

Level of Environmental Awareness and Practices among Junior High School Students in University of San Carlos – South Campus

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Abstract: This study explored the relationship between environmental awareness and practices. It sought to determine the level of environmental awareness and the extent of environmental practices and examine the correlation of the environmental awareness and environmental practices of the Junior High School students. This utilized correlational descriptive research and identified simple random sampling using Likert Scale survey-questionnaire and nonparametric correlation grouped with four environmental themes. This study found a high and good level of environmental awareness and practices in Stewardship and Finiteness of Resources. It also revealed contradicting levels of environmental awareness and practices in Change where it had a ‘high’ and ‘poor’ interpretations while in Materials Cycle had fairly aware and good interpretations. The study expressed an impressive overall high and good levels of interpretations yet displayed a weak correlation between environmental awareness and practices using the Spearman’s rho coefficient. It suggested creating programs that increase environmental awareness and practices.

Keywords: environmental awareness, environmental practices, connectedness, ecological sensitivity, climate-disaster related risks.

1. INTRODUCTION

The interaction of human beings to its environment shows an ideal state of connectedness throughout history. Environment becomes the creative setting in building cultures that includes, but does not limit to, behaviors, beliefs, practices and rituals, for which shapes the humans today (Lagala, et. al, 2016). This environment intertwines with all ecological aspects of the earth: floras and faunas and its resources, important to the development of human society (Pant, et. al, 2020). Moreover, this environment where humans link each other to its ecosystem makes sure that life is sustained and flourishing (Ashaolu, et. al, 2020). This idea is supported by a study of Seymour in 2016 where he discussed how strongly evident the relationship of humans are to nature, especially loving and learning those natural elements of the world, reflecting it to real-life and ensuring the improvement of human health even on constant societal and environmental evolution.

Over the past years, human society has seen a dramatic change to its economic, social and cultural aspects (Asian Development Bank, 2014) brought about by the development of science and technology and the change of human behaviors (Pitzen, 2019) that affects the balance of environment and its ecosystem (Rogayan and Nebrida, 2019). These environmental crises are proved as a result of its land, water, air and forestry deterioration from human activities (Anand, 2013). As reported by the Organization for Economic Cooperation and Development in 2016, the world’s carbon emissions will escalate, affecting the economic productivity of every country’s natural resources: a pivotal factor to one’s growth and development.

With this global concern about the environment, this has placed human behaviors in question, especially that the population is continually increasing so is its consumption (Jena and Behera, 2017). This lack of awareness drives the alteration of the

environment's resources and its continued support of human needs, intensifies the Earth's degradation and biodiversity loss (Shende, et. al, 2015). According to a study of Victoria in 2018 on Environment and Behavior, it revealed how small and limited the awareness of humans towards environmental protection and sustainability, which permeates higher disaster risks and negative impacts brought by climate change (Intergovernmental Panel on Climate Change, 2022).

As ways to reverse these known environmental consequences, the United Nations designed the Kyoto Protocol in 1997 and Paris Agreement in 2015 as accords of all countries to commit in reducing greenhouse gas emissions and strengthening the conservation of environment and its resources through sustainability (United Nations Framework Convention on Climate Change, 2015), without compromising future growth and development of the country and of the world. Through the assistance of the organization, its member-state proposes environmental schemes to realize the goals which brought environmental sustainability and awareness to media and academic attention (Correia, 2019).

In the Philippine context, the country passed several laws, local ordinances and regulations as contributions to its intentions in mitigating these various environmental issues (Caboverde, 2022), and creating a sense of environmental awareness. Last 2009, the country passed the Climate Change Commission which streamlined the coordination of the local and national agencies in times of environmental crises and life risk emergencies. Prior to this law, it implemented the Forest Protection Act of 1963, Clean Air Act of 1999 and Clean Water Air Act of 2004. This move towards the protection of the environment has brought the Department of Education to embrace and make it as one of its core values, *Makakalikasan*. The schools should promote activities and programs that foster this core value to the students and should reflect its integration of environmental issues to its textbooks used (Lualhati, 2019) to increment solid engagement and public participation. A study from Perez in 2019 which evaluated the effectiveness of the Youth for Environment in Schools Organization (YES-O) program is seen as strongly embraced by schools but the lack of monitoring, overlapping activities and time constraints are proved as the problem implementation.

Since education plays an important role in inculcating this core value, it is seen that the adolescent stage is the critical period for influencing, forming and acting on an individual's beliefs, behaviors and routines (Damris, et. al, 2020), befitting the idea of this study in recognizing the awareness and practices of the Junior High School students.

Therefore, the researchers wants to explore this matter by answering these following objectives:

1. determine the level of environmental awareness of the Junior High School students;
2. extent of the Junior High School students' environmental practices towards environmental problems; and
3. examine the relationship of the Junior High School students between their level of environmental awareness and practices on four environmental themes.

2. METHODOLOGY

Participants

This study involved 80 Junior high school students of University of San Carlos - South Campus. It used the simple random sampling technique which sealed parental consent for the conduct of the study.

Research Design

This study utilized correlational descriptive research that sought to provide the relationship of the Junior High School students' environmental awareness and practices through the survey-questionnaire.

Instrument

In order to gather the data on the level of student's environmental awareness and practices, the researchers adopted a survey-questionnaire and secured permission from the owner of this instrument. The survey-questionnaire measured the students' Environmental Awareness (Part I) and Environmental Behaviors (Part II) that used the Likert Scale. Since adopted, the researchers conducted pre-test and post-test to validate its reliability.

Procedure

The researchers secured an approval from the school principal to conduct the study. For ethical considerations, parental consent was sent to the participants to guarantee their protection and confidentiality of their data and information. The students were chosen to assess their current knowledge and routines regarding environmental concerns. Some participants were given 20 minutes to respond and the researchers collected all survey-questionnaires on the same day.

3. RESULTS AND DISCUSSION

The research questions of this study were answered by the participants based on their responses with regard to the assessment of the survey on their level of environmental awareness and practices. These research questions are pinned to obtain their individual level of environmental awareness and practices of the Junior High School students and determine the relationship between the level of environmental awareness and extent of practices of the students.

The researchers utilized different statistical analyses in order to draw out valid results from the responses of the participants.

Table 1. Descriptive interpretation for the level of environmental awareness

Mean	Definition	Interpretation
4.21 - 5.00	Highly Aware (HA)	Very High (VH)
3.41 - 4.20	Moderately Aware (MA)	High (H)
2.61 - 3.40	Fairly Aware (FA)	Average (A)
1.81 - 2.60	Poorly Aware (PA)	Low (L)
1.00 - 1.80	Not Aware at All (NA)	Very Low (VL)

Table 2. Descriptive interpretation for the extent of environmental practices

Mean	Definition	Interpretation
4.21 - 5.00	Always (A)	Very Good (VG)
3.41 - 4.20	Often (O)	Good (G)
2.61 - 3.40	Sometimes (S)	Poor (P)
1.81 - 2.60	Rarely (R)	Very Poor (VP)
1.00 - 1.80	Never (N)	Needs Improvement (NI)

The measure of central tendency is derived from the mean values on the level of the awareness and practices of the participants. It used the four environmental themes in order to descriptively disclose the results based on its respective descriptive interpretations for environmental awareness and practices. Moreover, the study utilized the nonparametric correlation analysis to exhibit the significant association between the two variables.

The level of environmental awareness and extent of practices of the Junior High School students are shown using the four environmental themes in Table 3.

In the first environmental theme, the participants showed a 'high' level of awareness with a mean rating of 3.52 and accepted the role as the core protectors of the earth and its living things. As stewards of the earth, it confirmed how important it is to perform the responsibilities in conserving and preserving all forms of life. Moreover, the participants concluded a 'good' level of environmental practices with a mean rating of 4.13. This rating agreed to oftenly execute ecological practices like following waste segregation in school, picking up litters at home and school and switching off lights when not in use.

For the second environmental theme, it focuses on the finiteness of resources which acknowledges the sole concept of sustainability, as earth serves as the only realm of people and all forms of biodiversity. The participants revealed a 'high' level of awareness with a mean rating of 3.78 which identified that all forms of earth are affected by these climate-related disaster risks, so it is said to make possible steps in flourishing the well-being of our environment. It coincided with their 'good' level of environmental practices at 3.68 rating as they manifested achievable routines like pouring water into cups when brushing teeth, purchasing eco-friendly products and packaging and using eco-bags when shopping. Through these practices, it affirmed a healthy dwelling space, not only for today, but also for the future generations to come.

In the third environmental theme, it centered more on understanding these environmental issues like climate change and coral bleaching to name some which exacerbates the condition of species harmed and threatens public health. The participants in terms of their level of awareness significantly exposed a 'high' rating with a mean of 3.67. On the other hand, the participants' environmental practices were with a mean of 3.36 rating and translated as 'poor'. This level of environmental practices exhibited an average performance of the participants both at home and school like walking short distances instead of riding to regulate oil consumption.

Lastly, in the last environmental theme, it discussed how those waste materials lead after consumption. The participants showed contradicting results on their awareness and practices: 3.18 mean rating deemed as 'fairly aware' and 3.52 as 'good' respectively. Though the participants are donating clothes instead of disposing and purchasing recycled products as means of minimizing waste disposal, they unveiled average awareness on what is happening around them.

In general, the level of environmental awareness on the four environmental themes among the participants remained 'high' with an overall mean rating of 3.54. The lowest rating among the four environmental themes is the Materials Cycle at 3.18 mean and interpreted as fairly aware. The result is extracted from the same interpretations on four environmental themes as the basis. In terms of their level of practices, the overall extent of the participants is found as good. The result is from the same environmental themes and the third theme, Change, is seen as the lowest with poor interpretations.

Meaningfully, the researchers of this study utilized a nonparametric correlation analysis to determine whether there is a significant interconnection between the level of environmental awareness and extent of environmental practices of the Junior High School students. The analysis included a Spearman's rho coefficient at 0.017 which shows a 'weak correlation' between the two identified variables as shown in Table 4. This means that the level of environmental awareness and practices of the participants are opposing. Although their overall rating had 'high and good' interpretations, their awareness and practices are not linked, especially in the third and fourth environmental themes: Change and Materials Cycle.

Table 3. Group N, M and DI on the level of environmental awareness and practices of Junior High School students towards the four environmental themes

Level of Environmental Awareness and Practices on the Four Environmental Themes (N = 80)	Awareness		Practices	
	Mean	DI	Mean	DI
A. Man: God's Caretaker (Stewardship)	3.52	H	4.13	G
B. The Earth: For the Future Generations Too (Finiteness of Resources)	3.78	H	3.68	G
C. Most of the Earth's Resources are now Depleting (Change)	3.67	H	3.36	P
D. Everything Must Go Somewhere and Ends Somewhere (Materials Cycle)	3.18	FA	3.52	G
Overall	3.54	H	3.67	G

Table 4. Significant relationship between the awareness and practices of the participants towards the four environmental themes

Nonparametric Correlation			Awareness	Practices
Spearman's rho	Awareness	Coefficient Sig.(2-tailed) N	1.000 .000 80	0.017** .000 80
	Practices	Coefficient Sig.(2-tailed) N	0.017** .000 80	1.000 .000 80

**Correlation is significant at the 0.01 level (2-tailed)

4. CONCLUSION

It is the key objective of this study to assess the relationship of environmental awareness and environmental practices among the Junior High School students with regards to the four environmental themes. This study is supported by a Likert Scale with five categories, stated on the table. As the researchers realized the study, the results exhibited a weak correlation of awareness and practices which pictured out the 'disconnected' knowledge and actions of the participants. Even if there were high and good level of interpretations of their awareness and practices in the first two environmental themes: stewardship and finiteness of resources, the last two themes: Change and Materials Cycle, were deemed as opposites which participants acted out the behaviors positively yet had minimal understanding on the purpose of doing those activities. The environmental awareness and extent of environmental practices should coincide in order to properly address these pressing environmental concerns that the world is experiencing. Moreover, it suggested that as the students' environmental awareness increases, so does their level of environmental practices.

5. RECOMMENDATIONS

Based on the summary of findings and conclusions the researchers would like to recommend the following:

1. Strengthen the knowledge of the students regarding the causes and effects behind the natural and man-made calamities like flood, drought, global-warming, ozone layer depletion and earthquake to name some in order to help the students in inculcating positive attitudes towards the environment and developing the environmental sensitivity within.
2. Conduct seminars, lectures or symposium in school for students related to local environmental issues and problems and get integrated into Social Studies subject as daily news reporting.
3. To arrange an environmental forum involving the students and the local community on different issues of environment or disaster management by experts.
4. Organize environmental programs and activities like seedling planting, painting, extemporaneous speech, and exhibits related to the environment (Yesilyurt et. al, 2020).
5. Encourage the educators from the basic education to higher education to get more involved with professional developments including research activities, training, workshops and environmental orientations in order to obtain supportive and significant ideas in inculcating environmental sustainability to the students for the achievement of quality education leading to sustainable development.
6. Science educators and curriculum developers should explore awareness of other environmental issues or related activities that could result in improved pro-environmental behaviors on wise purchasing of products, energy conservation, repairs and waste segregation in school and at home (Dela Peña et al, 2019).
7. To embolden the students, faculty and the surrounding community to be ambassadors of the environment wherein they will conduct a series of environmental programs to be led by the students such as coastal clean-up, endemic tree planting, eco-bricks and other environmental advocacy campaigns (Rogayan Jr. 2019).
8. Research on environmental awareness associated with preservation of nature (Danielraja, 2019).

REFERENCES

- [1] Anand, S. (2013). Global Environmental Issues. Retrieved from <https://www.omicsonline.org/scientific-reports/2157-7617-SR-632.pdf>
- [2] Ashaolu, T., M. Sadiku, A. Ajayi-Majebi and S. Musa. (2020). Environmental Studies: An Introduction. Retrieved from <https://www.researchgate.net/publication/348640513>
- [3] Asian Development Bank. (2014). Environmental Issues, Climate Changes and Energy Security in Developing Asia. Retrieved from <https://www.adb.org/sites/default/files/publication/42604/ewp-399.pdf>
- [4] Caboverde, C. (2022). The Effect of Environmental Regulatory Burden on the Profit Growth Rate of Philippine SMEs. Retrieved from <https://www.dlsu.edu.ph/wp-content/uploads/pdf/research/journals/apssr/2022-June-vol22-2/14-caboverde.pdf>

- [5] Correia, M. (2019). Sustainability: An Overview of the Triple Bottom Line and Sustainability Implementation. Retrieved from <https://www.researchgate.net/publication/330057873>
- [6] Damris, D. M. Maison, T. Susanti and T. Tanti. (2020). Learning Environment and Motivation in Junior High School. Retrieved from <https://www.researchgate.net/publication/341288287>
- [7] Danielraja R. (2019). A Study of Environmental Awareness of Students at Higher Secondary Level. Retrieved from <https://www.researchgate.net/publication/333561318>
- [8] Dela Peña, P., A. Macale and N. Largo (2019). Environmental Awareness and Pro-Environmental Behaviors of High School Students in Los Baños Laguna. Retrieved from https://www.journalofnaturestudies.org/files/JNS17-1/56-67_dela%20Pena_Environmental%20Awareness%20Pro-environmental_abstract.pdf
- [9] International Panel on Climate Change. (2016). Summary for Policymakers. Retrieved from https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_SummaryForPolicymakers.pdf
- [10] Jena, L. and B. Behera. (2017). Environmental Crisis and Human Well-Being: A Review. Retrieved from <https://isdsnet.com/ijds-v6n8-3.pdf>
- [11] Lagala, K., R. Inocian, J. Gapol, A. Lawas, V. Rangaysiso and J. Omamalin. (2016). The Hermeneutics of the Gozos for Señor Sto. Niño de Cebu. Retrieved from <https://www.researchgate.net/publication/305409754>
- [12] Lualhati, G. (2019). Environmental Awareness and Participation of Filipino Pre-Service Teachers. Retrieved from <https://www.researchgate.net/publication/334306169>
- [13] Organization for Economic Cooperation and Development. (2016). The Economic Consequences of Outdoor Air Pollution. Retrieved from <https://www.oecd.org/environment/indicators-modelling-outlooks/Policy-Highlights-Economic-consequences-of-outdoor-air-pollution-web.pdf>
- [14] Pant, H., J. Verma and S. Surya. (2020). Environmental Issues: Local, Regional and Global Environmental Issues. Retrieved from <https://www.researchgate.net/publication/345674317>
- [15] Perez, R. (2019). Promoting a Greener Curriculum Through Environmental Youth Organizational Program: A Policy Evaluation. Retrieved from <https://files.eric.ed.gov/fulltext/ED602043.pdf>
- [16] Pitzen, S. (2019). Human-Nature Relationships and Pro-environmental Behaviour: Lessons from Rural Zanzibari Villages. Retrieved from <https://core.ac.uk/download/pdf/233003447.pdf>
- [17] Rogayan, D. and E. Nebrida. (2019). Environmental Awareness and Practices of Science Students: Input for Management Plan. Retrieved from <https://files.eric.ed.gov/fulltext/EJ1219420.pdf>
- [18] Seymour, V. (2016). The Human-Nature Relationship and its Impact on Health: A Critical Review. Retrieved from <https://www.researchgate.net/publication/310611885>
- [19] Shende, V., K. Janbandhu and K. Patil. (2015). Impact of Human Beings on Environment. Retrieved from https://unfccc.int/sites/default/files/english_paris_agreement.pdf
- [20] United Nations Framework Convention on Climate Change. (2015). Adoption of the Paris Agreement. Retrieved from https://unfccc.int/sites/default/files/english_paris_agreement.pdf
- [21] Victoria, A. (2018). Environment and Behavior. Retrieved from <https://www.researchgate.net/publication/326060352>
- [22] Yesilyurt, M., M. Balakoglu and M. Erol. (2020). The Impact of Environmental Education Activities on Primary School Students' Environmental Awareness on Visual Expressions. Retrieved from <https://files.eric.ed.gov/fulltext/EJ1260775.pdf>