Perceptions, attitudes and lifestyles of students of Madrasah Ibtidaiyah Teacher Education Study Program about education for sustainable development

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Abstract. This study discusses students' perceptions, attitudes, and lifestyles of the Madrasah Ibtidaiyah Teacher Education Program at Siliwangi Islamic College regarding Education for Sustainable Development (ESD). The research was conducted in October 2019 involving 86 students of PGMI study program through a survey that focused on knowledge of ESD, attitudes, and lifestyles of sustainable development concepts. This research uses descriptive analysis. In terms of understanding found inconsistency of respondent's knowledge of ESD, it can be seen from 74.4% of students have heard the term ESD, 70% stated understanding of ESD, but only 24.4% of respondent were right when asked about the definition of ESD. In terms of attitude, respondents are in a very good category (85.63%) it means that respondents understand how to behave according to the ESD values in daily activity. But this is not in line with the curriculum in Madrasah Ibtidaiyah Teacher Education Program at Siliwangi Islamic College. The curriculum, especially mandatory subjects at the Madrasah Ibtidaiyah (MI) or elementary school, does not contain the values or activities related to ESD. While on the other hand, the concept and program of ESD have been introduced since 2002 by UNESCO and participated in by many countries through educational programs ranging from primary education to higher education. This research is very important to produce a picture of ESD competence integrated into the curriculum in the madrasah ibtidaiyah teacher education program.

1. Introduction

Education for Sustainable Development (ESD) was born as a recommendation produced in the Preparatory Committee forum IV of the World Summit for Sustainable Development (WSSD), which was held in June 2002 in Bali [1]. Furthermore, in September 2002, in the City of Johannesburg, South Africa, ESD was then legalized as a mature concept ready to be implemented or known as the decade of ESD (2005-2014). In this case, education is expected to contribute to addressing sustainable human development, peace, security, and quality of life in individuals, families, global communities.

Conceptually, ESD is related to efforts to change human behavior and lifestyles for positive societal transformation by developing sustainable development values through education. In this case, education reorientation can be carried out through the insertion or integration of sustainable development issues or values from an economic, environmental, or social perspective into the education system or learning activities. The values contained in ESD include (1) respecting the human
rights of all human beings on earth and being committed to social justice and economic equality, (2) respecting human rights for future generations by committing to intergenerational responsibility, (3) respecting and care for social life with its diversity which includes protection and improvement of the planet's ecosystems, and (4) respect for cultural diversity and commitment in terms of fostering attitudes of local and global cultural tolerance, peace and non-violence [1].

Based on field studies, currently the implementation of ESD at the basic education level (MI) in Indonesia has not yet been found that many ESD contents are integrated in learning activities, meaning that ESD program that have begun since 2002 have not been responded to optimally by the education system or curriculum in Indonesia, both from basic education to higher education. In addition, higher education that produces elementary school teacher candidates has not yet provided specific knowledge and skills regarding ESD in the courses provided. Meanwhile, to apply ESD in learning activities a teacher must master at least the values of ESD and how to apply and integrate these values in the curriculum and learning activities. This is reinforced by a study conducted by UNESCO, in the higher education curriculum for teacher education programs in Indonesia there is no ESD content integrated into the curriculum, so it can be assumed that these factors can become obstacles in the application of ESD at the school level, because teachers do not have sufficient knowledge in integrating ESD into their subjects [2].

In the context of the education system, elementary school students are the most basic students who need a strong foundation before continuing to higher education. The essence of basic education is the first step for the development of every student in the future by providing a foundation for them about basic knowledge so that they can live in a society anywhere in the world [3]. To accommodate this, a student teacher candidate must be equipped with the values of sustainable development and how to instill and integrate these values in the curriculum and learning activities at the elementary school level. The ESD values that a student teacher candidate needs to be formulated into competencies so that these competencies can be selected and implemented into courses that are relevant to ESD.

Based that explanation, this study is focused on finding the understanding of students in the madrasah ibtidaiyah teacher education study program towards ESD and ESD competencies which are considered important and needed by students as provisions for teaching at the basic education level. This description of competence can then be used as a basis for the development of an ESD-filled curriculum in the Madrasah Ibtidaiyah Teacher Education Program (PGMI). Madrasah Ibtidaiyah (MI) is the most basic level of formal and compulsory education held in Indonesia. For this reason, teachers are needed to understand the concept of ESD so that they can build attitudes related to ESD values to students as a strong basis for continuing to a higher level of education and as provision in living a real life that requires a sustainable mindset towards the environment economic growth and social life. Specifically, the elementary school level is a critical period in the effort to build the foundations of ESD values and attitudes [4].

2. Methods

2.1 Respondent
The number of responden who participated in the survey in this study was 86 students of PGMI study program. The survey was conducted in October 2019 at PGMI Studi Program STAI Siliwangi Bandung. Participants were prospective students of PGMI study program teachers consisting of students from year I to year IV, which were subdivided according to gender and geographical origin. This is to see how differences in students' perceptions about ESD are classified based on lecture year, gender and geographical location of origin.

2.2 Instrument
The instrument used in this study was a questionnaire (survey) made in the form of a rating scale (rating scale) with a total of 88 question items. The questionnaire was arranged to find out the knowledge, perceptions, attitudes and lifestyles of prospective madrasah ibtidaiyah teachers about ESD. Instrument content was compiled through a literature review and adapted from various previous research instruments related to ESD [4][1]. Before the questionnaire was given to the students as
respondents, the validity and reliability of the questionnaire were tested first, and the differentiation of each statement was tested by curriculum experts and lecturers of Madrasah Ibtidaiyah teacher education programs. In addition, readability tests are also carried out to ensure that the questionnaire is feasible in terms of readability.

The results of students' perceptions about ESD can be used as a basis for the preparation of competencies and contents so that they can be integrated in the curriculum in the Madrasah Ibtidaiyah teacher education programs. The content of the questions contained in the questionnaire given to participants included (1) knowledge and understanding about ESD, (2) Attitudes and lifestyles based on ESD which include social, environmental and economic. The data analysis technique used in this study is through the calculation of the percentage. The percentage category is in the range of 100% - 25% with four categories. Category I (very low / very insignificant) = 25% - 43.75%, category II (low / quite important) = 43.76% - 62.50%, category III (high / important) 62.51% - 81.25%, and category IV (high / very important) = 81.26% - 100%.

3. Result and Discussion

3.1 Result

The number of respondents who filled out the questionnaire in this study were 86 students consisting of gender, year (I-IV) and geographical location of origin. Based on this information obtained in accordance with the table below:

| Category                  | Description                                                                 |
|---------------------------|-----------------------------------------------------------------------------|
| Gender                    | Men = 11 respondents, Women = 75 respondents                                |
| Year                      | Year 1 = 10 respondents, Year 2 = 12 respondents, Year 3 = 41 respondents   |
| Geographic location       | Highland = 37 respondents, Lowlands = 49 respondents                      |
| City Origin               | Bandung = 12 respondents, Cimahi = 12 respondents, Bogor = 1 respondent,   |
|                           | Tasikmalaya = 2 respondents, West Bandung = 3 respondents, Cianjur = 1    |
|                           | respondent, Purwakarta = 3 respondents, Blora = 1 respondent, Purbalingga |
|                           | = 1 respondent, Garut = 1 respondent                                       |

While the contents of the research questionnaire were divided into four parts and break down into 7 sub-part as listed in table 2.

| No. | Question item                        | Sub question item | Number of Statements |
|-----|--------------------------------------|-------------------|----------------------|
| 1   | Knowledge and understanding of ESD   | ESD Concept       | 4                    |
| 2   | ESD I (Social Culture)               | Maintaining cultural diversity | 9                   |
| 3   | ESD II (Environment)                 | Understand the importance of sustainable energy use | 14                  |
|     |                                       | Understanding actions against natural disasters | 12                  |
|     |                                       | Understanding actions against the clean water crisis | 20                  |
|     |                                       | Understanding the measures against pollution of terrestrial ecosystems | 19                  |
| 4   | ESD III (Economy)                    | Understand about sustainable consumption and production actions | 15                  |
|     |                                       | Total             | 7                    |

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3.1.1. Knowledge and understanding of PGMI study program students about ESD. Before seeing the results of the student’s perceptions about ESD, it is important to consider the extent of their knowledge of ESD. It aims to find consistency between the knowledge and understanding of ESD concepts with the attitudes and lifestyles of students about ESD. There are four questions in this part. First, the question relates to knowledge of the term ESD with Alternative answers yes and no. Data shows that 74.4% (n = 65) of respondents had heard the term ESD and 25.6% (n = 21) had never heard of the term ESD. Second, the question of understanding about ESD with alternative answers is very understanding, understand, do not understand and really do not understand. The results showed 68.9% (n = 60) of respondents understood ESD and 31.1% (n = 26) said they did not understand ESD. Third, respondents were asked to choose an appropriate ESD definition from four alternative choices. The results showed 44.4% (n = 38) answered correctly while 55.6% (n = 48) of respondents answered incorrectly. Fourth, respondents were asked questions about how much ESD was needed to be included or integrated in courses in the PGMI study program. The results showed that 65.6% (n = 57) respondents indicated that it was very necessary while 34.4% (n = 29) answered that it was quite necessary.

3.1.2. Attitudes and lifestyles of preservice MI teachers based on ESD. After knowing the level of knowledge and understanding of the students about ESD, the next step is to look at the attitudes and lifestyles of students based on ESD values as stated in the questionnaire. The content of attitudes and lifestyles included in the questionnaire is divided into three parts, namely ESD I relating to social culture, ESD II relating to the environment and ESD III relating to the economy. Alternative answers to the questionnaire in this section are "strongly agree", "agree", "disagree" and "strongly disagree".

In general, the results showed that the level of respondents' needs about attitudes and lifestyles based on ESD I values (social culture) reached 91% (n = 86), ESD II (environment) reached 86% (n = 86) and ESD III (economy) reaching 82% (n = 86). In addition, the results of the study of curriculum documentation in the PGMI STAI Siliwangi Study Program found that the PGMI curriculum did not contain ESD values in lecturing activities.

3.2. Discussion
ESD is a dynamic concept that includes an educational vision to empower all human beings of all ages to take responsibility for creating and enjoying a sustainable future [1]. ESD is one solution that can be taken to instill character and sensitivity in socio-cultural, environmental, and economic aspects, in other words, education is a center of excellence [5]. This is in line with what was stated by Dyer that education brings a real responsibility to consistently deliver that excellence and maintain the 'state-of-the-art' dynamic, through quality education, it will A dynamic condition is created where environmental conditions are critically reflected in the learning system carried out by teachers and students in order to maintain and improve the quality of life at this time and the quality of life of future generations [6].

This study aims to discover the knowledge, perceptions, attitudes and lifestyles of Madrasah Ibtidaiyah teacher preservice about ESD. Based on the results of the question regarding the questions in part I, namely regarding the understanding of ESD data shows that there is an inconsistency between the knowledge of ESD and understanding of attitude based on ESD. It can be seen from the results of this study that 74.4% of respondents had heard the term ESD, 68.9% of respondents expressed an understanding of ESD but when asked to show the exact definition of ESD only 44.4% of respondents answered correctly. Other questions related to how necessary ESD if integrated into the curriculum or courses in the PGMI study program is only 65.6% of respondents who stated it was necessary, whereas as expressed by UNESCO integration of ESD values into the curriculum or system education is needed to instill in students that they can be sustainable in their daily lives with the hope that they can maintain the sustainability of human life in the future [1].

On the other hand, the questionnaire relating to the respondents' understanding (needs) of attitudes and lifestyles based on ESD values (Questionnaire part 2, 3 and 4) found a fairly high understanding of
an average of 86% both in terms of socio-cultural, environmental and economic. However, this high level of understanding is not directly proportional to the knowledge of preservice teachers about ESD values as the first part of the questionnaire showed students’ ignorance of the concept of ESD. This also happened in previous studies on student attitudes (Kagawa), teacher perceptions (Choi et al), and early teacher perceptions and attitudes (Park et al.) found that understanding of attitude is based on ESD values not in line with their knowledge of the concept of ESD [7][8][4]. The impact of this is that teacher candidates do not have a good foundation (knowledge) to develop ESD values in learning activities, so that ESD only becomes a teacher's personal property and its application will not be planned according to conditions in each region or school.

The concept of ESD is respond by different implementation strategies in each country that are adapted to environmental conditions and problems. The centrality of the curriculum in the education process causes in many countries the curriculum strategy is used to realize the concept of ESD, some focus on teacher training institutions (Indonesia), some focus on teachers by being trained and given an in-depth understanding of ESD (Brunei), or others look for problems related to the environment such as water, land and air which are then used as a focus to be resolved together with experts who understand these issues which are then integrated into education, especially in educational institutions and education personnel. Concretely, the concept of ESD in education can be applied through reorientation of education [9]. Reorientation of education in question is to integrate problems or topics related to three perspectives of sustainable development (social, environmental and economic) in the classroom [10][11].

Regarding the integration of ESD values in the teacher education program basically this has been done globally for the past 20 years [12][13]. In other country such as Britain, Sweden and Russia emphasize the importance of sustainable development by including ESD in their national curriculum on kindergarten education [14]. More specifically, Korea has also implemented the "Green Earth Guard" project on early childhood education [15]. Globally, UNESCO has formed an international network involving around 30 teacher education institutions consisting of 30 countries that aims to strengthen teacher education for ESD [1]. Another example, Australia has developed a program for pre-service teachers as an effort to improve ESD capabilities in the education system [16].

Based on the studies and discussions that have been carried out, there are several findings in this study, namely: first, ESD competencies that can be integrated into curricula and courses in primary school teacher education programs or madrasah ibtidaiyah; second, the level of student understanding of the ESD concept; and third, the level of needs of students of the PGMI study program for ESD competencies for teaching needs at the elementary school level, especially in learning with ESD content. The implications of this research for the education sector are the availability of ESD competencies which can be used as an alternative in integrating ESD values or competencies in the curriculum or courses in the primary school teacher education program or madrasah ibtidaiyah. In addition, this can accelerate the achievement of the 2030 sustainable development goals (SDGs 2030).

4. Conclusion
Student candidates for MI teachers are prospective teachers expected to provide a strong foundation for their students when teaching in elementary schools. An excellent understanding is needed, especially about ESD, to be delivered comprehensively to MI students. Basically, most teachers already know the term ESD and most also understand ESD, but most of them also cannot explain the definition of ESD correctly. While in terms of attitude and lifestyle based on ESD all respondents showed a very high rate. This gap between ESD knowledge and attitude should be bridged through the provision of a curriculum that integrates ESD values so that in the future between ESD knowledge and attitudes can be aligned as the provision by prospective teachers when entering the teaching world, especially at the elementary school level.

This research is possible to be used to determine and develop competencies that can be integrated into the curriculum in PGMI study programs. Competencies that can be integrated into the curriculum are already listed in the questionnaire used in this study. Only it needs to be adjusted to the problems faced in each region. The Elementary School Teacher Education program or Madrasah Ibtidaiyah
should have responded by reorienting the curriculum to ESD values to produce candidates for ESD-oriented teachers. At refers to ESD values in order to produce candidates for ESD-oriented teachers.

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