

# Level of Environmental Ethics Awareness and Environmental Citizenship Participation among Filipino Higher Education Student Leaders

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(Received: 27 July 2023, Revised: 2 October 2023, Accepted: 10 October 2023)

<https://doi.org/10.57260/rcmrj.2024.267020>

## Abstract

School institutions are responsible for honing environmental ethics awareness and environmental citizenship participation among their students. Student leaders, on the other hand, are expected to uphold responsibilities to empower their co-students and address pressing environmental issues through different sets of activities aligned with sustainable development goals. Thus, this study assessed the higher education student leaders' environmental ethics awareness, environmental citizenship participation, and its correlation, and proposed a plan of activities to sustain and enhance the two aforementioned variables. By employing a descriptive-correlational design with a researcher-made questionnaire, this study found out that the higher education student leaders are highly aware of ethical actions concerning the environment. However, in terms of citizenship participation, the results revealed that these student leaders are not highly participative in various environmental activities despite having high levels of awareness. Hence, this study suggests that fostering collaborations among student leaders, organizations, and clubs will address environmental issues collectively, strengthening their environmental ethics awareness and participation, and a proposed plan of activities that may be initiated by the concerned authorities to ensure its full implementation.

**Keywords:** Environmental ethics awareness, Environmental citizenship participation, Student leaders

## Introduction

In recent years, environmental sustainability has emerged as a critical concern, especially in the context of higher education institutions across the globe. The environment has long provided for the needs of humankind, but the industrial revolution and ongoing human consumption of natural resources, particularly non-renewable ones, have brought these resources to the brink of depletion (Brennan, 2014). This poses a significant threat to future generations.

To address this pressing issue, it is imperative for academic institutions and leaders to take action by implementing and strengthening policies and action plans that promote environmental awareness and responsibility (Galang, 2010). In the Philippines, Batangas State University plays a crucial role in shaping the leaders of tomorrow, imbuing them with a sense of environmental responsibility and accountability.

This research explores the critical intersection of environmental ethics and environmental citizenship, focusing on the specific challenges faced by student leaders in higher education at Batangas State University. The degradation of nature can be mitigated through the acquisition of moral behaviors and ethical attitudes toward the environment (Brennan, 2014). However, the effectiveness of these ethical attitudes in driving environmental citizenship participation among student leaders remains an open question.

In addition to environmental ethics, this study delves into the broader issue of environmental citizenship participation, examining the awareness, understanding, perception, and active engagement of youth leaders in addressing environmental challenges. By assessing their environmental duties and responsibilities, as well as the structural causes of environmental degradation, this research aims to identify areas where Batangas State University and its student leaders can contribute to the preservation of our planet and the development of inter and intra-generational solutions.

As future secondary science teachers, this study can empower the researchers to incorporate environmental ethics and citizenship into the teaching and learning plans fostering a sense of responsibility and ethical awareness among students. It can also inspire the next generation of environmentally conscious leaders and advocates, driving positive change in local communities and beyond.

## Objectives

The purpose of this study is to determine the level of environmental ethics awareness and environmental citizenship participation among higher education student leaders of Batangas State University, The National Engineering University - JPIPC Malvar, Batangas, Philippines during the Academic Year 2022-2023.

Specifically, this study aims to:

1. Determine the level of awareness of environmental ethics along with:
  - 1.1. Justice;
  - 1.2. Sufficiency; and
  - 1.3. Solidarity.
2. Describe the level of environmental citizenship participation in terms of:
  - 2.1. Reflection;
  - 2.2. Civic Responsibility; and
  - 2.3. Confidence.

3. Correlate environmental ethics awareness and environmental citizenship participation.
4. Propose a Plan of Activities to sustain environmental ethics awareness and enhance environmental citizenship participation of student leaders.

## Methodology

### Research Design

The researchers utilized a descriptive-correlational type of research that described the variables and the relationships that occur naturally between the two variables. This design is appropriate to use because this study describes the relationship between environmental ethics awareness and environmental citizenship participation among higher education student leaders.

### Respondents

This population of 162 student leaders at Batangas State University - The National Engineering University JPLPC Malvar during the Academic Year 2022-2023 was chosen as respondents because it represents a significant and relevant subset of the university's student body. These student leaders are likely to have a deeper involvement in campus activities, including those related to environmental awareness and citizenship. Their experiences and perspectives can provide valuable insights into the study's focus on environmental ethics and citizenship among young leaders, making them an ideal group to gather data from.

### Instrumentation

To address the research questions posed in this study, data was gathered using a researcher-made questionnaire. The questionnaire construction, validation, administration, and scoring adhered to established research standards and practices. The questionnaire was consisted of two parts. Part I assessed the awareness levels of higher education student leaders in environmental ethics, encompassing three dimensions such as justice, sufficiency, and solidarity. Part II focused on evaluating the environmental citizenship participation of student leaders, examining aspects such as reflection, civic responsibility, and confidence. Before administering the survey questionnaires, they underwent rigorous validation and reliability testing with the assistance of the adviser and experts.

To interpret the computed mean scores, we utilized the following mean ranges along with corresponding verbal interpretations:

- 3.51 – 4.00 – Highly Aware / Highly Participative
- 2.51 – 3.50 – Aware / Participative
- 1.50 – 2.49 – Slightly Aware/ Slightly Participative
- 1.00 – 1.49 – Not Aware / Not Participative

### Data Collection Procedure

A written letter, aimed at clarifying the research's purpose, was made to request permission from the Office of the Vice Chancellor for Academic Affairs to use the student leaders as respondents of the study. Furthermore, another letter was drafted and submitted to higher authorities to gain approval for the distribution of the research instrument. Once approval was granted, the researcher collaborated closely with the department's secretary to schedule the administration of the questionnaire. In a hands-on approach, the researcher personally distributed and collected the questionnaires. Also, the student leaders were provided with a comprehensive orientation regarding the study's requirements and the strict confidentiality maintained regarding the information collected from them as study participants.

Subsequently, the collected data underwent thorough analysis, including checks, tallying, scoring, and analysis using various statistical methods such as weighted mean, standard deviation, and Chi-Square. These careful interpretations and analyses of the data enabled the researcher to plan of activities to sustain environmental ethics awareness and enhance environmental citizenship participation of student leaders.

## Results

### 1. Environmental ethics awareness

One of the biggest threats to humanity today is the destruction of the environment. Prior to the human community, environmental protection and preservation were of utmost importance for sustainable development. The study endeavors to assess the environmental ethics awareness of higher education student leaders in the promotion of environmental protection and sustainability through the implementation of environment-related initiatives. Thus, this portion intends to present the levels of Environmental Ethics Awareness demonstrated by the higher education student leaders with its corresponding interpretation through tables.

#### 1.1 Justice

Table 1 shows the respondents assessments on environmental ethics awareness in terms of justice.

**Table 1** Environmental ethics awareness in terms of justice

Item Statements	Mean	Standard Deviation	Verbal Interpretation
<i>As a Student Leader, I know that ...</i>			
1. Respecting one's differences helps in achieving sustainable development goals.	3.75	0.46	Highly Aware
2. Giving equal opportunity with all constituents creates a secure and stable environment.	3.72	0.46	Highly Aware
3. Involving the students in all environmental activities held in the university is vital for greater change.	3.72	0.45	Highly Aware
4. Raising awareness about certain environmental issues creates a more progressive community.	3.70	0.51	Highly Aware
5. Doing collaborative environmental activities could help minimize the effects of environmental problems.	3.62	0.56	Highly Aware
<b>Overall</b>	<b>3.70</b>	<b>0.49</b>	<b>Highly Aware</b>

The table reveals that student leaders, on average, hold a high awareness of the crucial role that inclusivity, sustainability, and environmental engagement play within their university community. They highly recognize the significance of respecting differences, as indicated by a mean score of 3.75, and providing equal opportunities, with a mean score of 3.72, in achieving sustainable development goals while fostering a secure and stable environment.

Moreover, the data underscores their high awareness in the importance of involving students in environmental activities, with a mean score of 3.72, and in raising awareness about environmental issues, with a mean score of 3.70, to create a more progressive community. These high mean scores suggest a strong consensus among student leaders on these matters.

However, there is a slight variation in their views regarding the effectiveness of collaborative environmental activities, with a mean score of 3.62, indicating a somewhat lower level of agreement compared to the other statements.

The overall mean score of 3.70, with a standard deviation of 0.49, indication high environmental ethics awareness in terms of justice, suggests that the student leaders, possess a strong awareness and understanding of environmental ethics, particularly in the context of justice. They likely recognize that environmental justice involves fair and equitable treatment of all individuals and communities concerning environmental issues, resources, and policies. Hendryx et al. (2013) said that awareness can have significant positive implications for their decision-making, advocacy efforts, and contributions to more equitable and sustainable environmental practices within their communities or organizations.

## 1.2 Sufficiency

Reflected in Table 2 is the respondents' assessment on environmental ethics awareness in terms of sufficiency.

**Table 2** Environmental ethics awareness in terms of sufficiency

Item Statements	Mean	Standard Deviation	Verbal Interpretation
<i>As a Student Leader, I know that ...</i>			
1. Smart use of natural resources maintains Earth's biodiversity.	3.77	0.43	Highly Aware
2. Promoting the use of renewable resources saves money, energy, and electricity.	3.74	0.45	Highly Aware
3. Natural resources have limitations.	3.72	0.51	Highly Aware
4. Reforestation can help prevent habitat loss, as well as minimize the effects of climate change.	3.72	0.49	Highly Aware
5. Sustainable consumption and production help in sufficing the needs of both present and future generations.	3.67	0.53	Highly Aware
<b>Overall</b>	<b>3.72</b>	<b>0.48</b>	<b>Highly Aware</b>

The data presented in the table reveals a significant high level of environmental awareness among student leaders, particularly in sustainability. With an overall mean score of 3.72 and a low standard deviation of 0.48, it is evident that there is a strong consensus among these individuals regarding the critical importance of environmental ethics. One key aspect of this awareness is the recognition that sensible use of natural resources is essential for preserving Earth's biodiversity, as indicated by a mean score of 3.77. This underscores their understanding of the intricate connection between resource management and the maintenance of ecological diversity.

Furthermore, their awareness extends to the economic and environmental benefits of promoting renewable resources, as reflected in the mean score of 3.74. This indicates an appreciation for the cost savings, energy conservation, and improved electricity efficiency associated with renewable energy sources. Also, student leaders also grasp the finite nature of natural resources, as seen in the mean score of 3.72, signifying their acknowledgment of resource limitations. This recognition is pivotal in fostering responsible resource utilization and sustainability.

The implications of such heightened environmental awareness among student leaders are substantial. It positions them as advocates for sustainable practices, both within their academic institutions and in the wider community. Their informed decision-making abilities, stemming from this awareness, are likely to prioritize resource conservation and responsible

development. Furthermore, these leaders can play a pivotal role in educational initiatives, imparting their knowledge to peers and fostering a culture of sustainability. This is supported by Reis (2021) who stated that sufficiency is about consuming less in absolute terms and within the biophysical limits of the planet. The application of these principles can help Earth to become sustainable for future generations.

### 1.3 Solidarity

The respondents' assessment on environmental ethics awareness in terms of solidarity is presented in Table 3.

**Table 3** Environmental ethics awareness in terms of solidarity

Item Statements	Mean	Standard Deviation	Verbal Interpretation
<i>As a Student Leader, I know that ...</i>			
1. Working together with other student leaders creates a stronger foundation for planning and implementing environmental programs.	3.75	0.49	Highly Aware
2. Promoting environmental policy (such as <i>Tapat ko, Linis Ko</i> ) reinforces bayanihan in the community.	3.72	0.53	Highly Aware
3. Collaborating with other organizations will help strengthen the environmental programs in the community.	3.69	0.49	Highly Aware
4. Cooperating with the local government unit will increase more participants in environmental activities in the community.	3.59	0.56	Highly Aware
5. Coordinating with other stakeholders establishes a stronger connection for extending services in local communities.	3.51	0.56	Highly Aware
<b>Overall</b>	<b>3.65</b>	<b>0.53</b>	<b>Highly Aware</b>

The data underscores the impressive environmental ethics awareness of student leaders, particularly in relation to solidarity. With an overall mean score of 3.65 and a relatively low standard deviation of 0.53, it is evident that there is a strong consensus among these leaders regarding the importance of working together for the benefit of their communities and the environment.

Student leaders highly value the idea of working in unison with their peers to establish a solid foundation for planning and executing environmental programs, as indicated by a mean score of 3.75. This highlights their understanding that collective effort can enhance the effectiveness of such initiatives. Moreover, they recognize that promoting environmental policies, contributes to the spirit of *bayanihan*, or community cooperation, with a mean score of 3.72. This reveals their awareness of the role of policy advocacy in fostering communal values and cooperation.

Furthermore, they acknowledge the importance of collaborating with other organizations, local government units, and stakeholders to strengthen environmental programs and establish deeper connections within local communities. These findings indicate a comprehensive understanding of the significance of solidarity and cooperation in advancing environmental objectives. Overall, the data suggests that student leaders are well-equipped to lead and advocate for environmentally responsible practices, emphasizing unity and collaboration as essential principles in their environmental initiatives. This is supported by Welchman, (2012), who stated that ecological solidarity is based on the notion that individuals become united around a common goal and are conscious of their common interests and shared responsibility.

## 2. Environmental citizenship participation

In order to achieve a sustainable society, a citizen must be supported in overcoming any important gaps or challenges. Environmental citizenship participation is expressed through exercising environmental rights and duties, that were able to identify the underlying structural causes of environmental degradation and environmental problems, and the willingness and competencies to address critical and active engagements.

### 2.1 Reflection

Table 4 reveals the environmental citizenship participation in terms of reflection.

**Table 4** Environmental citizenship participation in terms of reflection

Item Statements	Mean	Standard Deviation	Verbal Interpretation
<i>As a Student Leader, I am ...</i>			
1. Looking forward to passing the environmental activities to the succeeding student leaders.	3.59	0.57	Highly Participative
2. Observing the positive outcomes of the environmental activities on and outside the campus.	3.48	0.69	Participative
3. Feeling satisfied with the results and feedback of the beneficiaries after conducting environmental training in the community.	3.45	0.60	Participative
4. Contemplating the consequences of every action of humanity on the environment in the long run.	3.43	0.59	Participative
5. Thinking of proposing environmental activities, movements, and policies, in and outside the campus.	3.36	0.62	Participative
<b>Overall</b>	<b>3.46</b>	<b>0.61</b>	<b>Participative</b>

The data reveals that student leaders demonstrate a significant level of participation in terms of reflection. The overall mean score of 3.46, along with a moderate standard deviation of 0.61, suggests a general consensus among these leaders in their active participation with environmental initiatives. This is also supported by the statement of Ramirez (2017) in his research on the role of student organizations in the promotion of environmental education and preservation, that based on the assessment, student leadership may be a useful instrument in solving environmental issues and promoting environmental education.

As seen in the table, it is evident that the respondents express a strong willingness to pass on the responsibility of environmental activities to their successors, as evidenced by a mean score of 3.59, verbally interpreted as highly participative. This signifies their commitment to ensuring the continuity and sustainability of environmental efforts within their organizations. Additionally, they actively observe the positive outcomes of environmental activities both on and off campus, with a mean score of 3.48. This suggests that they are not only involved in planning and organizing such activities but are also keen on evaluating their impact and effectiveness beyond the immediate campus environment.

Furthermore, student leaders express satisfaction with the results and feedback received from beneficiaries after conducting environmental training in the community, with a mean score of 3.45. This reflects their genuine investment in creating positive change and enhancing environmental awareness among community members. Their participation extends to contemplation of the long-term consequences of human actions on the environment, as indicated by a mean score of 3.43. This demonstrates their holistic and forward-thinking approach to environmental issues, recognizing the importance of considering the broader environmental implications of human activities. Lastly, they actively brainstorm proposals for environmental activities, movements, and policies both within and outside the campus, with a

mean score of 3.36. This underscores their proactive role in driving the environmental agenda, not only within their immediate academic community but also in the broader context.

## 2.2 Civic responsibility

Table 5 presents environmental citizenship participation in terms of civic responsibility.

**Table 5** Environmental citizenship participation in terms of civic responsibility

Item Statements	Mean	Standard Deviation	Verbal Interpretation
<i>As a Student Leader, I am</i>			
1. Working with colleagues to formulate a plan of activities that involve the environment.	3.35	0.74	Participative
2. Promoting and disseminate environmental education and awareness.	3.35	0.65	Participative
3. Raising awareness about climate change in and outside the campus.	3.31	0.66	Participative
4. Encouraging everyone to support local products that are 100% made from sustainable materials.	3.30	0.73	Participative
5. Joining voluntarily in various environmental activities (such as coastal clean-up drive, Clean & Green project, Earth Hour, etc.)	3.27	0.74	Participative
<b>Overall</b>	<b>3.32</b>	<b>0.70</b>	<b>Participative</b>

This table sheds light on the active participation of student leaders in environmental citizenship, specifically in terms of their civic responsibility. The data reveals a consistent pattern of participation, with an overall mean score of 3.32 and a moderate standard deviation of 0.70, indicating a shared commitment to environmental involvement.

Moreover, student leaders are actively working with their colleagues to formulate plans for environmental activities, as manifested by the mean score of 3.35. This reflects their collaborative approach to environmental initiatives, underscoring the importance of collective effort and teamwork in addressing environmental challenges. They are enthusiastic promoters and disseminators of environmental education and awareness, as demonstrated by the mean score of 3.35. This indicates their dedication to raising consciousness about environmental issues within and outside their academic community, demonstrating a sense of responsibility for spreading eco-friendly knowledge.

The table shows that the student leaders are actively participative in raising awareness about climate change both within and beyond their campus, as based on the mean score of 3.31. This suggests their recognition of climate change as a global issue that necessitates local action and advocacy, exemplifying their civic responsibility. Furthermore, they actively encourage others to support locally-made products crafted from sustainable materials, as shown by the mean score of 3.30. This demonstrates their commitment to promoting sustainable consumption practices and supporting local economies, aligning with principles of responsible citizenship.

Lastly, student leaders willingly participate in various environmental activities, such as coastal clean-up drives, Clean & Green projects, and Earth Hour events, as revealed by the mean score of 3.27. Their voluntary engagement in these activities reflects their sense of duty to actively contribute to environmental preservation and community improvement.

Overall, the data highlights that the respondents are actively participative individuals in their roles as environmental citizens, embracing their civic responsibility. Their collaborative planning, promotion of environmental awareness, climate change advocacy, support for sustainable products, and voluntary participation in eco-friendly activities collectively

demonstrate their commitment to making a positive impact on the environment and their communities. This participative spirit bodes well for fostering a culture of environmental responsibility within their academic institutions and beyond. Gottlieb & Robinson (2022) said, civic responsibility is a task bestowed by the government to ensure a balance between protection and allegiance. Student leaders are considered as the role models of their co-students and therefore shall possess active participation in the activities they implement for the institution.

### 2.3 Confidence

The respondents' assessment on environmental citizenship participation in terms of confidence is shown in Table 6.

**Table 6** Environmental citizenship participation in terms of confidence

Item Statements	Mean	Standard Deviation	Verbal Interpretation
<i>As a Student Leader, I am ...</i>			
1. Using my environmental knowledge in preserving the environment.	3.64	0.54	Highly Participative
2. Assessing a co-student leader's abilities and needs on environmental sustainability.	3.52	0.63	Highly Participative
3. Applying my environmental skills in solving problems in my community and at home.	3.46	0.67	Participative
4. Accepting and responding to personal feedback on environmental concerns.	3.40	0.61	Participative
5. Taking action in addressing environmental problems/concerns.	3.28	0.69	Participative
<b>Overall</b>	<b>3.46</b>	<b>0.63</b>	<b>Participative</b>

As seen in the table, student leaders exhibit a commendable level of active participation in environmental citizenship. The overall mean score of 3.46, along with a moderate standard deviation of 0.63, indicates a collective sense of participative engagement in environmental activities. Chambis et al. (2020) said that education for environmental citizenship should be suitable to, directly and laterally, promote those values to students and themselves, furnishing an occasion for their reflection, confidence, and consideration. Subsequently, one of the important characteristics of student leaders is being confident in the knowledge and skills they possess and being open to learning and adjusting when needed.

Looking at the mean score of 3.64, this expresses a high level of participation in utilizing their environmental knowledge to contribute to the preservation of the environment. This suggests that they are not only well-informed about environmental issues but are also confident in their ability to apply this knowledge effectively. On the other hand, they actively assess the abilities and needs of their co-student leaders concerning environmental sustainability, as revealed by the mean score of 3.52. This highlights their role in mentorship and support, demonstrating their commitment to nurturing environmental leadership skills among their peers.

Furthermore, the table indicates that they apply their environmental skills in problem-solving within their communities and at home, as manifested by the mean score of 3.46. This demonstrates their practical approach to addressing environmental challenges, emphasizing the relevance of their environmental knowledge in real-life contexts. A mean score of 3.40 shows that they express a willingness to accept and respond to personal feedback on environmental concerns. This openness to feedback indicates their adaptability and responsiveness to improve

their environmental initiatives based on input from others. Lastly, student leaders actively take action to address environmental problems and concerns, as manifested by the mean score of 3.28. This reflects their proactive stance in implementing solutions and driving positive change, further underlining their participative role in environmental citizenship.

In sum, the table portrays that the student leaders are highly participative and confident individuals in their roles as environmental citizens. Their confidence in applying environmental knowledge, mentoring their peers, problem-solving, and responsiveness to feedback aligns with their commitment to actively engage in environmental preservation and sustainability efforts. This participative and confident approach bodes well for their effectiveness as leaders in promoting eco-friendly practices and contributing to positive environmental change within their communities. According to Kasymova et al. (2014), being confident in terms of citizenship participation requires a realistic sense of one's capabilities and feeling secure in that knowledge.

### 3. Relationship between the respondents' environmental ethics awareness and environmental citizenship participation

Table 7 shows the relationship between the student leaders' level of environmental ethics awareness and environmental citizenship participation. The correlation of the two aforementioned variables was tested using the Pearson r formula.

**Table 7** Relationship between the respondents' environmental ethics awareness and environmental citizenship participation

Variables	Computed Pearson r	Verbal Interpretation	P-Value	Decision H0	Interpretation
Environmental Ethics Awareness and Environmental Citizenship Participation	0.519	Strong Correlation	0.000	Reject	Significant

Table 7 displays the correlation between the respondents' environmental ethics awareness and their environmental citizenship participation, as indicated by the computed Pearson correlation coefficient (r) of 0.519 and its corresponding P-value of 0.000. This correlation falls within the category of a "Strong Correlation," signifying a strong association between these variables. Consequently, the null hypothesis was decisively rejected, affirming the presence of a significant relationship between the respondents' environmental ethics awareness and their environmental citizenship participation.

This finding resonates with the widely accepted notion that "Greater awareness leads to greater action." It underscores the idea that individuals must first grasp the significance of environmental ethics principles before proactively engaging in efforts to address environmental issues. Essentially, individuals who lack familiarity with these ethical philosophies may question the rationale behind sustainability practices. Therefore, fostering environmental ethics awareness lays the foundation for effective social policies directed at environmental protection and the amelioration of environmental degradation through active citizenship participation. Ahmad et al., (2012) highlights the importance of fostering a citizenry that possesses a heightened environmental consciousness and actively engages in eco-friendly actions to protect and conserve the planet, contributing to its preservation through sustainable practices.

#### 4. Propose a plan of activities to sustain environmental ethics awareness and enhance environmental citizenship participation among higher education student leaders

Table 8 shows the proposed plan of activities that aims to sustain the level of environmental ethics awareness and enhance the environmental citizenship participation of the higher education student leaders. These activities are intended to be done within the effectiveness of the academic year 2023-2024. The strategy is to propose this plan to the student organizations of the university together with their advisers and the school authorities for effective implementation. As to the expected output, the higher education student leaders must be able to expose themselves in various environmental activities that will enable them to sustain their awareness of pressing environmental issues and eventually, be able to collaborate with their co-student leaders to enhance their citizenship participation.

**Table 8** Proposed plan of activities to sustain environmental ethics awareness and enhance environmental citizenship participation among student leaders

Activity/ Project Title	Category	Objective	Brief Description	Person/s Involved	Target Date	Projected Budget
Eco-Challenge: Nurturing Environmental Consciousness	Academic Activity	To develop a deeper understanding of the ethical dimensions of environmental decision-making and their role as responsible environmental stewards.	This is an activity designed to sustain environmental ethics awareness among students. It aims to engage participants in thought-provoking discussions, critical thinking, and real-life ethical scenarios related to environmental issues.	Student Leaders, Adviser	November 2023	Php 20,000
Observe and Interact: How to assess a co-student leader's abilities and needs on environmental sustainability	Special Interest Activity	To encourage student leaders to observe their peers' actions, behaviors, and involvement in environmental sustainability initiatives.	This activity can be done through regular interactions, attending meetings or events together, and observing their participation in sustainable activities.	Student Leaders, Adviser	August 2023	Php 15,000
"Green Guardians: Inspiring Environmental Action"	Special Interest Activity	To encourage student leaders to voluntarily participate in various environmental activities and to make the activities engaging, meaningful, and enjoyable to ensure maximum participation.	This will be done in a series of activities such as: Awareness Campaigns, Interactive Workshops, Field Trips and Outdoor Experiences, Volunteer Opportunities, Competitions and Challenges, School-wide Environmental Projects and Earth Hour Events.	Student Leaders, Adviser, Office of Student Activities	September 2023	Php 30,000

Activity/ Project Title	Category	Objective	Brief Description	Person/s Involved	Target Date	Projected Budget
able Solutions: Empowering Student Leaders for Environmental Change	Special Interest Activity	To empower student leaders with knowledge and skills to propose and implement environmental activities, movements, and policies within and outside the campus.	This activity is a dynamic and interactive workshop designed to equip student leaders with the knowledge and skills to propose and implement environmental activities, movements, and policies both within and outside their campus. Participants engage in brainstorming sessions to identify pressing environmental issues and devise innovative solutions.	Student Leaders, Adviser, Extension Services,	November 2023	Php 25,000
SURE-LEAD: Student-led Unified Response for Environmental Action and Development	Special Interest Activity	To empower every student leader with the knowledge, skills, and motivation to take unified action for environmental conservation and sustainable development, with the aim of enhancing their civic responsibility towards the environment.	This workshop aims to explore pressing environmental challenges, gain insights into their local impact, and develop a strong sense of responsibility for creating positive change. It also aims to foster a culture of environmental stewardship to make a lasting impact on the environment.	Student Leaders, Adviser	August 2023	Php 30,000

## Discussions

The majority of the higher education student leaders are highly aware of environmental ethics awareness along with justice, sufficiency, and solidarity. While in environmental citizenship participation higher education student leaders are participative in reflection, civic responsibility, and confidence. There is a significant relationship that exists between environmental ethics awareness and environmental citizenship participation. Moreover, a comprehensive plan of activities is proposed to sustain environmental ethics awareness and enhance environmental citizenship participation among higher education student leaders. The plan includes organizing seminars and workshops to improve their understanding of the environment. As well as the activities that aim to actively engage those higher education student leaders in various environmental activities, equipping them with the skills and knowledge necessary to positively influence their peers and the ultimate goal to empower

student leaders to become effective agents of change in promoting environmental sustainability and responsibility.

## Conclusion and suggestions

In line with the study's findings and conclusions, the researchers were able to construct the following recommendations. Foster collaboration among student leaders, organizations, and clubs to address environmental issues collectively, thus strengthening their environmental ethics awareness and participation.

The campus, through its Office of Student Organizations and Activities (SOA), may integrate sustainability goals and responsibilities into student leadership positions. The appointment of an environmental officer or committee within the student council to focus on sustainability initiatives and promote environmental awareness may be considered.

Furthermore, the proposed plan of activities may be initiated by the concerned authorities to ensure its maximum implementation. It is suggested to sustain environmental ethics awareness and enhance the environmental citizenship participation of the higher education student leaders in environmental citizenship. Since environmental ethics awareness and environmental citizenship participation deals with numerous concerns, a similar or follow-up study may be done considering other variables.

## New knowledge and the effects on society and communities

The findings of this study shed light on new knowledge regarding the environmental awareness and citizenship participation of higher education student leaders. It underscores the crucial role that the educational institutions play in shaping the ethical values and environmental consciousness of their students. Additionally, it emphasizes the expectations placed on student leaders to lead by example in addressing pressing environmental concerns in line with sustainable development goals.

One notable revelation from this research is that student leaders at Batangas State University, The National Engineering University - JPLPC Malvar Campus, Batangas, Philippines, exhibit a commendable level of awareness when it comes to ethical actions related to the environment. This signifies a promising foundation upon which to build environmentally responsible behaviors and practices among the student body. However, the study also uncovers a discrepancy in the level of awareness and actual citizenship participation among these student leaders. Despite their high awareness, they are not as actively engaged in various environmental activities as might be expected. This observation highlights the need for more concerted efforts to translate awareness into tangible actions that contribute to environmental sustainability.

The implications of these findings extend beyond the student population, as they have the potential to influence society and communities at large. Educating and empowering student leaders to take a more active role in environmental citizenship can lead to positive ripple effects throughout their academic institutions and beyond. As these young leaders graduate and enter the workforce, their heightened environmental ethics and participation can contribute to a broader societal shift towards sustainability and responsible environmental stewardship.

In response to these findings, it is crucial for concerned authorities to take action. Collaborative initiatives among student leaders, organizations, and clubs can harness their collective potential to address environmental challenges effectively. Implementing a well-thought-out plan of activities can ensure that these efforts are sustained and that the gap

between awareness and action is bridged. Ultimately, this study underscores the importance of equipping higher education student leaders with the knowledge and tools they need to make a meaningful impact on their communities and society as a whole in terms of environmental ethics and citizenship participation.

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