environmental laws.

Additionally, means were utilized to determine the average scores or ratings provided by the participants. This measure helped gauge the overall level of awareness, understanding, and attitudes of the BEED students toward environmental laws. It provided a numerical representation of their collective responses on Likert scales. By employing these descriptive statistical techniques, the researcher was able to summarize and present the data clearly and concisely, shedding light on the students' perspectives, knowledge, and behaviors related to environmental laws.

## Results and Discussion

### ***Awareness and Understanding of Environmental Laws***

The analysis of the table revealed that the BEED students of DEBESMSCAT Cawayan, Campus were lacking awareness of the Environmental Laws in the Philippines. This observation was disheartening from the perspective of policy-makers and also raised serious concerns, particularly because these students were pursuing a career in teaching without a

comprehensive understanding of the country's environmental laws. Given that the program already covered this topic during their senior high school education, their level of awareness

fell far below desirable standards. The implications were troubling, as it raised questions about their ability to effectively educate their future students on the subject matter.

*Table 1. Level of awareness and understanding of BEED students in DEBESMSCAT, Cawayan, Campus towards environmental laws*

INDICATORS	MEAN	QUALITATIVE INTERPRETATION
How familiar are you with environmental laws in the Philippines?	1.90	Not very familiar
How would you rate your understanding of environmental laws?	1.63	Not at all familiar

Comprehending and valuing the natural world, along with acknowledging the challenges associated with its preservation, constitute fundamental elements of environmental consciousness. This awareness encompasses educating students about the interconnectedness of all living beings and the significance of safeguarding the environment for future generations. A thorough understanding of the environment enables individuals to reduce their environmental impact. Examples of such actions include waste reduction, resource conservation, and active participation in environmental

conservation and restoration initiatives (Earth Reminder, 2022).

#### ***Knowledge of Environmental laws***

The primary objective of environmental laws was to safeguard the environment and its various components. The violation of these laws in the past resulted in corresponding punishments such as fines, community service, and imprisonment. In the absence of these laws, individuals would have continued exploiting natural resources, leading to continuous degradation of the environment.

*Table 2. Level of knowledge of the BEED students about Environmental Laws*

INDICATORS	MEAN	QUALITATIVE INTERPRETATION
How would you rate your knowledge of the penalties for violating environmental laws in the Philippines?	2.60	Good
How would you rate your knowledge of the procedures for reporting environmental violations in the Philippines?	2.51	Good
How much do you know about the Philippine Clean Air Act?	2.31	A little
How much do you know about the Ecological Solid Waste Management Act?	2.44	A little
How much do you know about the National Integrated Protected Areas System Act?	2.20	A little

Table 2 presented the levels of knowledge among BEED students regarding environmental laws in the Philippines. The BEED students exhibited varying degrees of familiarity with these laws. Specifically, when it came to understanding the penalties associated with breaching environmental laws and the procedures for reporting violations, the BEED students asserted that they possessed a comprehensive comprehension. This

observation implies that despite their limited awareness or knowledge concerning these laws, they refrained from engaging in activities that contravened them, and they were capable of exerting control to prevent environmental harm. Consequently, the BEED students at DEBESMSCAT Cawayan, Campus exhibited a positive attitude towards compliance with the laws. However, it is important to note that their actions concerning

environmental interactions were not always aligned with the correct course of action.

### **Attitudes toward environmental laws**

The encouragement of positive development in young individuals could equip them with the necessary tools to actively contribute to their environment, fostering positive attitudes and

behaviors (Bohlerengen & Wiium, 2022). Empowered and environmentally mindful youth had the potential to become significant agents of change, ensuring the long-term preservation and stewardship of the environment. The implementation of effective environmental education would grant these youths a stronger voice on environmental issues (Erhabor & Don, 2016).

*Table 3. The attitudes of the BEED students toward Environmental Laws*

INDICATORS	MEAN	QUALITATIVE INTERPRETATION
How important do you think it is to follow environmental laws in the Philippines?	3.76	Very important
To what extent do you agree or disagree with the statement "Enforcing environmental laws in the Philippines is essential for the preservation of natural resources"	3.36	Strongly agree

In Table 3, the attitudes of the BEED students towards environmental laws in the Philippines were presented. Understanding the enabling factors was deemed crucial, as young people's environmental attitudes and behaviors played a pivotal role in environmental conservation. In this particular table, the BEED students exhibited a positive and supportive outlook regarding the importance of environmental laws. They recognized that the enforcement of such laws was essential for the preservation of natural resources in the Philippines. When students supported these laws, it suggested the possibility of transforming and

rectifying their negative attitudes toward environmental matters.

### **Perceptions towards environmental laws and their enforcement**

The perceptions of BEED students towards environmental laws and their enforcement in the Philippines were presented in the table. It was observed that public environmental knowledge and institutional trust played a significant role in influencing environmental risk perception, public participation, and the evaluation of environmental regulation enforcement behavior.

*Table 4. The BEED student's perceptions of environmental laws and their enforcement*

INDICATORS	MEAN	QUALITATIVE INTERPRETATION
How effective do you think the enforcement of environmental laws in the Philippines is?	3.19	Somewhat effective
How confident do you feel in the government's ability to enforce environmental laws in the Philippines?	3.05	Somewhat confident
Do you think the general public is aware of environmental laws in the Philippines?	2.29	Unsure

Moreover, these factors were found to have a moderating effect on the relationship between the aforementioned variables. To enhance public participation, improve the effectiveness of environmental regulation implementation, enhance government environmental governance, and increase public

satisfaction, it was suggested that the government should give more attention to the public's perception of environmental risk, strengthen coordination among various entities, and enhance the environmental governance system (Liu et al., 2021).

In the past three decades, there has been a substantial increase in environmental laws; however, their implementation and enforcement have remained insufficient in addressing environmental issues. This inadequate enforcement is a widespread global trend and exacerbates environmental threats. The first-ever global assessment of environmental law has concluded that environmental issues persist due to the lack of effective implementation and enforcement (IISD-SDG Knowledge Hub, 2019). The BEED students expressed positive responses regarding their perceptions of environmental laws and their enforcement in the Philippines. They demonstrated some confidence in the government's ability to enforce these laws. However, they also noted that their familiarity with the implementation of these laws in their respective communities was limited, leading to a lack of complete confidence in their enforcement. Consequently, they expressed uncertainty regarding the general public's awareness of environmental laws in the Philippines.

It is evident that despite the positive perceptions of BEED students, there is a need for further efforts to bridge the gap between environmental laws and their effective enforcement. The insufficiency in implementation poses a significant challenge in addressing environmental issues in the country. To rectify this situation, the government must prioritize the public's perception of environmental risk, enhance coordination mechanisms among relevant entities, and strengthen the environmental governance system. These

measures would ensure greater public participation, improved effectiveness in environmental regulation implementation, enhanced government environmental governance, and increased public satisfaction (Liu et al., 2021). While BEED students showed positive attitudes towards environmental laws and their enforcement, it is evident that more comprehensive actions are required to address the existing gaps between legislation and implementation. The government must focus on improving enforcement mechanisms, increasing public awareness and understanding of environmental laws, and fostering public participation in environmental governance. Only through these concerted efforts can the Philippines effectively tackle environmental challenges and create a sustainable future.

#### **Pro-Environmental behavior**

The table presented the percentage of pro-environmental behavior exhibited by BEED students towards environmental laws in the Philippines. Regarding their behavior, the students demonstrated occasional positive actions, such as engaging in recycling, reducing their carbon footprint, utilizing public transportation, and purchasing environmentally-friendly products. They commonly repurposed reusable items like plastic bottles and containers, transforming them into vases and other useful objects. In their efforts to reduce their carbon footprint, they frequently deleted unused data and opted to walk instead of using motorcycles for transportation.

*Table 5. The Pro-environmental behavior of the BEED students toward Environmental Laws*

INDICATORS	MEAN	QUALITATIVE INTERPRETATION
How often do you recycle?	3.36	Sometimes
How do you usually dispose of your waste?	1.45	Throw it in the trash
Do you conserve energy at home?	3.66	Often
Have you ever participated in a community clean-up or tree-planting activity?	1.90	Yes
Do you actively try to reduce your carbon footprint?	2.80	Sometimes
How often do you use public transportation?	3.45	Sometimes
How often do you purchase environmentally friendly products?	3.22	Sometimes
Do you think individuals have the responsibility to protect the environment?	3.50	Strongly agree

Additionally, they often employed eco-friendly products like reusable bags when making purchases. These actions indicate a commendable concern for the environment through small-scale initiatives. However, the students did not consistently practice waste segregation and instead chose to dispose of their trash indiscriminately. Observing litter scattered about is an unfortunate sight resulting from this improper waste disposal behavior, which requires immediate attention. Nonetheless, it is remarkable that the BEED students strongly endorsed their responsibility to protect the environment. They firmly believed that the environment is a precious gift from God, the source of everything, and vital for humanity's well-being. Their aspirations to preserve nature for future generations are truly admirable.

## Conclusions and Recommendations

The BEED students are not very familiar with the environmental laws in the Philippines fair in terms of their level of understanding and among the laws being given, they only knew some about them. However, even though the BEED students are not very familiar with the environmental laws, it's good to know that they knew the penalties for violating environmental laws in the Philippines and mark good about their knowledge of the procedure for reporting environmental violations in the country. In the specific laws, it was clear that the BEED students had a limited understanding, with most of them answering "a little". The BEED students have positive attitudes towards environmental laws in the Philippines, recognizing their importance in the preservation of natural resources. The BEED students also have positive perceptions towards environmental laws and their enforcement in the Philippines. They perceive the enforcement to be somewhat effective, are confident in the government's ability to enforce those laws, and ensure that the general public is aware of such laws. The BEED students have a generally positive attitude towards pro-environmental behavior. There is still room for improvement in some areas, such as recycling and reducing carbon footprint, that require further attention and encouragement. Only some of the BEED students show concern for the environment and made ways support to

environmental protection. The majority of them didn't practice positive behavior. Knowing that some of them are already aware of the laws, the penalties for violating environmental laws in the Philippines, and the procedures for reporting environmental violations in the Philippines they continue their bad practices.

The institution should teach about specific environmental laws; cover the most important detail about environmental laws in the country including those related to air and water purpose and key provisions of each law. Pursuing the BEED students to be aware of the environmental laws. The institution should Promote ways to encourage the BEED students to take action about environmental protection, such as by participating in local environmental initiatives volunteering with an environmental organization, or advocating for stronger environmental laws in their communities, finally emphasize the importance of acting sustainable in their lives to reduce their carbon footprint and contribute positively to the environment. Furthermore, the barangay's community should provide strong implementations of the Environmental laws in the country and give disciplinary actions against the violators of such laws to help combat environmental damage and degradation.

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