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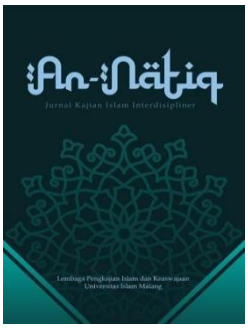

Religiosity as a Predictor of Students' Ecological Awareness: Study in the School Environment

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Abstract

The global environmental crisis requires a paradigm shift in education that integrates spiritual values with ecological action. This study aims to analyze the impact of religiosity on students' ecological awareness in school environments in the city of Jember. Using a quantitative correlational method, data were collected from 347 students through a Likert-scale questionnaire assessing aspects of religiosity and the level of environmental awareness. Simple linear regression analysis indicated that religiosity has a positive and significant effect on students' ecological awareness ($p < 0.05$). These findings suggest that strengthening spiritual values in schools plays a role in shaping students' environmental ethics. The implications of this study highlight the need to integrate a religious education curriculum focused on environmental conservation (ecotheology) as a response to the low level of environmental knowledge among young people.

Introduction

The current ecological crisis has transformed from a mere environmental issue into an urgent global existential threat. Recent reports on climate change, massive biodiversity loss, and microplastic pollution reaching the human food chain indicate that planetary boundaries have been crossed (Rockström et al., 2024). In this context, education is identified as a crucial instrument in mitigating the crisis through the formation of sustainability literacy in the younger generation (Stevenson et al., 2013a). However, the integration of ecological issues in the curriculum is often still trapped in the mere transfer of cognitive knowledge, without touching on the deeper affective aspects (Stevenson et al., 2013b)

The current phenomenon in the school environment shows a worrying paradox between students' knowledge and behavior. Although the environmental education curriculum has been implemented, students' ecological awareness levels are still in the moderate to low category (Anderson, 2012). Many students are able to define global warming theoretically, but fail to manifest it in simple actions such as reducing plastic waste or saving energy at school (Dioba et al., 2024). This imbalance indicates that environmental education is missing the "spirit" or foundation of values that can move the inner awareness of individuals (Lin & Zhou, 2025).

Religiosity has emerged as a key variable with potential to bridge the gap between ecological knowledge and behavior. As a value system embraced by the majority of Indonesian society, religion provides an ontology of the relationship between humans and nature as a form of divine trust (Sayuti et al., 2025). Recent studies have shown that religious commitment can act as a strong predictor of prosocial behavior, including concern for ecosystem sustainability (Sa'id et al., 2024). For students, internalizing

spiritual values in schools is not merely ritual obedience, but rather the formation of a transcendental environmental ethic (Wilkinson, 2022).

A recent literature review indicates a shift in focus in the study of ecotheology and environmental psychology. Some researchers argue that intrinsic religiosity is positively correlated with environmentally friendly behavioral intentions through the mediation of empathy for nature ("*Dark Green Religion* : Introduction and Review," 2013). On the other hand, religious education in schools is often anthropocentric, where nature is only seen as an instrument to fulfill human needs (Foltz, 2021). Therefore, exploring how the dimensions of religiosity held by students influence their ecological orientation is relevant in enriching the literature on character education (Deane-Drummond, 2009).

Although numerous studies have been conducted on the relationship between religion and the environment. Most previous research focuses on adult populations or specific religious communities, while studies targeting secondary school students with a comprehensive quantitative approach are still limited (Zaleha & Szasz, 2015). Furthermore, there are inconsistent results (contradictory findings) regarding whether all dimensions of religiosity (ideology, practice, experience) contribute equally to ecological awareness(Elizabeth Minton, 2023). This lack of clarity requires further empirical verification in the context of contemporary formal education (Khan & Kirmani, 2018a).

This study also responds to the growing criticism regarding the effectiveness of the *Adiwiyata School Program*, an environmental education initiative designed to cultivate environmentally responsible school communities by fostering ecological awareness, pro-environmental values, and a sense of responsibility for environmental conservation. Despite its strategic objectives, evidence suggests that the implementation of the program has often been dominated by administrative compliance and ceremonial activities, thereby limiting its capacity to promote the meaningful internalization of ecological values and sustainable environmental behaviors among school stakeholders (Sangia et al., 2022). Without the internalization of deep spiritual values (religiosity), environmental programs in schools tend to be temporary and disappear after the assessment is over (Tomlinson, 2019). By integrating the perspective of religiosity, this study attempts to fill the theoretical gap regarding how spiritual motivation can be a driving force for sustainable ecological awareness among adolescents (Stone, 2020).

Based on this background, the main research questions in this study are: (1) What is the current level of religiosity and ecological awareness of students in schools? (2) To what extent does religiosity significantly influence the formation of students' ecological awareness? These questions are crucial to answer in order to formulate educational strategies that are not only intellectually intelligent but also ecologically and spiritually sensitive (Palmer, 2002).

The main objective of this study is to analyze and empirically prove the influence of religiosity on students' ecological awareness. Specifically, this study aims to identify which dimensions of religiosity are most dominant in shaping pro-environmental attitudes (Hair et al., 2019). The results of this study are expected to provide a practical contribution to the development of an environmentally conscious religious education curriculum (eco-religious curriculum) at the secondary school level (Tang, 2024).

Research Method

This study uses a correlational quantitative design to empirically verify the influence of religiosity on ecological awareness (Creswell & Inoue, 2025). The research

instrument was developed through a rigorous variable operationalization process to ensure that each dimension is measured accurately.

Variable X (Religiosity) was measured using 25 statement items, while Variable Y (Ecological Awareness) used 20 statement items.

Table 1
Research instruments

Variables	Dimension	Indicator
Religiosity (X) (Stark & Glock, 1968)	Ideology	Belief in religious teachings related to nature
	Practice	Intensity of religious worship and rituals
	Experience	Appreciating religious values in natural phenomena
	Knowledge	Understanding sacred texts on environmental ethics
	Consequential	Implementing religious values in life
Ecological Awareness (Y) (Herdiansyah et al., 2022)	Knowledge	Understanding global environmental issues and crises
	Attitude	Caring and Emotions for Nature
	Behavior	Real Environmentally Friendly Actions at School

Descriptive statistical analysis was conducted to summarize the distribution and characteristics of the study variables prior to inferential analysis. The study involved 347 senior high school students selected through multistage stratified random sampling from 12 schools (7 public and 5 private) located across the three major sub-districts of Jember City, namely Kaliwates, Sumbersari, and Patrang. This sampling strategy ensured proportional representation of different school types and geographical areas, thereby enhancing the representativeness of the sample and the external validity of the study findings, as presented in Table 2.

Table 2
Characteristics of the Research Sample (N = 347)

Variable	Category	n	%
School Status	Public	206	59.4
	Private	141	40.6
Number of Schools	Public	7	58.3
	Private	5	41.7
	Total Schools	12	100.0
Sub-district	Kaliwates	122	35.2
	Sumbersari	116	33.4
	Patrang	109	31.4
	Total Participants	347	100.0

The data are categorized into three levels: Low, Medium, and High.

Table 3
Descriptive Analysis

Variables	Mean	Std. Deviation	Dominant Category	Percentage
Religiosity (X)	78.42	8.12	High	72%
Ecological Awareness (Y)	65.15	10.45	Medium	61%

The table above shows that despite students' high levels of religiosity, their ecological awareness remains at a "moderate" level. This indicates a gap in transforming spiritual values into concrete environmental action (Steel, 2007).

A simple linear regression test was performed to test the hypothesis.

Table 3
Regression Analysis

Model	Unstandardized B	Std. Error	t	Sig.	R^2
(Constant)	12.450	3.120	3.990	.000	0.384
Religiosity (X)	0.672	0.045	14.933	.000	

Based on Table 3, a significance value of 0.000 (<0.05) was obtained, thus H1 was accepted. The coefficient of determination (R2) of 0.384 indicates that religiosity contributes 38.4% to the development of students' ecological awareness (Hair, 2010). The remaining 61.6% is influenced by other variables outside this research model, such as school policies, peer influence, and social media exposure (Yang et al., 2024).

The resulting regression equation is:

$$\hat{Y} = 12.450 + 0.672\ X$$

This means that every one-unit increase in religiosity score is predicted to increase ecological awareness by 0.672 units. This finding confirms that the spirituality dimension is a significant predictor of strengthening environmental ethics in educational institutions.

Results and Discussion

The statistical analysis results show that religiosity has a positive and significant influence on students' ecological awareness, with a coefficient of determination (R2) of 38.4%. This finding indicates that nearly forty percent of the variation in students' environmental awareness can be explained by their level of spiritual depth. From an educational psychology perspective, this figure is significant, considering that ecological awareness is a complex variable influenced by multiple factors (Stern, 1992).

1. **Interpretation from an Ecotheological Perspective**

   Theoretically, this 38.4% contribution confirms the relevance of Ecotheological theory, which positions religion as a catalyst for environmental ethics. Religiosity does not stop at formal rituals but transforms into "ecological intelligence" rooted in divine values (Gottlieb, 2004). Students with high religiosity tend to view nature not as an object of exploitation, but as a subject with theological rights to be protected. This aligns with the concept of stewardship, where humans are morally responsible to the Creator for the condition of the earth (Arakawa et al., 2018).

2. **Islamic Perspective Analysis: Caliph and Mizan**

From an Islamic perspective, the influence of religiosity on ecological awareness can be explained through three fundamental concepts: Tawhid (oneness), Khalifah (representation), and Mizan (balance). Students who internalize Islamic values recognize that damaging the environment is a form of denial of the Mizan established by Allah SWT in the universe (Majeri Mangunjaya & Elizabeth McKay, 2012).

This positive correlation proves that the Consequence dimension of religiosity (Glock & Stark) manifests itself in the form of ihsan (respect for nature). Islam teaches that planting trees or cleaning the environment is part of the branch of faith (syu'abul iman) (Al-Jayyousi, 2016). Therefore, the high level of religiosity among students (78.42%) provides strong social capital for the Green Islam movement in the school environment, where ecological practices are seen as a form of worship that is ghairu mahdah (non-observant worship) (Syukri et al., 2024).

3. **Comparison with International Research**

When compared with global studies, these findings reveal a unique pattern. Research in Northern Europe tends to show a lower influence of religiosity on ecological behavior due to the dominance of secular-postmaterialist values (Taylor, 2025). Conversely, these results corroborate findings in Malaysia and Turkey, which show that in countries with a strong religious base, religion is a primary motivator, surpassing environmental science knowledge (Khan & Kirmani, 2018b).

However, the remaining 61.6% unexplained effect in this model indicates a value-action gap. Recent research in the United States has shown that even when religious individuals have pro-environmental attitudes, structural constraints in schools (such as a lack of recycling facilities) often hinder the manifestation of concrete behavior (Lacroix et al., 2019). This explains why students' ecological awareness in this study remained in the "Medium" category despite their "High" religiosity.

4. **Implications of Religious Education in Schools**

These findings call for a reorientation of the Islamic Religious Education (IRE) curriculum and character education in schools. Religious education should no longer be confined solely to the jurisprudence of worship (fikih mahdah), but should also address the issue of environmental jurisprudence (fikih al-bi'ah) (Sahin, 2014). Integrating ecological narratives into religious texts in the classroom can strengthen R2, or the contribution of religiosity in the future, making schools laboratories of green civilization based on spiritual values (Barton, 2014).

Conclusion

This study has empirically proven that religiosity plays a fundamental role in shaping students' ecological awareness in the Jember city school environment. Based on the results of the regression analysis, religiosity contributed significantly, at 38.4%, to ecological awareness. This confirms that spiritual values are not merely a private matter between an individual and God, but rather a driving force behind public ethics in preserving the earth.

The main conclusion indicates that the dimensions of practice (consequences) and ideology (beliefs) are the most dominant factors. Students who believe that preserving nature is a religious commandment tend to have more consistent pro-environmental attitudes. However, the presence of ecological awareness still at the "Moderate" level indicates that the significant potential of religiosity has not been fully optimized by the formal education system to translate into concrete behavior.

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