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Environmental Awareness and Participation among College Students of Mindoro State University – Calapan City Campus

Jovie Rose Masongsong^{1*}

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ABSTRACT

This study aimed to assess the level of environmental awareness and engagement among students at Mindoro State University regarding waste management, resource conservation, and environmental initiatives at the Calapan City Campus. Furthermore, it aimed to identify challenges in policy development addressing environmental pollution and actions contributing to degradation. The study also sought to analyze the application of environmental awareness through activities like tree planting and waste management. Employing stratified random sampling, the study involved 270 respondents enrolled during the 1st Semester of the Academic Year 2022-2023. Utilizing a structured questionnaire, the researcher measured awareness and participation levels. Results indicated that Mindoro State University students exhibited high levels of awareness and active participation, indicating a positive reception. This active involvement is crucial in establishing a mandate and framework for community-based environmental management, with widespread positive effects on the environment, nature, and society. The study's impact on the community includes heightened awareness, increased community participation, and adopting sustainable practices. Environmental education emerged as a catalyst for individuals, communities, and organizations to comprehend environmental impacts, fostering a deeper sense of community and heightened environmental consciousness. Community participation emerged as a potent tool for environmental conservation in protected areas, facilitating collaborative efforts to drive positive change and environmental protection. Moreover, the study advocates for promoting sustainable practices, such as waste reduction and resource conservation, to minimize individuals' environmental footprint and contribute to a healthier planet.

INTRODUCTION

Everything on earth is a part of the environment. The environment has suffered several difficulties throughout the years, which have worsened its look and resources. Its decline has primarily been caused by human activity. With the onset of global climate change, the destructive impact of mining, deforestation and disasters, it is imperative to strengthen the protection and conservation of our environment for the benefit of future generations. Such actions have resulted in the development of policies and regulations to address the issue of environmental pollution and the various actions that contribute to its degradation. Environmental awareness and participation among college students is becoming increasingly important as the world faces environmental challenges such as climate change, pollution, and loss of biodiversity. College students can play a significant role in promoting sustainability and environmental protection through their actions and advocacy.

The government is primarily responsible for the enactment and enforcement of environmental laws. This is done by establishing organizations and entrusting them with the task of enforcing environmental policies. Environmental sustainability, according to Achim Steiner (2012), Executive Director of the United Nations Environment Program (UNEP), can only be achieved through fair, clear, and implementable environmental laws. This will clarify requirements for the community,

facilitating compliance and discouraging violations. While national laws may be perfectly drafted, challenges remain in terms of education and enforcement. (Fulton and Benjamin, 2012).

Without a doubt, the environment has become such a significant issue. Individuals genuinely must ought to be completely educated on the significant ecological regulations are with the goal that they might be completely mindful as to what are permitted and what are restricted corresponding to the actions they initiate towards the climate.

Environmental protection is a fundamental prerequisite for any country's overall development. Because of the impact on human health and welfare, environmental awareness has become a global issue. As environmental protection awareness increases, so does human awareness of the need to preserve the environment by preventing negative impacts on nature.

In order to promote national awareness on environmental protection and ecological balance, Republic Act 9512 was passed and is otherwise known as National Environmental Awareness and Education Act of 2008. This law formally ordered the educational institutions like the Department of Education (DepEd), the Commission on Higher Education (CHED), the Technical Education and Skills Development Authority (TESDA), the Department of Social Welfare and Development (DSWD), in coordination with the Department of Environment and

¹ Mindoro State University, Philippines

* Corresponding author's e-mail: jovierose_dacoycoy@yahoo.com

Natural Resources (DENR), the Department of Science and Technology (DOST) and other relevant agencies to integrate environmental education at school curricula at all levels. Environmental education covers environmental concepts and principles, environmental laws, the state of international and local environment, local environmental best practices, the threats of environmental degradation and its impact on human well-being, the responsibility of the citizenry to the environment and the value of conservation, protection and rehabilitation of natural resources and the environment in the context of sustainable development (RA 9512, 2008).

Meanwhile, other studies demonstrated that environmental education has led to a number of positive impacts, from improving academic performance, to enhancing critical thinking skills, to developing personal growth and life-building skills including confidence, autonomy, and leadership (Ardoin, Bowers, Roth & Holthuis 2018). Furthermore, several studies found that environmental education increased civic engagement and positive environmental behaviors (Erhabor and Don 2016).

In a study conducted by Lualhati (2019) it found out that college students were not aware of environmental issues and policies while moderately participative in waste management and environmental initiatives. This is supported by the result of the study conducted by Maglucot (2021) which revealed that college students considered environmental law as “unimportant” because it does not directly affect them. Meanwhile, lack of respondents particularly from the freshmen level was the limitation in a study conducted by Schmidt (2007) to discover the impact of an environmental education course on student attitudes and behaviors. These limitations urged the researcher to develop this study since there have been limited researches focusing on college students’ awareness and participation on environmental laws and crimes and other students are more conscious on other aspects on environmental protection but not on environmental laws.

The educational institution has the responsibility to encourage and instill awareness, attitudes and environment behavior of students (Ningrum 2018). The purpose of this study is to determine the level of awareness on environmental issues and policies as well as the level of participation in terms of waste management, resource conservation, and environmental initiative among college students in Mindoro State University, Calapan City Campus during the Academic Year 2022 - 2023. This study has an end view of disseminating its results and the actualization of enrichment activities through an environmental management plan. Thus, the result of this study is not just applicable to schools, but also beneficial to the whole community as well.

Objectives of the Study

The main thrust of this study is to determine the extent of awareness on environmental laws and participation

of students in Mindoro State University, Calapan City Campus in waste management, resource conservation, and environmental initiative. This study attempted to formulate measures which will mitigate adverse impacts on various environmental components through an environmental management plan.

METHODOLOGY

Research Design

This study employed a descriptive method of investigation in determining the extent of awareness of environmental laws and participation of college students at Mindoro State University, Calapan City Campus, using stratified random sampling. The researcher employed a total of 270 respondents who were officially enrolled during the 1st Semester Academic Year 2022 – 2023. The researcher decided to accept them as respondents with the belief that the role of these students in instilling and reinforcing foundational environmental knowledge, awareness, and participation among students is vital.

Instrumentation

To elicit the needed information for this study, a structured questionnaire on Environmental Awareness and Participation developed by Lualhati (2019) was used to gather data. The questionnaire was composed of two parts using the Likert Scale, which includes 15-item statements to reveal respondents’ participation in terms of waste management, resource conservation, and environmental initiative, while the second part consists of 10 items to show their environmental awareness. The interpretation of the computed mean for the level of environmental awareness and participation, the following mean ranges with their corresponding interpretations were used: 3.26 - 4.00: Strongly Agree/Highly Aware/Highly Participative; 2.51-3.25: Agree/Aware/Participative; 1.76-2.50: Slightly Agree/Moderately Aware/Moderately Participative; 1.00-1.70: Disagree/Not Aware/Not Participative.

Data Collection Procedure

The consent form was prepared and given to the respondents so that the research objectives are clearly understood and the respondent is willing to participate. They were oriented on the study’s requirements and the confidentiality of the information to be collected among them as respondents of the study. Communication letter was also prepared to seek the approval from higher authorities to distribute the instrument. Upon approval, the researcher appropriately consulted the Colleges’ Program Chairperson for the administration of the questionnaire through google forms. The gathered data were checked, tallied, scored, and treated through weighted mean.

RESULTS AND DISCUSSION

Environmental Participation of the Respondents

This part of the study shows the respondents’ environmental participation in waste management,

Table 1: Mean Perception in terms of Waste Management

Items	Mean	Rank	Description
As a responsible student, I			
1. Segregate waste at source.	3.46	2.5	Strongly Agree
2. Dispose of waste products properly.	3.48	1	Strongly Agree
3. Regulate the use of plastics and Styrofoam.	3.29	5	Strongly Agree
4. Treat and dispose of hazardous wastes properly.	3.46	2.5	Strongly Agree
5. Comply with standards for the surrounding wastewater.	3.41	4	Strongly Agree

Overall Mean: 3.42, Description: Highly Participative

resource conservation, and environmental initiative. It displays each statement’s weighted mean and their equivalent verbal interpretation.

As shown in table 1, most respondents were highly participative in waste management.

The survey results highlight a generally positive perception among respondents regarding waste management practices, with an overall mean of 3.42, indicating a high level of perceived participation in proper waste disposal. This is a promising indication of a community that values responsible waste management practices. However, the survey also reveals a noteworthy concern, as the use of plastics and Styrofoam received the lowest rank among the respondents.

The discrepancy in perceptions between overall waste management and the use of plastics and Styrofoam suggests a need for targeted interventions in the specific area of plastic and Styrofoam usage. Plastics and Styrofoam are known for their detrimental environmental

impact. Their low ranking suggests that the respondents may not fully appreciate or acknowledge the severity of environmental issues associated with these materials. This lack of concern or awareness may contribute to increased pollution, harm to wildlife, and long-term environmental degradation. However, the regulation of using plastic and Styrofoam has the lowest ranks. In fact, the Philippines has enacted laws and ordinances governing the use of single-use plastics in products like grocery bags and food packaging. It is unclear, nevertheless, why these regulations do not specifically cover plastics and Styrofoam. Given that these materials are frequently used in a variety of industries and may have varying effects on the environment, it’s possible that discussions and debates about how to regulate them effectively are still ongoing. However, it’s critical to keep pushing for environmentally responsible and sustainable behaviors, like encouraging the use of biodegradable substitutes and minimizing the use of single-use plastics.

Table 2: Mean Perception in terms of Resource Conservation

Items	Mean	Rank	Description
As a responsible student, I			
1. Turn-off air conditioning units after class hours.	3.41	4	Strongly Agree
2. Turn-off lights during lunch breaks in our classrooms.	3.42	2.5	Strongly Agree
3. Put on sleep mode computers or machines when not in use.	3.38	5	Strongly Agree
4. A switch-off faucet that is not in use.	3.59	1	Strongly Agree
5. Reuse scratch papers.	3.42	2.5	Strongly Agree

Overall Mean: 3.45, Description: Highly Participative

The survey results on resource conservation reveal a generally positive perception among respondents, with an overall mean of 3.45, indicating a high level of perceived participation in resource conservation efforts. The high overall mean suggests that the majority of respondents perceive themselves as actively participating in resource conservation efforts. This is a positive indication of a community that values responsible resource use.

The highest-ranked behavior, switching off faucets when not in use, indicates a strong awareness and adherence to water conservation practices among the respondents. This behavior is commendable and reflects a positive environmental consciousness. However, the lowest rank for putting computers or machines on sleep mode suggests that there may be challenges or resistance

to adopting energy-saving practices in the form of electronic device management. This could be due to a lack of awareness, convenience issues, or other barriers to adopting this energy-saving behavior.

The high total mean perception of 3.34 indicates that respondents have a positive and participative attitude towards environmental initiatives. This is a promising sign for community engagement in activities aimed at improving and preserving the environment.

The highest rating for the item related to keeping the surroundings clean and teaching others to care for the environment (mean of 3.41) suggests that these actions are widely accepted and endorsed by the respondents. This implies a strong belief in the potential positive impact of such behaviors in reducing pollution and

Table 3: Mean Perception in terms of Environmental Initiatives

Items	Mean	Rank	Description
As a responsible citizen, I			
1. Preserve and conserve plants and trees inside and outside the campus.	3.39	2	Strongly Agree
2. Join environmental programs such as fun run and other related activities that promote love for the environment.	3.22	5	Agree
3. Patronize eco-friendly or green-labelled products.	3.38	3	Strongly Agree
4. Participate in the zero percent usage of plastic materials.	3.29	4	Strongly Agree
5. Keep the surroundings clean and teach others to care for the environment.	3.41	1	Strongly Agree

Overall Mean: 3.34, Description: Highly Participative

promoting community health.

The lowest ranking for joining environmental programs, such as fun runs and related activities (mean of 3.22), indicates a comparatively lower enthusiasm or perceived effectiveness for these specific initiatives. This suggests that, while respondents are generally supportive of environmental initiatives, certain programs may not resonate as strongly with the community.

Environmental Awareness

The high overall mean of 3.49 indicates a commendably robust level of environmental awareness among the respondents. This suggests a community that is well-informed and attuned to the importance of environmental issues.

The highest rankings for items highlighting the health impacts of pollution (item no. 3) and the severe health

hazards associated with mining (item no. 7) demonstrate a prioritization of health concerns within the community. This indicates a potential focus for environmental initiatives that aim to safeguard public health.

The lower agreement (mean of 3.44) with the statement linking pollution to reduced productivity and job opportunities (item no. 5) suggests a gap in recognizing the economic consequences of environmental degradation. This finding can inform targeted educational efforts to raise awareness about the broader economic impact of environmental issues.

The implication that environmental awareness played a significant role in reducing waste and increasing the recycling sector suggests a positive correlation between heightened awareness and pro-environmental behaviors. This indicates a potential pathway for fostering sustainable practices within the community.

Table 4: Mean Perception in terms of Environmental Awareness

Items	Mean	Rank	Description
As a student, I know that...			
1. Global warming results in a tremendous amount of heat.	3.52	3.5	Strongly Agree
2. Natural habitats decrease in number because of extreme disasters.	3.49	6	Strongly Agree
3. Pollution severely affects the health of every organism, and it must be solved.	3.53	1.5	Strongly Agree
4. Priority project of the Local Government Unit in disseminating environment-related issues must be continued.	3.45	9	Strongly Agree
5. Pollution lessens productivity, and job opportunities.	3.44	10	Strongly Agree
6. Many coral reefs have been damaged because of cyanide and dynamite fishing.	3.49	6	Strongly Agree
7. Mining poses calamities and severe health hazards.	3.53	1.5	Strongly Agree
8. Greenhouse gases from human activities are the most common cause of climate change.	3.49	6	Strongly Agree
9. Forest degradation affecting the soil and water quality in the immediate area can hurt biodiversity over a range of connected ecosystem.	3.48	8	Strongly Agree
10. Paper, plastics, and other materials that are burned can contaminate the air.	3.52	3.5	Strongly Agree

Overall Mean: 3.49, Description: Highly Aware

CONCLUSION

Based on the findings the following conclusions are drawn. The lack of appreciation or awareness regarding the environmental implications of plastics and Styrofoam poses a significant challenge. These materials are known for their detrimental effects on ecosystems, contributing to pollution and long-term environmental

degradation. As such, there is a crucial need for increased education and awareness campaigns to bridge the gap in understanding and promote responsible usage and disposal of these materials. The disparities in rankings present an opportunity for targeted education and awareness campaigns. Emphasizing the importance of energy conservation, particularly regarding electronic

devices, and addressing any misconceptions or barriers to adopting these practices can contribute to overall improvements in resource conservation.

RECOMMENDATION

Based on the conclusions drawn from the collected data, the researcher recommended the following. Awareness campaigns may be recommended to educate the community about the environmental impact of plastics and Styrofoam. Emphasize the importance of responsible usage, proper disposal, and the long-term consequences of these materials on the environment. Moreover, to increase awareness about the importance of energy conservation practices such as putting computers or machines on sleep mode is highly recommended. Given the limited recognition of the economic impact of pollution, it is advisable to expand educational initiatives that specifically emphasize how environmental degradation can affect productivity and job opportunities. This can involve targeted workshops, seminars, and awareness campaigns focused on the economic dimensions of environmental issues.

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