



# The Influence of Islamic Eco-Spiritual Based Civic Education on Student Ecological Awareness

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**Abstract.** This research is very important considering the current environmental crisis. Significant environmental damage is predicted to have an impact on humans. So, saving the environment must be done with all efforts, one of which is civic education. The purpose of this study was to determine the effect of Islamic Eco-Spiritual based Civic Education learning on students' ecological awareness. This study used a quasi-experimental comparative quantitative approach with a non-equivalent control group model. The number of respondents who participated was 598. The results showed that civic education has a great influence on eco-spiritual Islam in the ecological awareness of students.

**Keywords:** Civic Education · Ecological Awareness · Eco-Spiritual

## 1 Introduction

Saving the environment must be done immediately considering that environmental damage is increasingly difficult to overcome. Environmental damage is indicated by human behavior that is further away from environmental ethics and is anthropocentric [1]. The agenda of saving the environment, raising awareness and responsibility of citizens must be done to avoid social conflicts in society [2].

Many studies have been initiated to increase the awareness and responsibility of citizens towards the ecology, for example: ecoliteracy [3], Ecological Citizenship [4], Environmental Education [5]. Even in Indonesia, the enthusiasm is to overcome ecological problems by integrating them in every subject, such as History, Geography, Economics, Sociology, Anthropology and of course Citizenship Education [6].

Civic education aims to develop good and smart citizens through character education and play a role in fostering concern and responsibility for the ecology [7]. Moreover, ecological awareness in citizenship education can be developed through a paradigm; civic knowledge, disposition and skills [8]. Ecological awareness cannot only be built through the educational process alone, the transfer of knowledge, but must place students as active subjects [9]. So civic education is the right subject to foster ecological awareness, because it develops knowledge and participation [10].

So that the concept of ecological citizenship (ecological citizenship) that is guided by the ethics and morals of citizens towards their environment emerges which is taught through education [4], Moreover, Civic education is a multi-faceted field of study with interdisciplinary, multidisciplinary and transdisciplinary characteristics [8]. So that civic education is easy to develop the meter. Seeing the excellence and dynamism of ecological problems, it is important to develop an Eco-Spiritual based civic education.

Ecological rescue through a spiritual/religious approach is considered to play a role in dealing with the environmental crisis [11]. Thus, Algore [12], believes that the cause of this global ecological crisis is due to a spiritual crisis, where religious people have lost their spirituality of nature [13]. In the Al-Quran as a guideline for Muslims, there are many verses that invite to always investigate and maintain the balance of nature, so that in Islam there is also a term that is widely known as “green deed”. So, it is very important to raise awareness of the environment through civic education based on Islamic Eco-Spirituality.

Moreover, the Aceh region is familiar with its religious community and the application of Islamic law so that it is hoped that Islamic values can be more easily understood and foster environmental awareness for students. Environmental awareness is a multidimensional construct consisting of cognitive, attitude, and behavioral components [14]. The cognitive component consists of a person’s environmental knowledge regarding ongoing environmental issues, for environmental attitudes regarding concern for the environment, ecology, or energy saving [15]. The level of one’s concern for environmental issues is environmentally conscious behavior. The components of environmental awareness in this study are the knowledge and behavior of junior high school students about the environment. Sample Heading (Third Level). Only two levels of headings should be numbered. Lower level headings remain unnumbered; they are formatted as run-in headings.

## 2 Method

This study used a quasi-experimental comparative quantitative approach with a non-equivalent control group model. The population in this study were junior high school students who came from low (C), medium (B), and high (A) level schools in Aceh Besar District (control group, an area that had not yet been introduced to civic education based on Islamic eco-spirituality) and Banda City. Aceh (experimental group, an area that has implemented Islamic eco-spiritual based civic education). The population of this study were junior high schools in Aceh Province in Aceh Besar District and Banda Aceh City. The number of sample experimental schools, namely, 13 schools (20% of the sub-population of junior high schools in Banda Aceh, totaling 67 schools). As a control group, 10 junior high schools from Aceh Besar District were taken. Overall respondents who came from 23 schools totaled 598 students.

## 3 Data Collection

The test data was collected quantitatively. Academic tests were conducted on grade IX students, both from control and experimental schools. The test was specifically carried out to measure the level of ecological awareness of students in the school environment.

The research instrument was developed by researchers. The test of students' knowledge of ecological awareness consists of 20 choice questions, which refer to the principle of preparing eco-spiritual based civic education learning materials referring to the Law on the National Education System of the Republic of Indonesia Article 36 Paragraph 3.

## 4 Data Analysis

Civics education test score data for junior high school students were analyzed using the t test ( $\alpha = 0.05$ ), to determine the mean difference between experimental and control school knowledge scores. The same academic test data were analyzed again using the ANOVA test ( $\alpha = 0.05$ ), to differentiate the level of ecological awareness knowledge of each school in the Citizenship Education subject. The significant ANOVA test results were further tested (post-hoc test) using the Tukey Honestly Significant Difference test of 5% (Honest Real Difference Test/BNJ), to compare the rankings of each school, so that no errors occurred in the study.

## 5 Result and Discussion

The academic test in this study was conducted with the aim of knowing the impact of Islamic eco-spiritual based civic education on the ecological awareness of junior high school (SMP) students in Aceh Province. The academic tests conducted in this study were specifically focused on civic education subjects. The average data for the test scores of ecological knowledge in junior high school civic education in Banda Aceh City (Experiment) and Aceh Besar District (Control), the mean data for the civic education scores in experimental and control schools, respectively: 4.89 and 3.00 (Table 1).

In Table 2, the data for the standard deviation and standard error of the mean value of ecological knowledge from the two school categories are presented. In absolute terms it is clear that student test scores in the Citizenship Education subject differ between schools that have not and those that have implemented Islamic eco-spiritual based civic education. To statistically reinforce the significance of this difference, the data on academic test scores from the experimental and control schools were further analyzed using the t-test difference.

Based on the data in Table 3, there are two stages of analysis that must be carried out. The first analysis that must be tested is the assumption whether the population variances of the two categories are equal (equal variances not assumed), by looking at the Levene Test value in the table. It can be seen in Table 3 that the Levene Test F counts, namely, 8.256 with a probability of 0.004 (less than 0.05), it can be concluded that the two school categories have unequal variances. Thus, the second analysis, namely the t-test difference test analysis, must use the assumption of equal variances not assumed. It can be seen in Table 3 that the t value at equal variances is not assumed, namely, -17.312 with a significance probability of 0.000 (2-tailed), it can be concluded that the mean value of ecological knowledge differs significantly between the experimental and control schools (with the exception of the assumption of variance equality). This fact shows that there is a significant effect of the application of Islamic eco-spiritual based civic education for increasing the ecological awareness of junior high school students.

**Table 1.** Name of School and Number of Respondents by Treatment.

| Treatment                          | Schools                   | Number of respondents |
|------------------------------------|---------------------------|-----------------------|
| Control                            | SMP Negeri 1 Darul Imarah | 20                    |
|                                    | SMP Negeri 2 Darul Imarah | 13                    |
|                                    | SMP Negeri1 Darul Kamal   | 17                    |
|                                    | SMP Negeri 1 Baitussalam  | 17                    |
|                                    | SMP Negeri 1 Indrapuri    | 18                    |
|                                    | SMP Negeri 2 Indrapuri    | 12                    |
|                                    | SMP Negeri 3 Indrapuri    | 20                    |
|                                    | SMP Negeri 1 Darussalam   | 20                    |
|                                    | SMP Negeri 3 Ingin Jaya   | 29                    |
|                                    | SMP Swasta Fajar Hidayah  | 29                    |
| Experiment<br>Treatment<br>Control | SMP Negeri 2 Banda Aceh   | 29                    |
|                                    | SMP Negeri 3 Banda Aceh   | 28                    |
|                                    | SMP Negeri 17 Banda aceh  | 37                    |
|                                    | SMP Negeri 16 Banda Aceh  | 16                    |
|                                    | SMP Negeri 7 Banda Aceh   | 18                    |
|                                    | SMP Negeri 15 Banda Aceh  | 39                    |
|                                    | SMP Negeri 4 Banda Aceh   | 40                    |
|                                    | SMP Negeri 9 Banda Aceh   | 28                    |
|                                    | SMP Negeri 18 Banda Aceh  | 20                    |
|                                    | SMP Negeri 12 Banda Aceh  | 31                    |
|                                    | SMP Negeri 14 Banda Aceh  | 40                    |
|                                    | SMP Negeri 13 Banda Aceh  | 37                    |
|                                    | SMP Negeri 1 Banda Aceh   | 40                    |
| Treatment                          | Number of respondents     | 598                   |

**Table 2.** Statistical Data on the Value of Civic Education by Treatment.

|       | Implementation Category | N   | Mean   | Std. Deviation | Std. Eroor Mean |
|-------|-------------------------|-----|--------|----------------|-----------------|
| Score | Already applied         | 195 | 3,0000 | 1,17315        | 0,08401         |
|       | Not applied yet         | 403 | 4,8883 | 1,39649        | 0,06956         |

The research hypothesis proposed is related to the implementation of civic education based on eco-spiritual Islam in the city of Banda Aceh, namely, there is a significant

**Table 3.** Result of the t-test for Civic Education based on treatment.

| Independent Samples Test                |                                     |       |       |         |         |                              |                    |                             |  |          |
|---|-------------------------------------|-------|-------|---------|---------|------------------------------|--------------------|-----------------------------|--|----------|
| Levene's test for Equality of Variances |                                     |       |       |         |         | t-test for Equality of Means |                    |                             |  |          |
|   |                                     | F     | Sig.  | t       | df      | Sig.<br>(2-tailed)           | Mean<br>Difference | Std.<br>Error<br>Difference | 95% Confidence<br>interval of the<br>Differences |          |
|   |                                     |       |       |         |         |                              |                    |                             | Lower  | Upper    |
| Nilai                                   | Equal<br>varances<br>assumed        | 8,256 | 0,004 | −16,301 | 596     | 0,0000                       | −1,88834           | 0,11584                     | −2,11584   | −1,66084 |
|   | Equal<br>varances<br>not<br>assumed |       |       | −17,312 | 449,298 | 0,0000                       | −1,88834           | 0,10907                     | −2,10270   | −1,67398 |

**Table 4.** ANOVA Test Results of Civic Education Value of Junior High School Students by School. Test of Between-Subjects Effects. Depends Variable: Nilai Civic education

| Source          | Type III Sum of Squares | df    | Mean Square | F        | Sig.  |
|-----------------|-------------------------|-------|-------------|----------|-------|
| Corrected Model | 709,258a                | 22    | 32,239      | 22,877   | 0,000 |
| Intercept       | 8335,879                | 1     | 8335,879    | 5915,165 | 0,000 |
| Sekolah         | 709,258                 | 22    | 32,239      | 22,877   | 0,000 |
| Error           | 810,312                 | 575   | 1,409       |          |       |
|                 |                         | 1,409 |             |          |       |
| Total           | 12436,000               | 598   |             |          |       |
| Corrected Total | 1519,570                | 597   |             |          |       |

a. R Squared = 0,467 (adjusted R Squared = 0,446)

of ecological knowledge which can be explained by the variable factor of implementing civic education based on eco-spiritual Islam is 44.6%.

The temporary conclusion that can be drawn from the test results and the ANOVA model equation is that there is a significant difference in the civic education value of junior high school students between schools that have and have not implemented Islamic eco-spiritual based civic education. Furthermore, a posthoc test was conducted to identify and determine the comparison between each school that differed significantly. Based on the results of the Tukey HSD test (which are summarized in Table 5), statistical grouping of math scores occurs between the experimental and control schools. This grouping can be observed through the Tukey HSD notation, in which the control school (low mean score) shows a different notation tendency from the experimental school.

The Tukey HSD notation can be used as the basis for ranking each school from the two implementation categories. For example, for schools that have not implemented (control) categories, schools with low scores are grouped by the minimum Tukey HSD notation (a), Fajar Hidayah Private Junior High School, SMP Negeri 3 Want Jaya and SMP Negeri 3 Indrapuri. Classified as high (with a maximum notation (e)), namely: SMP Negeri 1 Darussalam, SMP Negeri 2 Darul Imarah, and SMP Negeri 1 Darul Imarah.

Furthermore, for schools that have implemented civic education based on eco-spiritual Islam (experiment), schools with low civic education values are grouped by the minimum notation (d), namely: SMP Negeri 2 Banda Aceh. SMP Negeri 3 Banda Aceh and SMP Negeri 17 Banda Aceh. Meanwhile, schools with high civic education scores (with a maximum notation (h)) are: SMP Negeri 14 Banda Aceh, SMP Negeri 13 Banda Aceh and SMP Negeri 1 Banda Aceh.

There are findings related to the ranking of the value of ecological knowledge from this study. For regions that have not implemented it, the schools in the sample, Fajar Hidayah Private Middle School, SMP Negeri 3 Wish Jaya and SMP Negeri 3 Indrapuri are in the lower ranks, while the rest, which are state schools, are in the middle to upper ranks. On the other hand, regions that have implemented Islamic eco-spiritual based civic education have the highest ranking for SMP Negeri 1 Banda Aceh.

**Table 5.** Post-hoc Test Results (Turkey HSD 5%). Data Value of Civic Education School Control and Experiment

| Treatment  | Schools                   | Average | Notasi Tukey HSD |   |   |   |   |   |   |
|------------|---------------------------|---------|------------------|---|---|---|---|---|---|
| Control    | SMP Swasta Fajar Hidayah  | 2,3077  | a                |   |   |   |   |   |   |
|            | SMP Negeri 3 Ingin Jaya   | 2,3529  | a                |   |   |   |   |   |   |
|            | SMP Negeri 3 Indrapuri    | 2,6176  | a                |   |   |   |   |   |   |
|            | SMP Negeri 1 Baitussalam  | 2,9000  | a                | b |   |   |   |   |   |
|            | SMP Negeri 1 Indrapuri    | 2,1967  | a                | b |   |   |   |   |   |
|            | SMP Negeri 2 Indrapuiri   | 2,9500  | a                | b | c |   |   |   |   |
|            | SMP Negeri 1 Darul Kamal  | 3,0000  | a                | b | c | d |   |   |   |
|            | SMP Negeri 1 Darussalam   | 3,3276  | a                | b | c | d | e |   |   |
|            | SMP Negeri 2 Darul Imarah | 3,4138  | a                | b | c | d | e |   |   |
|            | SMP Negeri 1 Darul Imarah | 3,4500  | a                | b | c | d | e |   |   |
| Experiment | SMP Negeri 2 Banda Aceh   | 4,0345  |                  | b | c | d | e | f |   |
|            | SMP Negeri 3 Banda Aceh   | 4,2188  |                  |   | c | d | e | f | g |
|            | SMP Negeri 17 Banda aceh  | 4,2321  |                  |   |   | d | e | f | g |
|            | SMP Negeri 16 Banda Aceh  | 4,2838  |                  |   |   |   | e | f | g |
|            | SMP Negeri 7 Banda Aceh   | 4,4167  |                  |   |   |   | e | f | g |
|            | SMP Negeri 15 Banda Aceh  | 4,4250  |                  |   |   |   | e | f | g |
|            | SMP Negeri 4 Banda Aceh   | 4,4744  |                  |   |   |   | e | f | g |
|            | SMP Negeri 9 Banda Aceh   | 4,9000  |                  |   |   |   |   | f | g |
|            | SMP Negeri 18 Banda Aceh  | 4,9286  |                  |   |   |   |   | f | g |

(continued)

**Table 5.** (continued)

| Treatment | Schools                  | Average | Notasi Tukey HSD |  |  |  |   |   |   |
|-----------|--------------------------|---------|------------------|--|--|--|---|---|---|
|           | SMP Negeri 12 Banda Aceh | 5,2750  |                  |  |  |  | f | g |   |
|           | SMP Negeri 14 Banda Aceh | 5,4125  |                  |  |  |  |   | g | h |
|           | SMP Negeri 13 Banda Aceh | 5,4355  |                  |  |  |  |   | g | h |
|           | SMP Negeri 1 Banda Aceh  | 6,6351  |                  |  |  |  |   |   | h |

Note: The same notation shows no significant difference between schools, on the other hand, different notations indicate significant differences between schools.

The results of this study prove that the application of eco-spiritual Islamic based civic education has a positive impact on the attainment of the ecological awareness level of junior high school students in the city of Banda Aceh. The increasing academic achievement of students is certainly the hope of all stakeholders. Increasing academic ability should not be the main objective of every school. Islamic eco-spiritual based civic education is a study that investigates ecosystems and natural balance, both biotic and abiotic and their relationship with citizen activities based on Islamic values, sourced from the Al-Qur'an and Hadith for the harmony of nature and humans.

**6 Conclusion**

The results of the study prove that the application of eco-spiritual Islamic based civic education for students has a positive impact on junior high schools in Banda Aceh City, Aceh Province. A positive impact was observed through the high attainment of awareness of the importance of protecting the nature of Banda Aceh City Junior High School students when compared to the achievements of Aceh Besar District Junior High School students who have not implemented Islamic eco-spiritual based civic education. This success has further strengthened civic education based on eco-spiritual Islam as a model. Developing teacher professionalism in improving learning performance so as to result in increased attainment of ecological awareness.

Based on the study of the impact of civic education based on eco-spiritual Islam on ecological awareness that has been carried out, the following provides suggestions and recommendations for future improvement.

First, this study only focuses on the impact of eco-spiritual Islamic based civic education on ecological awareness of academic achievement in Citizenship Education subjects, so it is suggested for other researchers to study the impact of Islamic eco-spiritual based civic education on ecological awareness in other subjects (IPA), Social Sciences, and Physical Health and Social Welfare).



Second, for schools that have implemented Islamic eco-spiritual based civic education, the performance of teachers and students still needs to be optimized. Furthermore, for schools that have not implemented eco-spiritual Islamic-based civic education, it is necessary to initiate in the form of socialization and implementation of Islamic eco-spiritual based civic education.

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