

# Adiwiyata School:

## Between promoting environmental awareness and winning awards

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**Abstract**—Nowadays the world's attention to environmental education for sustainability is becoming increasingly severe dealing with environmental damage becomes more widespread. Therefore, the Indonesian government has launched an *Adiwiyata* program which aims to establish environmental awareness among school members. This study aims at revealing how the School integrates this program onto school system. This study employed a qualitative approach with case study design in Public Junior High School (SMP) in Jambi. The results revealed that the School implemented *Adiwiyata* programs by government standards and won national *Adiwiyata* awards. This success is supported by strong leadership, active participation of school residents, solidity and continuous development. Also, as a government program based on standard instruments and bureaucratic management, this program herding the School to win awards rather than realizing environmental awareness.

**Keywords**—component; environmental education; *Adiwiyata* school; environmental awareness

### I. INTRODUCTION

In recent years, environmental education becomes an important theme in sustainable development literature. Environmental issues are the world's attention along with the occurrence of various environmental problems such as global warming, forest fires, industrial waste, air pollution and so on. Since 1960, the world's attention to the environment has been continuously evolving and currently develops towards education for sustainable development. The concept of education for sustainability aims to help people understand the interdependence of life on Earth. Foster or impede sustainable development. It is concerned with developing people's awareness, values and attitudes, thus enabling them to be involved effectively in sustainable development [1].

In Indonesia, environmental education is also the primary concern of the government along with the worsening of environmental conditions. The Central Statistical Agency (BPS) noted that the Indonesian economy grew by 5.78% in 2013. However, the environmental quality index (IKLH), over the past 3 years, actually showed a decline (65.50 in 2011, 64.21 in 2012 and 63.1 in 2013) [2]. As a form of concern for the environment, especially at the secondary school level, in 2006 the Ministry of Environment developed an environmental education program at the primary and secondary levels through the *Adiwiyata* program. The plan was implemented in 10

schools in Java as a model school involving universities and NGOs engaged in the field of environmental education. Nevertheless, since 2006, the percentage of *Adiwiyata* schools in Indonesia is only 4% of all. This data shows that the environmental education policy through *Adiwiyata* program at the school level has not been optimally socialized.

Previous studies related to environmental education in developed countries focus more on various approaches to build environmental awareness. Herman's research, et al. focuses on applying socio-scientific issues (SSI) approach to environmental education [3]. Meanwhile, Thomas put forward the importance of pre-service teacher attitude toward education for sustainability and its relevance to learning [4]. Others researchers see the importance of teacher resilience in strengthening resilience among students [5], examines the influence of families, schools and groups in building environmental care attitudes [6], look at efforts to develop environmental care attitudes and behaviors by involving children in sustainable development [7], highlighted the contribution of women in environmental education [8].

Compared to those environmental education studies in developed countries, studies on school environmental education in developing countries, such as Indonesia, highlight the implementation of government programs, such as the *Adiwiyata* program. Several previous studies focused on aspects of strengths, weaknesses, opportunities, and challenges and formulas for *Adiwiyata* school assistance strategies [9], obstacles and difficulties in carrying out socialization and internalization of the four principles of *Adiwiyata* [10]. Other studies try to evaluate the level of knowledge, attitudes, and behavior of the school community that implemented *Adiwiyata* program [11], the school's efforts to develop ecological intelligence and examine the extent to which school environmental policies influence *Adiwiyata* understanding [12]. Ashar examines the significance of environmental learning outcomes between schools that implement *Adiwiyata* program and those who do not apply this program [13]. Similarly, Neti focuses on the planning, implementation, and supporting factors for the Implementation of Character education for the environment, Cooperation, and Responsibility through *Adiwiyata* [14].

Previous research is more likely to describe the implementation of *Adiwiyata* at school. The literature that

discusses *Adiwiyata* critically as an award is regarded as limited except the one carried out by Prabawa-Sear who examined environmental education approaches in Surabaya and Yogyakarta [15]. Therefore, this study focuses on the application of *Adiwiyata* programs in schools and the missions to get the awards.

The research on the application of *Adiwiyata* programs in junior high schools is applied by using a qualitative approach. By this approach, the questions of how school creatively fulfill the standards of the environmental school and its determinant factors. This knowledge is useful for researchers to examine more deeply the dominant factors that shape environmental awareness. The school principal can redesign the application of *Adiwiyata* in school based on environmental awareness, and the government can design environmental education policies at the school level more massively and under school capacity and resources.

## II. METHOD

This study employed a qualitative approach with ethnographic design in explaining, analyzing, and translating culture groups which include behaviors, beliefs, and languages which are developed over time. This study used the ethnographic type of a collective case study in photographing the problem implementation *Adiwiyata* at school [16]. The research was carried out at State Junior High School No.7. This setting is chosen three main consideration. First, this school is one of the schools that are environmentally oriented, have a healthy school environment, received the *Adiwiyata* award. Second, the school is excellent in the management of institutions and is accredited A. Third; there are adequate documents available to facilitate researchers. Fourth, the location of the School is not too far away so that it can be reached by researchers. The research subjects consisted of principals as key informants, teachers, students, staff, and the community determined by purposive sampling technique [16]. Data collection was carried out by non-participant observation techniques, in-depth interviews, and document study. The data are then analyzed by using flow model analysis [17], including data collection, data reduction, data presentation, and conclusion drawing.

## III. FINDING AND DISCUSSION

### A. *Adiwiyata* School Policy

*Adiwiyata* school policy in State Junior High School in Jambi can be seen from 8 components. One of the *Adiwiyata* school policies can be seen from its vision. The vision of State Junior High School Jambi is Consciousness to God, cultured, excellence, environmentally and globally minded. The purpose of producing graduates with environmental insight shows that schools have a high concern for environmental problems.

The implementation of the school's vision and mission is manifested in the determination of school policies both physically and non-physically. The policy is physically related to the construction of school facilities and infrastructure while non-physical policies relate to providing opportunities and

appeals to increase school citizens' awareness of the environment through various school activities.

One of the *Adiwiyata* school policies in State Junior High School in Jambi is to collaborate with external parties to support the activities held by the school. Those are external parties such as Jambi City Education Department and the Jambi City Environmental Department. Schools also set policies by making Green House and waste management in schools. *Adiwiyata* school policy in the development of environmental learning is the development of materials about the environment, the development of environment and culture-based learning methods, the growth of cross-subject learning models, and the development of curricular activities to improve students' knowledge and awareness about the importance of the environment.

*Adiwiyata* school policy in environmental learning is not only implemented in the development of learning materials, learning methods and models but also supported by activities such as compost making practices, industrial visits, waste treatment, and partnership with agencies that have the awareness to greenhouses. *Adiwiyata* school policy is focused on improving the quality of human resources. Improving the quality of human resources is carried out at the stage of involving teachers in training and study activities to several schools that have been successful in managing *Adiwiyata* schools. By joining train and study activities in schools that have been awarded *Adiwiyata*, it is expected that the knowledge, insight, and abilities of the teacher can be improved. This will be advantageous for State Junior High School in Jambi because they can implement the experience as an effort to achieve *Adiwiyata* award.

Another policy is the provision of socialization to teachers about environment-based schools. The socialization was carried out by inviting an informant from the Environmental Department of Jambi City to provide information about the importance of environmental conservation. The officers from the Environmental Department are continuously asked to give guidance to the teachers in managing the *Adiwiyata* School. Organizing various activities to create a clean and healthy school environment and sending students to take part in training activities, establishing cooperation with *Puskesmas*, (center for public health) increasing the placement of trash points, and installing healthy living-themed flyers or stickers are regarded as an effort to create a healthy and clean school environment.

As a school that has won the National *Adiwiyata* School in 2016 and awarded as a healthy school, State Junior High School in Jambi are now struggling to be acknowledged as *Adiwiyata Mandiri* school. State Junior High School in Jambi as a National *Adiwiyata* school has accomplished and developed environment-based school policies including:

- The school's vision, mission, and objectives contained in the school curriculum have included environmental and global policy. This vision, mission, and goals have also been internalized (known and understood) by all school residents. This policy has gone quite well.

- The school curriculum structure has included all the compulsory subjects in an integrated manner. However, since State Junior High School in Jambi City applies the 2013 Curriculum (K13), it is difficult to have a monolithic (standalone) subject such as Environmental Education. To solve this case, environmental learning at this school is integrated into other topics.
- State Junior High School in Jambi has a School Budget and Action Plan (RKAS) of 20% of the total school budget. This high percentage is considered as an effort to protect and manage the environment for student activities, curriculum and learning activities, capacity building of educators and education personnel, availability of facilities and infrastructure, school culture and environment, community participation and partnership, and quality improvement and development.

### *B. Adiwiyata School Environment-Based Curriculum*

One of the *Adiwiyata* school environment-based curriculums in State Junior High School in Jambi is the implementation of Environmental Education in the syllabus and Learning Implementation Plan. Environmental Education materials are integrated into several subjects such as Science, Social Sciences, Religion, Crafts and others.

The development of *Adiwiyata* school curriculum concerns to integrate environmental education to other subjects such as science, social studies, religion, and craft. Curriculum development is carried out by providing counseling to teachers by presenting speakers from the Environment Department and Education Department of Jambi City about the environment.

Curriculum development planning is clearly formulated referring to the policy of *Adiwiyata*, based on the Joint Decree of the Environment and National Education Ministry. The organization of environment-based curriculum development related to organizational components, consisting of three elements including the *Adiwiyata* team: the teacher, the student council, and a group of class motivators. The environment-based curriculum material is developed by the *Adiwiyata* team of teachers by compiling K13 Environmental Care, in the form of syllabus and Lesson plan.

The environment-based curriculum is implemented in learning activities. For example, in the Natural Sciences subject, these environmental issues are learned: the greenhouse effect, the importance of greening, the importance of greenhouses, the importance of a healthy environment, the arrangement of water and all kinds of making. In the craft subjects, the teacher can integrate the subject to environmental issues as well such as the 3R (Reduce, Reuse and Recycle) — environmental education in learning activities by implementing learning by utilizing the environment as a learning resource. The implementation of the environment-based curriculum is also followed by supporting policies such as the development of planting various crops in the schoolyard, building greenhouses, and so on. Instead of that, the implementation of a new environment-based curriculum at the cognitive level has not touched affective awareness. The analysis of the curricula shows that the core contents are referred to as scientific facts and concepts, while students are expected to acquire the

provided information and facts. It was observed that the materials of science subjects were mostly oriented towards the cognitive dimension and the acquisition of within that domain knowledge. There were far fewer issues related to students' experiences and those that would serve to contribute to attitudes and habits aimed at preserving the environment and encouraging students to become active and demonstrating environmentally appropriate behavior [18].

Likewise, the development of an environment-based curriculum has not entirely resulted in students having the awareness of the environment. Whereas the real objective of a curriculum is that the learners gain knowledge and sensitivity, acquire a variety of experience and a basic understanding of the situation, as well as the form of the character in order to obtain a set of values of environmentally sensitive feeling in the level of primary education up to the secondary school [19]. Meanwhile the existence of module also importance, which positively changed the environmental attitudes of students, provided adequate time for positive environmental attitudes, supplied to the improvement of environmental attitudes through providing a multi-learning environment with reading texts and posters related to environmental education that improves environmental awareness of students and positively changes their environmental attitudes [20].

### *C. Participatory Activities of the Adiwiyata School*

Several characteristics of participatory activities in *Adiwiyata* schools in State Junior High School in Jambi are:

- The person in charge cleans the room before the KBM (Teaching and Learning Activity) begins which they usually call five minutes clean and after the last lesson ends.
- Do not store garbage in the drawer during the teaching and learning activities
- The teacher does not smoke in the school environment especially when teaching in the classroom
- The teacher inserts environmental lesson (PLH) material at the time of KBM
- Carry out a clean Saturday with the distribution of plots provided by the PLH team
- Carry out class pickets and pick teenager cross red (PMR) members.

All school residents play an active role in maintaining environmental hygiene. Schools cultivate responsibility on school citizens to maintain cleanliness without exception. This is one of the participatory-based activities, where every school member has the same obligation to support the school's *Adiwiyata* policy in the slightest matter.

One participatory based activity is the non-academic activities carried out by the external parties together with schools. The activities carried out include the following:

- The DLH office facilitates the supply of garbage carts, and bio pores equipment.
- Bank 9 Jambi, provides 33 plastic drum barrels.

- Bank BTN provides a drum aid for fruit plants in pots (TABULAPOT).
- PTP VI provides 12 flower pots.
- Dissemination of drugs, socialization of healthy schools, HIV / AID and so on carried out by BNN, POLDA, and DKK of Jambi City.

The participation of all related parties is an essential aspect in the implementation of the *Adiwiyata* program in schools. There is a correlation between participants' interest in the activities, their motivation, and their intention to act. The importance of psychological needs is the prerequisite of environmental motivation. According to Wheeler, the partnership is viewed as a dynamic resource rather than a transactional arrangement that addresses the identified challenges of time, funding, skills and personnel. Furthermore, the use of "partnership brokers," such as local government or non-government organizations, is recommended to expand the current school-centered approach to partnerships [21].

#### *D. Management of Adiwiyata School Infrastructure*

State Junior High School in Jambi has developed the management of facilities and infrastructure that support environmentally friendly schools, including:

- Providing facilities and infrastructure to overcome environmental problems in schools by fulfilling the standards of facilities and foundation of the Minister of National Education no. 24 of 2007.
- Providing infrastructure to support environmental learning in schools such as providing composting facilities, school parks, greenhouses and so on.
- Maintaining the ecological friendly school facilities and infrastructure. It can be seen from every room having the right light settings, natural air ventilation, and green trees maintenance.
- Improving the management and support of school sanitation facilities where each class has rules, picket lists with teachers as supervisors
- Improving the quality of health and environmental friendly canteen services, by way of schools to socialize by inviting health parties.
- There is an appeal for schools to use electricity, water, and stationary efficiently through electricity-saving slogans, saving water, using markers as needed and others.

Fulfillment of infrastructure is one of the important aspects of creating an environment-based school. Facilities to ensure health and learning skills for children are essential for an effective education system. Safety, supportive environment, sanitation, hygiene, and nutrition are the basis for making school environment healthy [22].

#### *E. Dominant Factors and Values in Environment-Based School Management*

In carrying out environment-based school management, there are several supporting factors of determinants that are regarded as driving force, namely:

1) *Strong leadership*: Leadership in carrying out environment-based school management is the main factor of the school to run the *Adiwiyata* School program in State Junior High School in Jambi. Here the Principal has the central role in achieving the *Adiwiyata* School title. A leader becomes a role model for all school residents, it's useless if subordinates and school residents have a strong desire but if the leader does not have a firm intention and motivation to move all the citizens of the school, then this *Adiwiyata* School will not be achieved. Some schools that are financially capable, but leaders do not have strong intentions and motivations to move all school citizens still unable to be awarded the *Adiwiyata* School. In contrast, a regular school that the leader has a strong desire and motivation but he can move his subordinates easily can reach *Adiwiyata* award. Thus, here Leadership determines the success or failure of *Adiwiyata* management itself.

2) *Active participation*: Participation, the existence of the involvement in carrying out and achieving the *Adiwiyata* School in State Junior High School in Jambi is the second dominant factor and value after leadership. Participatory here is the participation of all school residents in running and realizing the *Adiwiyata* School in State Junior High School in Jambi. Participatory in the State Junior High School in Jambi is vigorously implemented by all residents this school. Start from the Principal to the School Guards even though they are very involved in carrying out environment-based school management. This factor reverses from the leadership factor above; if there is no strong drive and desire from a leader, then the desired goal will not be achieved. Likewise on the contrary, if there is no strong participatory from the whole school population, State Junior High School Jambi is difficult, and the goal will not be achieved in carrying out the *Adiwiyata* program.

3) *Solidity*: Solidity here is the main key in carrying out an activity within a good organization within the education organization itself. Without solidity, the goals will be difficult to achieve. Likewise in running the management of the *Adiwiyata* School, it needs unity from all school residents. Solidarity here is a factor and the dominant value of State Junior High School in Jambi in running the *Adiwiyata* School Program. It is almost the same as participation; if only participating without any connectedness between leaders, subordinates, staff, teachers, and students it is difficult to run and reach the *Adiwiyata* School.

4) *Sustainable development*: Sustainable development means the development of the present without reducing its ability to fulfill the needs of the future. Sustainable development here is also a supporting factor in State Junior High School in Jambi in carrying out environmental

conservation because sustainable development must pay attention to the use of the environment and the preservation of the situation to maintain the quality of the environment. That's what was implanted by all citizens of State Junior High School in Jambi. Renewal of the school environment that is not guarded will cause the carrying capacity of the environment to be healthy and clean to diminish, or even disappear from all residents of State Junior High School in Jambi.

The implementation of the *Adiwiyata* program in State Junior High School in Jambi is successful if it is associated with the acquisition of *Adiwiyata* awards. However, the awareness of school residents, especially among students is not optimal, it can be observed both in the aspect of understanding and environmentally conscious behavior shown by students. This is in line with the findings of Said et al., That environmental education had raised the environmental awareness of students but was rather ineffective in changing action and behavioral patterns [23]. One of the causes of the lack of optimal mission to build school citizens' awareness of the environment is related to the *Adiwiyata* program itself which is designed to win awards so that some activities are directed to fulfill the instruments set by the government. Even though programs such as *Adiwiyata* or eco-schools, green schools aim to cultivate better-educated pupils, more aware of sustainability [24], the eco-school program is developed with a purpose to promote the medium for improving students' environmental literacy thus, improving the quality of environmental education [25]. Nevertheless, some other findings show that programs such as the Sustainable-School Environmental Awards are effective.

#### IV. CONCLUSION

The implementation of the *Adiwiyata* school program State Junior High School Jambi is manifested in some components, namely environmentally sound policies, environment-based curriculum for participatory environment-based activities, and management of ecologically friendly supporting facilities. The effectiveness of these four components depends on four driving forces, namely strong leadership, school participation, solidity, and sustainable development. The implementation of the *Adiwiyata* program at the School not only to establish environmental education but seems to have a 'hidden agenda' to gain prestige or *Adiwiyata* awards, the later tends to be the priority of the School. *Adiwiyata* school policies that are full of bureaucracy and formalities lead the Schools to meet the standards contained in the guidelines for *adiwiyata* rather than building environmental awareness, especially among students

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