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## ESTABLISHING STUDENTS' ENVIRONMENTAL CARE CHARACTER AT THE ADIWIYATA SCHOOL IN THE FRAMEWORK OF EDUCATION FOR SUSTAINABLE DEVELOPMENT (ESD)

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### ABSTRACT

This study aims to analyze students' environmental care character and the obstacles faced by the Adiwiyata school. This study employed the descriptive qualitative method with the case study approach. The researchers analyzed the students' environmental care character with the Adiwiyata program, specifically SMAN 1 Dukuntang. In the aspect of classroom hygiene management, the school was in the very good category. Next, in the environmental education management aspect, the school was also in the very good category. The school also foster students' creativity through the DLS program by creating environmentally friendly products with economic value. The obstacle faced by the Adiwiyata school in shaping the students' environmental care character was the need for free time for students to participate in environmental activities outside of school during the implementation of the SBL program.

#### Pembentukan Karakter Peduli Lingkungan Siswa pada Sekolah Adiwiyata dalam Rangka *Education for Sustainable Development (ESD)*

**ABSTRAK:** Tujuan penelitian ini untuk menganalisis: karakter peduli lingkungan siswa, Program-program pada sekolah Adiwiyata, serta Kendala yang dihadapi pada sekolah Adiwiyata. Penelitian ini merupakan penelitian kualitatif deskriptif dengan pendekatan studi kasus (case study). Hasil penelitian menunjukkan bahwa karakter peduli lingkungan siswa pada sekolah Adiwiyata di SMAN 1 Dukupuntang pada aspek pengelolaan kebersihan kelas dengan kategori sangat baik. Kemudian diikuti oleh aspek pengelolaan pendidikan lingkungan yang juga termasuk kategori sangat baik. Serta untuk menumbuhkan kreativitas siswa dengan menciptakan produk ramah lingkungan yang bernilai ekonomis dilakukan melalui program DLS. Kendala yang dihadapi pada sekolah Adiwiyata dalam membentuk karakter peduli lingkungan siswa adalah dibutuhkannya waktu luang bagi siswa untuk berpartisipasi di kegiatan lingkungan luar sekolah pada pelaksanaan program SBL.

## **INTRODUCTION**

An Education for Sustainable Development (ESD) paradigm will sustainably achieve goals (Cahyani, 2020). The paradigm relates to environmental, economic, and social issues. Sustainable development aims to meet the needs of the present generation but not at the expense of future generations (Basri, 2013; Prathama et al., 2020). Sustainable living plays an important role in meeting the challenges by providing the necessities of life (Gunamantha, 2010a; Meilia & Murdiana, 2019). The living challenges are also for sustainable development like character building and understanding (Desfandi, 2015; A. Setiawan, 2016; Wahyuni et al., 2019). Therefore, the development of educational needs can produce students who think ahead and move in a sustainable direction (Fitriandari & Winata, 2021; Gunamantha, 2010b; Rasyid, 2015).

Education is expected to overcome problems in human life to achieve goals and sustainable development. One of the life problems is the environmental problem (Rachman, 2012; Widyaningrum et al., 2013). Life problems education (Afandi, 2013) shape humans to think ahead and overcome problems through education (Yasin et al., 2019). Character is the nature or trait possessed by individuals (D. E. Setiawan, 2019) that distinguishes them from one another. A person's character comes from awareness and personality (Marzuki, 2017; Sirojudin, 2018; Wibowo, 2016). Three parties play a crucial role in constructing individual character: family, school, and environment (Ahsanulhaq, 2019; Latifah, 2020; Pratama, 2019; Rismayanthi, 2011). Family acts as the main educator and the basis for forming behaviours, characters, and morals (Mansur, 2018; Sari, 2017). However, schools process the formation and development of students' characters (Morelent, n.d.; Narwanti, 2014; Pratiwi, 2017).

Environmental characters are related to the actions that can improve and maintain

the quality of the environment. The environmental care characters need to be developed to prevent natural damage and repair the environmental damages (Anggita, 2014). Schools need to implement the Adiwiyata (Green School) program to develop this policy. The Adiwiyata school is expected to realize school members responsible for protecting and managing the environment through good school governance to support sustainable development. Adiwiyata school is also considered to be successful in shaping the environmental care characters. Adiwiyata program affects students' cognitive, affective, and psychomotor (Al-anwari, 2014). Therefore, the Adiwiyata program at SMAN 1 Dukuntang supports students' environmental care characters.

## **METHOD**

This study employed the descriptive qualitative method with the case study approach. The sources of data were divided into primary and secondary data sources. Questionnaires were utilized to collect data on students' environmental care character. The researchers distributed the questionnaire to 100 students at SMAN 1 Dukuntang. Anggita (2014) states that the questionnaire should include the management to handle natural disasters, energy-saving habits, classroom cleanliness management, school cleanliness management, availability of waste disposal sites, liquid waste management, natural resource management, waste management, human resources management, transformation management, and environmental education management.

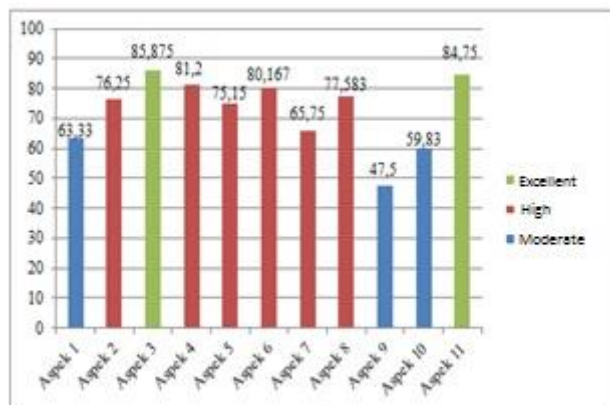
The interviews, observations, and documentation were analyzed using the Miles and Huberman model, which consists of data reduction, data display, and conclusions in Sugiyono (2018). The validity of the data was tested by triangulation. There were several triangulation methods performed, including source triangulation, technical triangulation, and time triangulation. The researchers conducted a preliminary study first and then continued by

data collection and data analysis. Lastly, the researchers concluded the analysis and reported the research results.

## RESULTS AND DISCUSSION

### A. Students' Environmental Care Character

Figure 1 displays the students' environmental care character at the Adiwiyata school of SMAN 1 Dukuntang.



**Figure 1. Each Aspect of Students' Environmental Care Character at the Adiwiyata School of SMAN 1 Dukuntang**

Description:

- Aspect 1: Natural disaster management and
- Aspect 2: Water and energy-saving habits
- Aspect 3: Classroom hygiene management
- Aspect 4: School hygiene management
- Aspect 5: Availability of garbage disposal
- Aspect 6: Waste management
- Aspect 7: Natural resource management
- Aspect 8: Waste management
- Aspect 9: Human resource management
- Aspect 10: Transportation management
- Aspect 11: Environmental education Management

Based on Figure 1, the highest environmental care character at SMAN 1 Dukuntang was classroom hygiene management, followed by environmental education management aspects. The percentage of the classroom hygiene management aspect was 85.875%, within the very good category. On the other hand, the lowest percentage was the human resource management aspect, with 47.5%. The values might be influenced by the teacher's actions of getting students to care about the environment. This habit created a cultured environment to develop students' awareness, love, and preservation. Character education must also be instilled early. Character education not only teaches what is right and wrong but also instills habits

(habituation). Habits must be carried out continuously or sustainably to care for the environment to improve students' environmental care character (Al-anwari, 2014).

Students' environmental care character can be influenced by the teacher, the school, or the school environment. Istiqomah (Istiqomah, 2019) claims that character formation is influenced by the results of individual interactions with their environment. The results are thoughts, feelings, knowledge, and understanding to produce actions. The teacher must change the view and increase students' knowledge on environmental care concepts properly. Students' environmental knowledge can support them in various environmental

management that is beneficial for themselves and their lives.

SMAN 1 Dukuntang applies environmental education subjects to increase students' environmental knowledge. Putri and Suryanto (Putri & Suryanto, 2018) state that knowledge is one of the factors that can affect students' concern for the environment. Therefore, a cultured school environment increases students' environmental awareness, which must be driven by the students' will. If the students care for the environment, then the attitude or action to care for the environment will be realized.

The human resource management aspect obtained the lowest percentage. It might be influenced by the lack of awareness and participation in carrying out various environmental care activities. Therefore, students must be aware, remind each other, and work together to care for the environment. Students need to change their mindset to love their environment more. Anggita states that (Anggita, 2014) it is necessary to form students' mindset to form and develop students' environmental care character. The mindset needs to be changed so that they are concerned and active in participating in activities related to environmental management. Active students show the success rate of environmental care character in participating in environmental improvement activities.

The Adiwiyata program at SMAN 1 Dukuntang produces students with environmental care character. The questionnaire responses showed that the highest achievement was in the aspect of the classroom hygiene management. It could be influenced by habituation set by the teachers in maintaining a clean environment to support the learning process. Adiwiyata School has its characteristics to preserve environmental culture not to disappear. Research by Permana and Ulfatin (Permana & Ulfatin, 2018) discover that the school system with a cultured environment can influence the actions or behaviour of school

residents. Adiwiyata schools create the value of caring for the environment, loving the environment, and the spirit of achievement.

Masruroh (Masruroh, 2018) believes that the driving factor that can realize the environmental care character is an environmental education delivered as early as possible. Students' awareness changes can be role models and can be applied in community life. The environmental education program aims to increase students' knowledge and awareness to be responsible for preserving the environment. Good environmental management can create comfortable and natural atmospheres. Besides, the wealth on earth can be utilized and recycled to produce economic value.

### B. Environmental Care Character Building Programs at Adiwiyata School of SMAN 1 Dukuntang

Adiwiyata School is a school that cares about the environment. In short, it is an environment-based school. Adiwiyata is a habituation that ends up in the culture. Environmental culture aims to develop students' environmental awareness and preservation. Programs at the Adiwiyata School are continuously implemented and developed. SMAN 1 Dukuntang already has programs that support it as an Adiwiyata school. It has made efforts to increase students' environmental care awareness. Tablee 1 displays the programs at the Adiwiyata school of SMAN 1 Dukuntang.

**Table 1.1.** Program at Adiwiyata School of SMAN 1 Dukuntang

No	Program	Information
1	PLH (Environmental Education)	PLH subjects are taught to the tenth grade only.
2	SBL (Environmental Cultured School)	The SBL program has various activities, such as mangrove planting, carried out at least twice a year. There is also eco-bricks-based handicraft manufacturing activities carried out every year.

3	DLS (School Environment Ambassador)	Students can be creative and create something related to the environment. Students of SMAN 1 Dukuntang have produced Ketapang powder as a fish antibiotic.
4	Healthy Friday	Students take a walk on Friday and pick up trash on the road.
5	One Person One Plant (Sarangsatum)	Every new school year, students are required to plant and grow a tree.
6	Bring Your Own Eating Utensils Movement	Students are required to bring their eating utensils every day.

Environmental education (PLH) targets the cognitive, affective, and psychomotor aspects. The cognitive aspect increases environmental problems understanding. The affective aspect increases a sense of acceptance and judgment to organize life with nature. The psychomotor aspect increases environmental care culture (Baharudin, 2017).

Environmental education and other subjects must be related to everyday life based on the environment. Therefore, students can be active to develop their knowledge and practicing it in environmental management. Also, the family and community environment (Adriansyah et al., 2019).

According to Nurzaelani (Nurzaelani, 2017), environmental education must manage the behaviour and attitude of living things. Landriany (Landriany, 2014) believes that environmental education is crucial in the success of environmental management in schools and communities. It is also a very important tool in producing human resources that can implement the principles of sustainable development. At SMAN 1 Dukuntang, environmental education is applied as a monolithic subject.

SMAN 1 Dukuntang has an SBL program that has a special team, namely the SBL team. The SBL program annually holds various activities that support

environmental management. Each student is required to bring two eco-bricks. The collected eco-bricks will first be checked for suitability by the SBL team. Then, the eco-bricks are made into crafts, such as chairs and tables. The SBL team also promotes the crafted tables and chairs through social media. Any money collected from each program or activity is used for further programs.

The SBL program fosters students' participation and creativity in sustainably utilizing the environment. One example is using eco-bricks to produce environmentally friendly crafts. Suminto (Suminto, 2017) states that eco brick captures all non-biodegradable materials. Ecobricks is one of the creative efforts made by schools to deal with plastic waste. The SBL program also holds mangrove planting activities twice a year. The mangrove planting collaborates with community organizations to increase the students and the community's awareness to care about the environment. Another product is Ketapang leaves powder as fish antibiotics. Suminto states that (Sumino et al., 2013) Ketapang leaves can inhibit or kill bacteria. Ketapang leaves contain chemical substances, namely tannins and flavonoids, which act as antibacterial. Therefore, the ketapang tree is an alternative material that can be used to treat fish diseases.

SMAN 1 Dukuntang holds healthy Friday activities where students take a healthy walk by walking around the school area and picking up trash along the roads. Hardianti (Hardianti et al., 2017) claims that a trash-picking movement is needed to foster the public's environmental awareness.

Health is crucial to performing normal activities. One of the efforts to maintain health is sports like walking or jogging. Unfortunately, not everyone likes sports. Therefore, self-motivation and the influence of the surrounding environment are needed. Also, someone who lives a healthy life can shape character, discipline, self-confidence, self-control, and gratitude (Suharjana, 2012). Students can be healthy due to the

exercises they perform. Thus, the program motivates students to care about the environment.

The Sarangsatum program fosters a student's love for plants. Plants in schools can also be used to learn and appreciate the natural surroundings. Eriawati (Eriawati, 2016) states that plants in the school environment can be used as natural media to improve student's learning outcomes. Besides, the plants can also create comfortable learning conditions to increase learning activities, such as biology. Humans and the environment are inseparable. Therefore, the environment can affect human life directly or indirectly.

Waste management in Indonesia is still not handled properly. That is why the environment should be preserved to create comfortable environmental conditions (Purwaningrum, 2016). The movement of bringing tumblers to school is one of the green lifestyles. Heydemans and Langi (Heydemans & Langi, 2019) argue that the green lifestyle is a human awareness and attitude to protect and preserve nature and a solution to reduce plastic waste. Through this green lifestyle, we can take action and minimize environmental damage due to human activities. In carrying out these movements and lifestyles, they can be influenced by the surrounding environment.

Acting sustainably will bring about significant impacts. All education and training activities can strengthen sustainable development. The Adiwiyata school program can change students' lifestyles and contribute to the school environment and society. Sustainable development foster students' initiative in participating or making decisions from the existing programs at the Adiwiyata school (Asyari, 2019).

Gunamantha (Gunamantha, 2010b) states five critical skills related to sustainable development, including envisioning, critical and reflective thinking, systemic thinking, partnerships building by promoting dialogue and negotiation, learning to work

together, and participatory decision making. Sutanto (Sutanto, 2017) claims that education for sustainable development can increase the empowerment of human resources that can affect a sustainable future.

The implementation of activities held outside the school environment in the SBL program needs to be arranged well. Teachers should motivate students to fill their spare time with positive activities. Participation must consider various aspects and cooperation between all parties. Habibi (Habibi, 2018) states that participation is an activity in utilizing free time for certain activities.

Students are expected to participate or take part in environmental activities in the community. Student participation does involve not only physical but also mental and emotional aspects in providing initiatives or ideas. Student participation in environmental management is self-involvement in the SBL program at SMAN 1 Dukuntang.

Adiwiyata school is closely related to environmental character building. The character can be developed through three aspects: the level of knowledge, affective, and behaviour. The environmental care character formation involves other factors, such as institutional factors, educational strategies, knowledge, and values. Institutional factors are related to the applied political policies, availability of funds, and facilities in environmental management. Educational strategies result from policies to increase knowledge and values that can influence students' environmental care character (Iswari & Utomo, 2017).

## CONCLUSIONS AND SUGGESTIONS

The environmental care character at the Adiwiyata school of SMAN 1 Dukuntang has the highest score percentage in classroom hygiene management and environmental education management. The

other aspects are school hygiene management, waste management, water and energy-saving habits, waste disposal sites, and natural resource management.

Students' environmental care characters are related to natural disaster management, transportation management, and human resource management. The students' environmental care character can be formed by instilling a sense of belonging to the plants they nurture through the Sarangsatum (one person, one plant) program. It is also done by forming habits (habituation) and fostering students' creativity by creating environmentally friendly products that have economic value.

The lack of free time is the obstacle faced by the Adiwiyata school of SMAN 1 Dukuntang in shaping the students' environmental care character. Therefore, the students participate less in environmental activities outside of school.

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