
**THE INFLUENCE OF ECOLOGICAL LITERACY TOWARDS
ACADEMIC MOTIVATION AMONG JUNIOR HIGH SCHOOL
LEARNERS**

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ABSTRACT

This study aimed to determine the Influence of eco-literacy on academic motivation among high school learners. This study employed a descriptive correlational research design to determine the level of ecological literacy among learners in terms of waste management, recycling, water conservation and the level of academic motivation in terms of interest, self-efficacy and desire for achievement among Junior high school learners. The participants consist of Grade 7, 8, 9, and 10 learners from San Andres National High School in Kadingilan Bukidnon District I during the school year 2025–2026. The result revealed that the level of ecological literacy among learners in terms of waste management, recycling, and water conservation interpreted as very high level. The level of academic motivation among junior high school learners in terms of interest, self-efficacy, and desire for achievement interpreted as very high level. The result also revealed that ecological literacy is positively associated with learners' interest in learning. Its influence on self-efficacy was mixed, showing a small positive effect in some areas but a nuanced or weak relationship overall, indicating that ecological knowledge alone may not consistently boost learners' confidence in their academic abilities. In terms of desire for achievement, ecological literacy appeared to have little to no direct impact, implying that while students may be environmentally responsible, this does not necessarily translate into stronger goal-oriented or competitive motivation in school. The regression analyses show that ecological literacy, particularly water management and water conservation, significantly enhances learners' interest in learning, indicating that active environmental practices can strongly boost engagement and curiosity.

However, its influence on self-efficacy is limited and mixed, and it does not significantly affect learners' desire for achievement, suggesting that environmental knowledge and behaviors do not directly translate into confidence or goal-oriented academic motivation.

KEYWORDS: *Ecological literacy, waste management, recycling, water conservation, academic motivation, interest, self-efficacy, desire for achievement.*

INTRODUCTION

In recent years, environmental education has gained global attention as a critical component of sustainable development. Eco-literacy, defined as the understanding of ecological principles and the ability to apply them in daily life, has been recognized as essential not only for environmental stewardship but also for shaping learners' attitudes and behaviors (Sudarti, S. 2024). Studies have shown that students with higher levels of eco-literacy tend to exhibit greater awareness of environmental issues and engage more actively in problem-solving and critical thinking activities. This growing body of research highlights the importance of integrating eco-literacy into educational curricula to foster holistic development (Zhu, G., et al. 2022).

Despite the recognized benefits of eco-literacy on general cognitive and social outcomes, limited research has explored its direct impact on learners' academic motivation. Academic motivation, which drives students to engage in learning, persist through challenges, and achieve academic goals, is a crucial determinant of educational success (Kim, H. J. 2023). While prior studies have examined the effects of traditional educational interventions on motivation, the potential role of environmental literacy as a motivational factor remains underexplored. This gap indicates the need to investigate how eco-literacy may influence learners' intrinsic and extrinsic motivation in the classroom context (Chao, Y. L., et al. 2024). This study aims to examine the influence of eco-literacy on academic motivation among learners. By exploring this relationship, the research seeks to provide insights into how integrating environmental awareness and ecological understanding into education can potentially enhance students' drive to learn and achieve academically. Findings from this study may inform educators, curriculum developers, and policymakers on the value of eco-literacy not only as an environmental tool but also as a means to foster academic engagement and success among learners.

Conceptual Framework of the Study

The study, grounded in the Expectancy-Value Theory developed by Eccles and Wigfield (2002), emphasizes that individuals' motivation is influenced by both their expectations for success and the value they attach to a task. Expectancy reflects one's belief in their ability to succeed, while value refers to the perceived importance, utility, and interest of the task. In the context of eco-literacy, students are more likely to engage actively when they recognize environmental education as valuable for personal growth and societal impact, and when they believe they can succeed in eco-literacy tasks. Integrating eco-literacy into curricula can therefore enhance motivation by aligning students' expectations with meaningful learning experiences.

Eco-literacy, particularly in areas like waste management, recycling, and water conservation, also supports the development of goal-oriented behaviors and academic motivation. Learners who practice proper waste segregation tend to cultivate responsibility and discipline, which translate into more focused learning approaches. Recycling activities encourage creativity and problem-solving skills, fostering planning and organizational abilities essential for academic success (Ristanto, 2019). Likewise, mindful water conservation promotes foresight and accountability, reinforcing traits that support goal-directed learning (Pursitasari & Rubini, 2025).

Significance of the Study

This study was conducted because the researcher believes that it would benefit and provide significance to the following people:

To the teachers. Teachers benefit from integrating eco-literacy into the curriculum as it provides innovative ways to engage students in meaningful learning experiences. It encourages the use of project-based and experiential teaching methods, which can make classroom instruction more dynamic and interactive. As students become more motivated through eco-literacy initiatives, teachers may observe higher levels of participation, attentiveness, and academic performance, ultimately enhancing teaching satisfaction and professional growth.

To the learners. Developing eco-literacy enhances learners' understanding of environmental issues and sustainable practices, which fosters critical thinking, responsibility, and self-discipline. By connecting ecological knowledge to their daily lives, learners become more motivated to set and achieve academic goals, especially when they see the relevance of their

studies to real-world problems. This heightened motivation can lead to improved academic performance and a stronger sense of personal achievement.

To the school administrators. Schools that promote eco-literacy create a culture of sustainability and responsibility, which can improve the overall learning environment. Environmentally conscious practices, such as recycling programs and water conservation efforts, can reduce operational costs and foster a positive public image. Additionally, schools that emphasize eco-literacy are more likely to cultivate motivated, socially responsible students, contributing to better overall school performance and a stronger reputation in the community.

To the future researchers. For future researchers, studies on eco-literacy and academic motivation offer a foundation for exploring the intersection of environmental education and student development. They provide valuable data, methodologies, and theoretical frameworks that can guide further investigations into effective teaching strategies, motivational factors, and sustainability education. These insights can inform policy development, curriculum design, and innovative approaches to enhancing both learning outcomes and environmental stewardship among students.

Definition of Terms

For better understanding of the study, the following terms are operationally defined:

Ecological literacy. Ecological literacy refers to the understanding of natural systems and the interdependence between humans and the environment. It involves knowledge, attitudes, and behaviors that enable individuals to make informed decisions and take responsible actions to sustain ecological health. In the context of learners, eco-literacy equips them with the skills to analyze environmental issues critically and adopt sustainable practices in daily life.

Waste Management. Waste management is the systematic process of handling, collecting, transporting, processing, recycling, and disposing of waste materials to reduce their negative impact on the environment. It includes strategies to minimize waste generation, reuse materials, and ensure proper disposal to protect public health and natural resources. For learners, understanding waste management fosters awareness of environmental responsibility and encourages participation in sustainable practices.

Recycling. Recycling is the process of converting waste materials into reusable products to prevent environmental pollution and conserve natural resources. It involves collecting, sorting, processing, and repurposing materials such as paper, plastics, metals, and glass.

Among learners, recycling education promotes habits of resourcefulness, environmental stewardship, and the reduction of ecological footprints.

Water Conservation. Water conservation is the practice of using water efficiently and responsibly to reduce wastage and ensure the availability of clean water for present and future generations. It includes measures such as minimizing water use, repairing leaks, reusing water, and protecting water sources from contamination. Teaching learners about water conservation cultivates sustainable habits and reinforces their understanding of the value of natural resources.

Academic Motivation. Academic motivation refers to the internal drive or external encouragement that stimulates learners to engage in educational activities, persist in learning tasks, and achieve academic goals. It encompasses factors such as interest, self-efficacy, and the desire for achievement, influencing the learner's effort, attention, and persistence in schoolwork.

Interest. Interest refers to the learner's level of curiosity, enjoyment, and engagement in academic activities and school subjects. It reflects how much a learner is attracted to learning tasks and how willing they are to participate actively in classroom activities.

Self-Efficacy. Self-efficacy is the learner's belief in their own ability to successfully understand lessons, complete academic tasks, and perform well in school. It influences how much effort a learner puts into learning and how they handle challenges and difficulties.

Desire for Achievement. Desire for achievement refers to the learner's motivation to attain academic success, improve performance, and reach educational goals. It reflects the learner's drive to excel, earn good grades, and gain recognition for academic accomplishments.

Research Methodology

This section discusses the methods and procedures used in the study: research design, research respondents, sampling procedure, research instrument, system of scoring, data gathering procedures, and statistical treatment of data that will be used in analyzing the data that will be gathered in the study.

Research Locale

This study was conducted in San Andres National High School of the Kadingilan I District, Division of Bukidnon, during the academic year 2025-2026. Kadingilan, officially known as the Municipality of Kadingilan, is a 3rd class municipality located in the province of Bukidnon, Philippines. According to the 2015 census, the population is 33,778. Kadingilan is

located within the grid coordinates of 124O 49' to 125O 2' east latitude and 7O 20' 31" north longitude. Kadingilan is situated on the southernmost boundary of the province of Bukidnon.

Kadingilan is divided from the municipality of Pangantucan and the province of Lanao del Sur by the Maridugao and Kidanggin Rivers in the southern region. San Andres National High School possibly named after the local town or a noteworthy figure, this school would provide secondary education to students, with a focus on foundational disciplines such as mathematics, science, language, and social sciences. Schools in this area frequently include local culture and values into their courses and offer extracurricular activities to support holistic development.

Respondents of the Study

The respondents of the study were the three hundred thirty-nine (339) grade 7, grade 8, grade 9 and grade 10 learners in San Andres National High School, for the school year 2025-2026. Table 1 presents the distribution of respondents by grades.

Table 1. *Distribution of Respondents by Grades.*

Grades	Total Population Learners
Grade 7	102
Grade 8	95
Grade 9	57
Grade 10	85
Total	339

Research Instrument

This study used an adapted questionnaires from Liu (2019). The instruments that were used in gathering the necessary data is a questionnaire composed of 2 parts. Part 1 deals on the level of ecological literacy among learners in terms of waste management, recycling, and water conservation. Part II is about the level of academic motivation in terms of interest, self-efficacy, and desire for achievement among junior high school learners. The questionnaire was patterned and modified in order to fit the settings of the study.

The reliability and validity of the research instrument were carefully established to ensure the accuracy and consistency of the data gathered. The adapted questionnaire from Liu (2019) underwent modification to suit the context of the study, after which it was subjected to expert validation. Specialists in education and research reviewed the instrument to assess its content validity, ensuring that each item appropriately measured the constructs of ecological literacy (waste management, recycling, and water conservation) and academic motivation (interest,

self-efficacy, and desire for achievement). Revisions were made based on their suggestions to improve clarity, relevance, and alignment with the study objectives. To determine reliability, the instrument was pilot-tested among a group of learners similar to the target respondents. The collected data were analyzed using Cronbach's alpha to measure internal consistency, yielding coefficients that indicated the questionnaire was reliable. These procedures confirmed that the instrument was both valid and dependable for use in gathering data for the study.

Data Gathering Procedure

This study began with securing approval from the Schools Division Office and obtaining consent from the principals, teachers, and Junior High school learners in San Andres National High School. Once approvals will be granted, the researcher coordinated with the class advisers to schedule the administration of the validated research instrument. During the data collection phase, the instrument was administered personally by the researcher to all Grade 7, 8, 9, and 10 learners, ensuring standardized instructions and clarifying any questions for better understanding. The learners completed answering the questionnaire during regular class hours under the supervision of the researcher and the class teacher. After collection, the responses were checked for completeness and accuracy, then organized for data analysis.

This procedure ensured ethical compliance, minimized disruption to classroom activities, and promoted accurate, consistent responses from the learners, thereby enhancing the quality of the data collected for assessing the level of eco-literacy among learners in terms of waste management, recycling, water conservation and the level of academic motivation in terms of goal orientation among junior high school learners.

Scoring Procedure

The data were processed and interpreted using the rating scales below. For the level of ecological literacy among learners in terms of waste management, recycling, water conservation and the level of academic motivation in terms of interest, self-efficacy, and desire for achievement among junior high school learners this scale was used.

Level of Ecological Literacy

Scale	Interval	Descriptive Rating	Interpretation
5	4.20-5.00	Always	Very High Level
4	3.40-4.19	Often	High Level
3	2.60-3.39	Sometimes	Moderate Level

2	1.80-2.59	Rarely	Low Level
1	1.00-1.79	Never	Very Low Level

Level of Academic Motivation

Scale	Interval	Descriptive Rating	Interpretation
5	4.20-5.00	Always	Very High Level
4	3.40-4.19	Often	High Level
3	2.60-3.39	Sometimes	Moderate Level
2	1.80-2.59	Rarely	Low Level
1	1.00-1.79	Never	Very Low Level

Statistical Treatment of Data

The following statistical tools were applied to analyze and interpret the data of this study:

Mean and standard deviation were used to determine the level of ecological literacy among learners in terms of waste management, recycling, and water conservation.

Mean and standard deviation were used to determine the level of academic motivation in terms of interest, self-efficacy, and desire for achievement among junior high school learners.

Pearson r Product-Moment Correlation Coefficient or Pearson r was utilized to find out the significant relationship between the level of ecological literacy among junior high school learners and the level of academic motivation in terms of interest, self-efficacy, and desire for achievement among junior high school learners.

Regression Analysis was used to determine the variable of the level of ecological literacy significantly influence the academic motivation among Junior High School learners.

FINDINGS

Presented below are the findings derived from this study.

The result revealed that the level of ecological literacy among learners in terms of waste management, recycling, and water conservation interpreted as very high level.

The level of academic motivation among junior high school learners in terms of interest, self-efficacy, and desire for achievement interpreted as very high level.

The result revealed that ecological literacy is positively associated with learners' interest in learning. Its influence on self-efficacy was mixed, showing a small positive effect in some areas but a nuanced or weak relationship overall, indicating that ecological knowledge alone may not consistently boost learners' confidence in their academic abilities. In terms of desire for achievement, ecological literacy appeared to have little to no direct impact, implying that

while students may be environmentally responsible, this does not necessarily translate into stronger goal-oriented or competitive motivation in school.

The regression analyses show that ecological literacy, particularly water management and water conservation, significantly enhances learners' interest in learning, indicating that active environmental practices can strongly boost engagement and curiosity. However, its influence on self-efficacy is limited and mixed, and it does not significantly affect learners' desire for achievement, suggesting that environmental knowledge and behaviors do not directly translate into confidence or goal-oriented academic motivation.

CONCLUSIONS

Drawing from the study's findings, the following conclusions can be made:

The study concludes that junior high school learners exhibit a very high level of ecological literacy in waste management, recycling, and water conservation, demonstrating strong awareness and responsible environmental practices. This suggests that students are capable of integrating ecological knowledge into daily life and that such literacy can support engagement and interest in learning.

It is also concluding that junior high school learners demonstrate a very high level of academic motivation in terms of interest, self-efficacy, and desire for achievement, indicating strong engagement, confidence, and goal-oriented behavior in their learning. This reflects those students are not only eager to learn but also believe in their abilities and strive for academic success.

Moreover, ecological literacy has a strong positive relationship with learners' interest in learning, enhancing engagement and curiosity. However, its influence on self-efficacy is limited and mixed, and it does not significantly affect learners' desire for achievement, indicating that environmental knowledge alone does not consistently translate into confidence or goal-oriented academic motivation.

The study concludes that ecological literacy, especially in water management and water conservation, significantly enhances learners' interest in learning, demonstrating that active environmental practices can effectively boost engagement and curiosity. However, its impact on self-efficacy is limited and inconsistent, and it does not significantly influence learners' desire for achievement, indicating that environmental knowledge alone does not directly foster confidence or goal-oriented motivation.

RECOMMENDATIONS

Derived from the study's conclusions, the following recommendations are proposed:

To the Schools. Schools may continue to enhance environmental education through hands-on activities and projects that connect ecological practices with academic learning. Additionally, teachers and administrators may provide the necessary resources and support to sustain these programs and further develop students' skills and motivation. Schools may also implement complementary strategies, such as goal-setting, skill-building exercises, and positive reinforcement, to enhance self-efficacy and achievement motivation alongside ecological literacy.

To the Teachers. Teachers may continue to foster and maintain high levels of academic motivation by creating engaging, meaningful, and challenging learning experiences. Additionally, schools may provide supportive environments and opportunities for goal-setting, skill mastery, and recognition of achievements to further strengthen learners' interest, confidence, and desire for academic excellence. Teachers may also incorporate hands-on environmental activities that connect ecological practices with academic learning to maintain and strengthen learners' interest.

To the School Heads. School Heads may integrate ecological literacy with activities that actively promote academic engagement, linking environmental practices to classroom learning to strengthen students' interest. Additionally, educators may combine environmental education with strategies that build self-efficacy and achievement motivation, such as goal-setting, mastery experiences, and recognition of academic successes.

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