A-G-I-L scheme as social system to build characters caring for the environment through the Adiwiyata program

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Abstract. Environmental issues are a shared responsibility, concern for ecosystem stability, and environmental productivity. For this reason, government policies also lead to education which must also build a caring character for the environment. In a non-formal way, the education applies environmental care by synergizing all character-building aspects that care for the environment. This study aims to analyze the A-G-I-L Scheme as an effective social system in building the character of caring for the environment through the Adiwiyata program. The method in this research is descriptive qualitative with data collection techniques of observation and documentation. The results show that obtained ecological intelligence through education. Therefore, in environmental awareness, competence is needed in environmental awareness as an indicator of the student’s awareness of a healthy environment. Students developed their sensitivity, awareness, understanding, critical thinking, solving environmental issues, and forming environmentally sound ethics. The Adiwiyata program can help students develop a single “core competence” to practice the principles of sustainable development in society as responsible citizenship. The Adiwiyata program only can achieve the goal if all school components from the school leader, teachers, staff, students, and the students’ parents support the program.

1. Introduction

Human life is inseparable from social interaction with the surrounding environment. A concern for the ecosystem as a unified that influences each other in shaping the environment balance, stability, and productivity. Likewise, education is a significant milestone in instilling character and intelligence. For this reason, how to achieve environmental balance in formal and informal education to form environmental balance through education in Indonesia is one of the main priorities conducted by the government. This was explained in the Preamble to the 1945 Constitution. Education has many good things, one of which is supporting activities to save the earth and manage the environment. The Indonesian government makes a policy implemented in the world of education, which was stated in article 65, the fourth point of Act Number 32 of 2009 concerning Environmental Protection and Management [1]. Educational development is a process of structural reform of teaching and learning activities of each academic unit to achieve a superior level of participation, efficiency, effectiveness, and relevance of education [2].

Schools are important institutions in growing environmental awareness. When concern for the environment is grown from an early age, it becomes an effective medium for forming a caring character for the environment [3]. The relevance of environmental education at a practical level contributes...
through three teaching elements, i.e., (1) the emphasis on contextual knowledge; (2) learning that involves students as cognitive and affective whole persons; and (3) to strengthen the relationship between knowing and doing, or between knowledge and practice—responsibility for the environment [4]. If we want to build the students’ character, it can be developed knowledge from school through various curricula and instruments and various integrations of the learning process (Ligon, 2006). The Adiwiyata school program is the first recognition for schools so that they need to support environmental-based learning [5–10].

The existence of the Adiwiyata school program in Indonesia, as a medium for character building [9] in the belief of the schools’ components as a team will be one of the exciting things, considering that the Adiwiyata School, which has long been developed in the team’s understanding still needs to be improved. It still needs to be improved, primarily related to the scope of schools that implement this program. In 2017 it still covered 4%, namely 8,331 schools [11] of all schools that implement the curriculum. In addition to integrating character education-based curricula, efforts must be made to synergize with the Adiwiyata program. It is also important to investigate why only 4% schools in Indonesia implemented the Adiwiyata program. This research focused on the policy review of the Adiwiyata program. We used the AGIL framework to review the Adiwiyata program policy, i.e., Adaption, Goal Attainment, Integration, and Latency [12].

Many studies conducted from 2014 to 2021 paid attention to the implementation of the four components of the Adiwiyata Program, namely (1) Environmentally Insight Policies; (2) Environment-Based Curriculum; (3) Participatory-based Environmental Activities; and (4) Management of Environmentally Friendly Supporting Facilities [1, 13–19]. Only a few research focused on the Adiwiyata program policy based on the AGIL scheme as a social system. We hope this research can reveal why only a few schools in Indonesia implemented the Adiwiyata program, especially from building environmental care characters.

2. Method
The type of research used in this research is descriptive with a qualitative approach. The focus of the research in this study is the A-G-I-L scheme as a social system for building environmental care characters through the Adiwiyata Program. This research was conducted at Public Upper Secondary School (SMAN) 3 Jombang in August 2020. The data collection techniques we observed schools’ environment, curriculum-based-environment implementation, and facilities and infrastructure. Besides observation, we also conducted interviews with principals, teachers, students, schools’ committees, and documentation. The analysis data used qualitative analysis techniques.

3. Result and Discussion
Society is a social system consisting of various elements that are related to one another. As a social system, environmental issues are the shared responsibility of every citizen without exception. Concern for ecosystem stability and environmental productivity is a shared responsibility to make it happen. Through strategic steps, the Government initiated a program called Adiwiyata. The government's policy through the program is essentially that education that has not only developed knowledge but is also given curriculum content that can build a caring character for the environment. In a non-formal way, education applies environmental care by synergizing all aspects of environmental care character building. This study aims to analyze the A-G-I-L Scheme as an effective social system in building the character of caring for the environment through the Adiwiyata Program.

The A-G-I-L scheme has meaning, namely Adaptation - Goal Attainment - Integration - Latency (maintenance of patterns). Adaptation is necessary for social systems to deal with their environment. He must adapt to the environment and adapt the environment to their needs. The following is an illustration of the AGIL scheme:
Figure 1. AGILE framework.

Talcott Parsons is best known for the four functional imperatives for the “action” system, namely the AGIL scheme. AGIL, a function is a group of activities directed to meet one or more system requirements. Parsons believes that community development is closely related to the development of the four main subsystem elements, namely culture (education), justice (integration), government (attainment of goals), and economy (adaptation) [20]. Using this definition, Parsons believes that there are four functional imperatives or characteristics of the whole system necessary: (a) Adaptation, the system must cope with situational needs that come from outside. It must adapt to the environment and adapt the environment to its needs; (b) Achieving goals, the system must define and achieve its primary goals; (c) Integration, the system must regulate the relationship of the parts that are its components; and (d) Latency (pattern maintenance), the system must complement, maintain and renew individual motivation and cultural patterns that create and maintain that motivation [21]. From some of these understandings and schemes, it can analyze that the social system can work well if: (a) the social system can harmonize with the whole system; (b) the harmony and sustainability of a system can run in harmony if there is support from other systems, meaning that the planting of a loving character for the environment can be realized if various elements in society can be in synergy with one another; (c) the social system can meet expectations or expectations and can move statically and dynamically, adaptively in various changes, especially in anticipating the millennial generation; (d) the social system is able to give birth to holistic community participation; (e) the social system must also be able to be adaptive in dealing with problems if there is a potentially parasitic or negative system; (f) keeping the system in balance through creativity.

From this analysis, the A-G-I-L Scheme as a Social System for Building Environmental Care Characters through the Adiwiyata Program, one of which is implemented at SMAN 3 Jombang one of the public schools located in the East Java province (based on the author’s previous research) can be analyzed as follows:
3.1. Adaptation
The schools must adopt the policies issued by the Ministry of Environment and Forestry and the Ministry of Education, Culture, Research, and Technology, which instructed in 2019 that Adiwiyata education is something that must be implemented by schools in Indonesia. The schools developed the Environment-Based Curriculum. The delivery of environmental material to students can be done through an integrated or monolithic curriculum. The development of materials, learning models, and various learning methods are conducted to provide students with an understanding of the environment related to daily environmental problems (local issues). Furthermore, the Development of Participatory-Based Activities to create a school that cares and is environmentally cultured, school residents need to be involved in various environmental learning activities. In addition, schools were also expected to involve the surrounding community in conducting various activities that benefit school residents, the community, and the environment and make eco enzymes according to the conditions and materials around them.

3.2. Goal Attainment
The goal of the Adiwiyata program is to create good conditions for schools to become places of learning and awareness for school residents so that the school community can take responsibility for efforts to save the environment and sustainable development. The main activity is directed at realizing school institutions that are environmentally cultured for primary and secondary schools in Indonesia. Besides the development of basic norms, which include togetherness, openness, equality, honesty, justice, and the preservation of the function of the environment and natural resources. As well as the application of basic principles, namely: participatory, where the school community engages in school management which includes the entire planning, implementation, and evaluation process according to responsibilities and roles; and sustainable, where all activities must be carried out in a planned and continuously comprehensive manner with these objectives. To answer the challenges of the times where generations X, Y, and Z have lost their sense of care for the environment, this supports the next generation to preserve the environment by making very participatory programs for the next generation. Adiwiyata program objectives are very relevant.

3.3. Integration
The concept of integration embodied by SMAN 3 Jombang led to achieving the independent Adiwiyata in the Jombang Regency. Stated through a program that is implemented through a vision and mission that has been agreed upon by the school, with a vision and mission that has been designed as follows: “Vision: Faith and piety, educated, environmentally cultured, and superior in quality” and formulate a mission related to Adiwiyata namely: (a) foster a clean and environmentally conscious culture; and (b) create a culture of Adiwiyata school, which can support practical, comfortable and quality school management. The mission is well integrated to support the goal of the Adiwiyata independent title at SMAN 3 Jombang. It receives funding from the government, which is managed directly by the school through the Greenteen organization. This vision and mission were formed when the school reached the “Adiwiyata Mandiri” level in 2010, guided by the vision and mission that had been achieved, among others, fostering a clean and environmentally conscious culture so that achieving the goal of Adiwiyata is to cultivate the school community about the importance of caring for the environment.

3.4. Latency
Maintenance Patterns, activities at SMAN 3 Jombang related to reforestation and cleanliness efforts. Every Friday there are clean Friday activities. All students of SMA Negeri 3 Jombang worked together to clean their surroundings from scattered garbage and dirt. These activities continue to be conducted simultaneously. In addition, there are other activities of SMA Negeri 3 Jombang which are related to nature. The SMAN 3 Jombang continues to strive to keep the environment green and shady. This school have many big and old trees as shade. Apart from being a shade, there are trees at SMA Negeri 3 Jombang which have other functions such as producing O₂, binding CO₂, blocking noise, and absorbing
cigarette smoke. For that we must care for and preserve it for the sake of our earth and for the sake of future generations.

The Adiwiyata School program is always conducted from supporting the cleanliness of the classroom, garden, to the environment of SMA 3 Jombang. Even for the 19th anniversary of SMAN 3 Jombang, the theme was Adiwiyata. From booths decorated with dry leaves, costumes for a healthy walk using second-hand goods, art performances with the theme of regional nuance, to blogs with the theme of Adiwiyata. This is done so that school residents know about cultural diversity, preserve biodiversity, and maintain the cleanliness of the surrounding environment. Another activity conducted is to provide guidance to the target schools that are pioneering the Adiwiyata program. In various aspects, for example, in the preparation of a curriculum that is always integrated with all subjects in the school. In addition, technical guidance on composting and other activities conducted by teachers and students requires high mobility for school residents.

Processing or maintenance efforts conducted by the school are conducted together, namely, students and teachers and other school members collaborating to support each other to create a conducive environment for all. In the end, the students at SMAN 3 Jombang, conduct the functions of adaptation: so that students are able, they must be able to adapt themselves to the environment and adapt to the environment with themselves. Therefore, student integration must regulate the relationship between its components so that it can function optimally and maintain existing patterns: every society must keep, improve, and renew both the motivation of individuals and the cultural patterns that create and maintain those motivations.

3.5. AGIL Perspective
The results of this study show that ecological intelligence is obtained from education. Therefore, in the context of environmental awareness, competence is needed as an indicator of the achievement of teaching an understanding of ecological intelligence in students by developing sensitivity, awareness, understanding, critical thinking solving environmental issues, and forming environmental ethics that have been developed. Develop a single "core competence" to help today's young generation develop and live in a society that has sustainable development principles. Includes: knowledge (learning to know), attitudes (learning to be), action (learning to do), and relationships with humans and the environment nature (learning to live together) thus education will also be able to provide education about the importance of the environment, handling environmental damage problems, environmental conservation which refers to increasing awareness and developing environmentally sound human resources.

4. Conclusion
The Adiwiyata school is a school that applies love and care for the preservation of the school environment. The applied teaching is environment-based, and the school community’s awareness of the importance of environmental conservation. Schools taking part in the Adiwiyata program should involve all elements of the existing school community. All of them actively take part in keeping the sustainability of the mutually agreed program. The Adiwiyata program provides several benefits that can be obtained for schools, including being a place for learning for the younger generation about the value of maintaining and managing the environment properly and correctly and increasing efficiency in the implementation of school operational activities and the use of various existing resources. Create conditions of togetherness for all school members. Increase savings in funding sources by reducing resources and energy used, as an effort to avoid various risks of negative environmental impacts in the school environment, improve teaching and learning conditions to be more comfortable and conducive for all school residents, change residents’ behavior schools to be more environmentally aware by preserving the environment.

The Adiwiyata program is necessary for every school or institution to create a prosperous life, not just a slogan or a program on paper so that every school or institution should support and strive to achieve the Adiwiyata title. Participation from all school members is required to realize the Adiwiyata program. In this case, the school community should be involved in regulating school policies starting
from planning, implementing, and evaluating according to their roles and responsibilities. The program should be conducted sustainably to support the success of the Adiwiyata program, which means careful planning is needed so that the school community’s love for the environment will continue to be supported. It is not only the current generation that takes part in the program but future generations were expected to maintain their enthusiasm in implementing this program.

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