Integration of Sustainable Development Education Concerning Environment Conservation into Senior High School Islamic Education Curriculum

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Abstract. This study attempts to explore the needs for integrating sustainable development education into Senior High School (SHS) Islamic Education Curriculum which addresses questions on what types of the needed competencies better included in the SHS Islamic Education Curriculum. The method used in this study is a survey method. The survey was conducted to explore the competencies needed for environment conservation by distributing a questionnaire in the form of rating scale that has been tested its validity, reliability, and each of its items ‘discriminating power to 136 teachers of 27 districts’ and cities’ SHS in West Java, selected by using a multi-stage sampling technique. The obtained data were analyzed by using descriptive statistical methods of mean and standard deviation, followed by inferential statistical method of t-test. The conclusion indicates the perception of the West Java SHS teachers regarding the integration of ESD into Islamic Education curriculum concerning the environment conservation dimension is very important and viable.

1. Introduction
On 20 December 2002, The UN General Assembly adopted a resolution to establish the 2005-2014 decade as the UN Decade of Education for Sustainable Development (DESD). Basically, DESD was created to encourage the implementation of sustainable development, which is a socially and economically beneficial to guarantee ecological sustainability. In June 2005, Scotland’s minister of education launched an action plan that focused on schools, which included the integration of ESD into a new curriculum, increased participation in Eco-School programs, and modernization of eco-friendly school buildings [1]. Meanwhile, in UK the integration of ESD in the school curriculum is not a new thing, as it has been explicitly included in primary and secondary school science curricula since 1999 [2].
Innovative efforts to develop and implement ESD through the education process in Indonesia are very important, considering that the sustainability of nature, social life, and public welfare in general are still very concerning. The innovation of the education process does not seem to be sufficient by integrating the values contained in ESD into the curriculum and its implementation, but by actualizing these values in every educational activity so as to have an impact on the development of community culture. One alternative that can potentially be used to support the application of the concept of education for ESD is through the integration of the implementation of education for sustainable development in Islamic Education.

This research has been conducted by one of researcher [3]. The data show that about 29% of the earth's land has gone through mild, moderate and severe desertification, while the other 6% is classified as very severe. Tropical forests that cover 6% of the earth's surface area with high biodiversity (which is about 50% of the total number of species) are in a state of concern, as they have been destructed between 7.6 and 10 million hectares per year. In addition, the use of fossil fuels in industrial activities contributes greatly to the accumulation of CO2 in the atmosphere [3].

From the previous study as mention above, some obstacles are encountered in the implementation of this program. Among others is the teachers’ interpretation of the meaning of education which is limited as the process of transferring knowledge. Therefore, students’ mastery of the material is still more important compared to change in their attitude or behavior. On this basis, the research problems are related to how the education curriculum for sustainable development developed based on the assessment of high school students’ needs and the effectiveness of the implementation of the curriculum. The alternative that can potentially be used to support the application of the concept of education for sustainable development (ESD) is through the integration of the concept in Islamic Education.

In the religion education perspective at school, the teachers often face the obstacles in the implementing religion habit at school. It is merely caused the teachers did not have the mature competence, and not supported by the concept of scientific internalize mastery between the general and religion science by the teacher in the other field. Whereas in the content of religion curriculum in senior high school about the environment conservation is very much in Al–Qur’an and Hadits that teach to conserve the environment, but in the implementation, there is the same perception about ESD PAI integration at school, that is poor awareness in conserving the environment both in the highland and lowland.

2. Literary Review

Explained that education is the most strategic sector in the national development, because the quality improvement of human resources as the subject of the development in order to participate in the process of achieving development visions can only be obtained through education [4]. While the sustainable development is a type of development which combines the fulfillment of present needs without risking the future generations’ ability to cater their own needs [5]. Therefore, Education for Sustainable Development (ESD) is a concept that carries a new vision of education, which empowers people of all ages to take responsibility for creating a sustainable future [6].

The general purpose of ESD is to empower citizens to be able to contribute to the creation of a positive environment and social change [7]. In addition, ESD requires a long and gradual process because it must lead to awareness that encourages behavioral and lifestyle changes (not only at the level of knowledge and understanding). Therefore, ESD implementation needs to apply a holistic and transdisciplinary approaches, the principle of skills development, and the principle of lifelong learning [8].

Explained that Integrated Learning is a model that combines fields of study by establishing curricular priorities and finding overlapping skills, concepts and attitudes in several subjects [9]. This model has a special characteristic that is combining a number of topics from different subjects with the
same topic core. In this model, the related and overlapping themes are the thing the teacher wants to find and choose in the program planning stage. In this model, firstly the teacher selects some concepts, skills and attitudes that are taught in one semester from several subjects. Then, those concepts, skills and attitudes which have close and overlapping relationships between various subjects are chosen.

Define the word implementation using three approaches; first, implementation as activity; second, implementation as an effort to increase the interaction between the developer teacher and the fellow teachers; third, implementation as an entity separated from the curriculum component. The implementation of integrated learning model related to Education for Sustainable Development (ESD) with Islamic education subject in high school is very appropriate to use because it is related or intersect between two subjects. In the application, the main lesson remains focused on one subject, but there is an open connection between skills and concepts with other [10].

3. Methods
This research was carried out to develop an educational curriculum for sustainable development in high schools. This study employed a design and development approach, is the systematic study of design, development, and evaluation processes with the aim of establishing empirical bases for the creation of instructional and non-instructional products." Further, they also explained the steps in applying the approach, namely: 1) identifying research problems, 2) formulating objectives, 3) designing and developing artifacts, 4) testing artifacts, 5) evaluating the results of artifact testing, and 6) communicating the results of these tests [12]. Here is the overall flow of research from the Dissertation research series.

In carrying out research with this approach, in general, this study was conducted in six steps. The first step is identification of the problem, which was followed by formulation of objectives (step 2). The third step is to design and develop artifacts, in this case the curriculum, based on the result of step 1 and 2. The next step is curriculum testing (step 4), followed by evaluation of test results (step 5). These three steps (steps 3, 4, and 5) were carried out through quasi-experimental research. As for step6, communicating the results of the curriculum testing, will be carried out through the preparation and publication of articles in international journals indexed by Scopus. In the design and development step, relevant data are needed. For this, the researchers conducted the data collection using the method of needs assessment survey. This survey was conducted to explore the competencies related to ESD. The survey was conducted on a number of high school teachers and students who were selected through multi-stage sampling techniques. The instruments used were questionnaires made in the form of a rating scale that had been tested with validation and reliability tests. The data are analyzed using descriptive statistics using the mean and standard deviation as well as the significance test using the mean value through t test.

4. Result And Discussion
4.1. Result
High School Islamic Education Teachers’ perceptions on the integration of ESD on the implementation of Islamic Education Curriculum in West Java.
Table 1. Environmental Sustainability Maintenance

| Dimensi ESD                      | Number of respondents | Mean    | Std. Deviation | Std. Error | 95% Confidence Interval for Mean Lower Bound | Upper Bound | Minimun | Maximum |
|----------------------------------|-----------------------|---------|----------------|------------|---------------------------------------------|-------------|---------|---------|
| Maintenance of environmental sustainability Coastal areas | 75                    | 4.5396  | 0.359139       | 0.041470  | 4.45733                                     | 4.62259     | 3.667   | 5.000   |
| Mountainous areas                | 61                    | 4.60108 | 0.339189       | 0.043429  | 4.51421                                     | 4.68795     | 3.667   | 5.000   |
| Total                            | 136                   | 4.56738 | 0.350378       | 0.030045  | 4.50796                                     | 4.62679     | 3.667   | 5.000   |

The questions of the ESD dimension of environmental damage are related to the maintenance of environmental damage, which consists of 6 questions. Table 1 shows an average score related to the perception of the respondents. The mean score of environmental sustainability in the coastal area is 4.5396, while in mountainous areas is 4.60108. Those numbers show that the maintenance of environmental sustainability in coastal areas is lower than in mountainous areas. In other words, the mountainous areas are prioritized. The result for each question item is as follows:

The first question related to environmental conservation dimension is realizing the existence of oneself as part of the environment. 55% of the respondents strongly agree while 46% shows agree to this statement in question 1. This reflects that realizing the existence of oneself as part of the environment is very important to be included in the Islamic education curriculum.

The second question of the ESD dimension is related to maintenance of environmental sustainability. 79% of respondents strongly agree and 21% agree that they maintain environmental sustainability. This shows that the importance of maintaining the cleanliness of the surrounding environment both in mountainous and coastal areas to be included in the PAI curriculum.

The third question is related to the respondent’s views on cleaning activities. 82.6% respondents strongly agree and 16.8% agree that cleaning the surrounding, especially home, is a noble character. This implies that cleaning up a residence is a noble character that is needed to be incorporated in Islamic education curriculum.

The fourth question is related to animal exploitation. 45% respondents strongly agree, 40.9% agree, 12.1% disagree and 0.9% strongly disagree that exploiting protected animals such as elephants and orangutans, interferes with fauna preservation. This shows that majority of respondents agree that exploitation of endangered animals is prohibited.

The fifth question is related to reforestation. 55% respondents strongly agree while 45% agree that growing crops in your home environment is a part of reforestation efforts. This means that reforestation activities are needed in the mountains and on the coast. Related to the sixth question, 55% of respondents strongly agree while 44% agree to the needs of using environmentally friendly items. This is interpreted that using environmentally friendly goods is something that is needed to be included in the Islamic education curriculum.
Table 2. One-Sample Test

| Score | df | Sig. (2-tailed) | Mean Difference | 95% Confidence Interval of the Mean |
|-------|----|----------------|-----------------|-----------------------------------|
| 18,883 | 135 | 0.000 | 3.40441 | Lower 3.0479, Upper 3.7610 |

Based on the One-sample test, Sig value = 0.000 so Ho is rejected. In other words, H1 is accepted, which means the positive statements with positive score 24. The mean difference is 3.40441 with the lower score 3.0479 and the upper score is 3.7610.

4.2. Discussion

The mean score of environmental sustainability based on table 4.1 in the coastal area is 4.53996, while in mountainous areas is 4.60108. It implies that the maintenance of environmental sustainability in coastal areas is lower than in mountainous areas. The maintenance of the mountainous environment is greater than on the beach, as reinforced by the results of other studies which shows the fact that data is estimated at 6.66 million (44.6%) from about 14.95 million hectares of peat land has been. Although the average in mountainous areas and coastal areas (4.56738) agreed to the importance of maintaining environmental sustainability to be included in the Islamic education curriculum.

Related to the ESD dimension of maintaining environmental sustainability, 79% respondents strongly agree and 21% agree to the statement. This implies that maintaining the cleanliness of the surrounding environment, both in mountainous and coastal areas, is very important to be included in the Islamic education curriculum. This is relevant to other research evidence that the wrong water system is the main cause of peat swamp degradation. Even worse, the peat fires will contribute to global climate change as a result of increased emissions of greenhouse gases released into the air.

5. Conclusions

The Islamic education teachers in the West Java region show positive responses regarding ESD integration in the implementation of the Islamic education curriculum. They considered the importance of integrating the environmental conservation dimension in the Islamic education curriculum, as implied by 136 respondents, sampling from 27 cities and regencies in West Java in both mountainous and coastal areas showing average 61.833% strongly agree. Islamic education curriculum is very comprehensive in nature, including morality to the environment. All aspects of moral education contain demands for the practice of noble moral values, including maintaining the environment.

6. References

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