



Proceeding SYMBION (Symposium on Biology Education)

<http://seminar.uad.ac.id/index.php/symbion>

2540-752X (print) | 2528-5726 (online)



Implementation of adiwiyata program at SMA N 1 Godean

Kalika Azra Zainina ¹, *; Sula ², ; Farah Salsabila ³, ; Trianik Widyaningrum ⁴,

Biology Education, Universitas Ahmad Dahlan, Yogyakarta, Indonesia

¹ kalika1900008003@webmail.uad.ac.id *; sula1900008006@webmail.uad.ac.id;

farah1900008041@webmail.uad.ac.id; trianik.widyaningrum@pbio.uad.ac.id

* Corresponding author

ARTICLE INFO

Article history

Submission Dec 10th, 2022

Revision May 10th, 2023

Accepted May 17th, 2023

Keyword

Environment

Adiwiyata

Organic Waste

Education

Implementation

ABSTRACT

The research conducted aims to describe the implementation of the Adiwiyata program at SMA N 1 Godean. This research is included in qualitative research with a descriptive approach. The data collection techniques are through interviews, observation, and documentation. The results obtained are that SMA Negeri 1 Godean has implemented the Adiwiyata program as well as possible. This can be seen from the condition of the school field which is spacious and lush, the green house and fish pond are in a well-maintained condition, the prayer room, restroom, and canteen are in a very decent condition. In addition, this high school has also minimized the use of plastic, sorted waste, recycled organic waste into compost, and managed water to be suitable for use. This achievement cannot be separated from the role of all school members. In the current Adiwiyata program, SMA N 1 Godean has entered the Provincial level and is preparing for the National level in 2023.

This is an open-access article under the [CC-BY-SA](#) license



Introduction

The environment is defined as everything that is around humans and affects human life directly or indirectly. Environmental constituents consist of biotic and abiotic factors. In the school environment, biotic factors that can be found include all living things such as students, teachers, labor, and plants. Meanwhile, the abiotic environment can be exemplified such as school buildings, desks, chairs, and various other inanimate objects. The school environment is a collection of various factors that affect education or where the educational process takes place, especially in the formation of student attitudes and potential¹.

In general, the environment is beginning to be threatened by various impacts caused through human activities. Changes in environmental conditions are also influenced by extreme weather changes, prolonged droughts and other factors. As population and industry grow, environmental problems are increasingly complex. These problems can be categorized as local, national, regional and global environmental problems². Based on this, awareness is needed for

humans to start paying attention to the surrounding environment. One of the ways that can be taken is by instilling the character of environmental care for students in schools.

The character of caring for the environment is a character that must be applied. This caring attitude can be improved by improving the quality of the environment and increasing the awareness of school residents and taking the initiative to prevent environmental damage³. The character of forming students who care about the environment cannot be done instantly. Character in students is processed through stages, starting from students first understanding the meaning of goodness, then bringing up a sense of commitment in students accompanied by the implementation or application of student behavior. The character of caring for the environment really needs to be familiarized. Therefore, it can be formed through strengthening student character by involving the three centers of education, namely class-based, culture-based and community-based⁴.

The Ministry of National Education developed the character of environmental care as one of the points in the affective aspects that must be applied to students⁵. This is sustainable with a program known as Adiwiyata. The Adiwiyata program is a government commitment to environmental management and protection through education. Adiwiyata is an ideal and good place, various sciences, norms, and ethics that are the basis for humans towards the realization of the welfare of life and for the ideals of sustainable development can be obtained. The purpose of the adiwiyata program is to realize school citizens who have responsibility as an effort to protect and manage the environment based on good school governance in supporting sustainable development⁶.

The Regulation of the Minister of Environment of the Republic of Indonesia Number 5 of 2013 concerning Guidelines for the Implementation of the Adiwiyata Program states that the adiwiyata program is a program to realize an environmentally friendly and cultured school that can be followed by elementary schools (SD) equivalent, junior high schools (SMP) equivalent, and senior high schools (SMA) equivalent⁷. The regulation also states that there are several components of adiwiyata, including aspects of school policy, curriculum aspects, aspects of school activities, and aspects of management of facilities and infrastructure, all of which are based on the environment. The initial organizers of the adiwiyata program consist of ministers, governors, and regents/mayors.

Schools that have received the Adiwiyata title are widely assumed to be schools that have succeeded in shaping caring characters in their school environment. The Adiwiyata program has a positive effect on students' cognitive, affective and psychomotor levels. The emergence of this positive influence cannot be separated from good management and support from teachers and the school community environment for the adiwiyata programs that are carried out. Therefore, the character of environmental care is important to be implemented in schools to foster positive attitudes that underlie student behavior in everyday life. One of the schools in Sleman Regency that implements the Adiwiyata program is SMA Negeri 1 Godean. In this regard, this study aims to determine the implementation of the Adiwiyata program at SMA N 1 Godean.

Method

This research is a type of qualitative research with descriptive method. The descriptive method was taken to describe the implementation of the Adiwiyata program and the school's efforts to improve the characteristics of environmental care in students. This research took place at SMA N 1 Godean in mid-August to early September 2022 which was carried out in conjunction with PLP (Introduction to School Field) 2 activities. Data collection techniques were carried out by observation (observation), interview (interview), and documentation. The data analysis uses the Miles and Huberman model. The data collected will be written in the

form of descriptions and simplified to facilitate understanding so that conclusions are easy to draw.

The implementation of the research has several stages including: 1) Making observation instruments and interview guidelines along with assessment rubrics, 2) Validation of instruments by experts, 3) Taking care of licensing with teachers who will be interviewed, 4) Data collection using observation and interview methods, 5) Processing the data that has been obtained, and 6) Writing research articles.

Results and Discussion

The results of this study were obtained from observations or observations made in the school environment. The supporting data is in the form of interview results which will be described in the discussion section. The following are the results of observations presented in tabular form.

Table 1. Observation Results

Assessed Aspect	Score
Computer Tub Condition	3
GreenHouse Condition	4
Schoolyard Condition	3
School Canteen Condition	3
Condition of Fish Pond	3
Condition of School Mosque	3
Garbage Disposal Condition	3
Condition of Hand Washing Place	4
School Toilet Condition	4
Electricity Usage	4
Green Open Park	3
Total	84 %

Adiwiyata comes from the Sanskrit words "Adi" and "Wiyata". Adi can mean big, great, good, ideal or perfect. While Wiyata can mean a place where someone gets knowledge, norms and ethics in social life. In education, the adiwiyata program is expected to be a place to build character in efforts to save the environment. The Adiwiyata program has the meaning of a good and ideal place, where all knowledge can be obtained and various norms and ethics that can become the basis for humans in the creation of the welfare of our lives and towards the ideals of development and sustainability⁵.

Based on the data in Table 1, the school environment observation obtained a score of 84% which is categorized as good or eligible. The assessment category can be divided into 3 types, namely good or qualified if it reaches 80%-100%, moderate if it reaches 61%-79%, and unqualified if the percentage is <60%⁸. Some of the points that were observed included the school yard, the condition of the school canteen, the condition of the school greenhouse, the condition of the fish pond, the condition of the school toilet, the condition of the school mosque, garbage disposal, the condition of the composter tub, the condition of the hand washing area, the condition of the school garden and the use of electricity.

The condition of the school yard of SMA N 1 Godean received a score of 3 which can be assessed from the condition of the large and well-maintained school yard, there is no plastic waste found around the school yard and there are various types of plants that beautify the front yard of the school. The well-maintained schoolyard is inseparable from environmental activities from the participation of school residents which can be implemented by implementing environmental protection and management. This can be seen from the participation in the maintenance of buildings and the environment, activities including carrying out class pickets,

holding clean Fridays, holding class hygiene competitions and carrying out garden maintenance by each school community⁹. However, dry leaves are still found around the school yard, so it did not get the maximum score of 4.

The school canteen also received a score of 3 because the condition of the canteen, especially on the dining table, is sometimes still not clean. Apart from this, the food sold is fairly healthy and nutritious and no food containing artificial colors and preservatives is found. The canteen also provides paper, cups, and plates as containers for food and drinks. Every corner of the canteen has a trash can so that students can dispose of trash in its place. Healthy standards used for school canteens must also pay attention to hygiene standards, both tables and supporting equipment⁹. Therefore, if the school pays more attention to the cleanliness of the canteen, it can get the maximum score.

Greenhouse received a maximum score of 4 because greenhouse maintenance is carried out regularly, compost is available, there are more than 10 types of plants and adequate equipment is available. The fish pond received a score of 3 with the shortcomings of the fish in the pond not varying. However, the fish pond is always maintained regularly, the water circulation is quite good and there are aquatic plants to beautify the fish pond. The condition of the pond will be better if there are additional types of fish so that it is more varied. The availability of a well-maintained fish pond with a variety of fish can be a school facility in providing knowledge to students related to flora and fauna ecosystems and supporting learning in various fields¹⁰. The statement supports the condition of the pond to get a score of 4.



Fig 1. Fish Pond and Trash Can

The condition of the toilet received a score of 4 because the toilet is always clean, the water circulation is smooth and clear, the availability of sinks and trash cans are in very good condition. The mosque received a score of 3 with a fairly large school mosque building, the availability of complete prayer equipment as well as toilets and ablutions. However, there is a slight problem with the water flow in the ablutions and toilets. The lack of water availability is caused by many factors, one of which is the dry environmental conditions and the less than optimal condition of the water reservoir. Immediate handling to overcome water flow problems needs to be done. The presence of infiltration wells serves to accommodate water infiltration in order to preserve water resources in the school environment and the environment around the school. In addition to technical measures, there needs to be guidance to students in order to save water when doing ablution¹¹. This needs to be done as a small step so that all school residents who will use water in the mosque area are not constrained. The need for the preparation of a program plan in order to implement the policy by making rules for water use, socializing water saving programs to all school residents, conducting water conservation activities, compiling SOPs for water use and reuse of ablution and hand washing water waste and developing water-saving infrastructure¹².

Waste disposal did not receive the maximum score of 4, but only 3 because there was no landfill for waste. This is due to the fact that the waste generated is immediately sorted, especially if the waste has a selling value or can be recycled. However, it would be better if a

landfill is provided so that waste is not scattered around. The remaining waste that cannot be economically utilized either from composting activities or the utilization of inorganic waste, which amounts to approximately 10%, must be immediately disposed of to the final landfill (TPA) at the school¹³. Apart from this, the score of 3 obtained is due to the fact that trash bins are very easy to find, waste is also sorted both organic and inorganic, and trash bins are routinely cleaned. The condition of the handwashing stations received a score of 4 because they are easily found in almost every classroom, handwashing soap is available, the water flows well, and the water drain does not leak.

The garden gets a score of 3 with the condition of the garden being regularly maintained, there are more than 10 types of plants, and the layout of the plants is neat and appropriate. However, there is still a lot of dry leaf litter found around the garden and it would be better if garden management was developed by checking regularly on some unkempt or dead plants. The amount of dry or dead leaves disturbs the level of beauty of the garden. The preparation of the park also involves several aspects such as comfort and beauty, these two aspects go hand in hand. A well-managed garden, checking regularly so that it is neatly coordinated and overcoming damaged or dead plants as soon as possible, so as to provide comfort and beauty value at the same time for all school residents¹⁴. The use of electricity received a score of 4 because the school has used electricity according to its needs, turning off electronic devices or fans when not in use, saving water when used, adequate ventilation and light entering the room so that it can save electrical power.



Fig 2. Sink Condition and Mosque Building

In addition to observation, an interview process was also carried out. Through interview activities, the results obtained that the Adiwiyata program at SMA Negeri 1 Godean has been established for approximately 5 years, to be precise at the beginning of 2017. In that year, SMA N 1 Godean was asked to participate in the adiwiyata school program until finally in 2018 it reached the district level. The following year, 2019, SMA N 1 Godean continued the adiwiyata school program to the provincial level and was asked to continue to the national level which is targeted in 2023. From the district to the provincial level, SMA N 1 Godean followed a series of assessments from the government authorities.

The implementation of Adiwiyata program activities has an organizational structure consisting of a chairman, secretary, treasurer, and several special teams such as the water conservation team, waste bank team, organic waste management team, and collaboration with home and environmental agencies. All school members, including teachers, administrative staff, employees, and students, are involved in the Adiwiyata program at SMA N 1 Godean. In fact, each class has students who are appointed as representatives (cadres) of the Adiwiyata program special team. The running of this activity really requires the role of all school members and is carried out consistently. The school Adiwiyata team consists of the principal as the person

in charge, teachers, administrative staff, students, school committee, and school community. The task of the adiwiyata team is to manage the environment including involving elements of the school community including the active involvement of students. The school adiwiyata team will vary depending on the needs of the school¹⁵.

The main purpose of implementing the Adiwiyata program at SMA N 1 Godean is to instill and empower the character and movement of environmental care. Through this goal, it is hoped that the character of caring for the environment will be formed for all school members. The sustainable goal of this implementation is to bring the Adiwiyata program of SMA N 1 Godean to the national level. The examples of environmental care behavior in question are how to dispose of and process waste properly and properly and save energy use.

Facilities are needed to support the running of the Adiwiyata program. SMA N 1 Godean already has several supporting facilities, for example, a large school environment with shady trees, land for planting trees, the availability of a greenhouse, a water conservation area so that it can be used for hydroponic purposes. In addition, the school also provides a place for waste management both liquid and solid. Solid waste is sorted before being managed by a third party. As for dry foliage waste, it is processed directly into compost through tools that are already available at the school.



Fig 3. Garden condition and Making compost fertilizer

The implementation of the adiwiyata program certainly has supporting and inhibiting factors. Supporting factors for the implementation of the adiwiyata program at SMA N 1 Godean include the large number of students with a fairly high attitude of environmental care, although guidance must still be given. Teachers and employees are also very supportive in the implementation of adiwiyata activities. In addition, facilities and the environment that really allow the implementation of adiwiyata activities well. The inhibiting factor is that the coordination of the adiwiyata team or committee to students still has to be improved better. Another effort that can be made to overcome environmental problems is through education. Environmental education forms human resources with environmental culture and becomes the basis for environmental management for sustainable development¹⁶.

Student attitudes from the implementation of the Adiwiyata program are still being observed because the implementation of the Adiwiyata program was stopped during the pandemic. During the pandemic, the implementation of activities could not be carried out in real time at school. Assessment is also not optimal. The formation of cadres is also difficult to do because you cannot see students directly. However, they are still trying their best. Green house management is still running with students who are asked to participate. The management of the green house can be done in ways such as: preparing ornamental plant seeds, keeping plants alive, and managing ornamental plants so that they remain sustainable¹⁷. Due to the change of students, after the pandemic the school made adjustments to the adiwiyata program. The activities that can be implemented after the pandemic are clean Friday activities such as caring for plants, cleaning the environment, sorting waste, and so on. These activities are intended to provide education to students so that it is hoped that there will be a gradual change

in their attitude towards environmental care. However, more complex activities, such as managing waste, reducing plastic waste and so on, still need to be improved.

The implementation of the Adiwiyata program in learning activities can be carried out in all types of subjects which of course adjust the characteristics of these subjects. For example, Indonesian language lessons are asked to write essays related to environmental conservation, geography subjects can study climate change, biology studies ecosystems and so on. Integration of environmental care can also be done through extracurricular activities and student self-development. The implementation of the Adiwiyata program is very instrumental in conditioning the school environment and getting used to environmental care behavior. Through habituation, it will create an attitude to maintain, care for and preserve the environment¹⁵.

Waste management at SMA N 1 Godean is also carried out. The liquid waste from the restrooms is put into a container while the garbage waste continues to be sorted even though it has not been done optimally. Dry leaf waste is managed directly by the school into organic compost with a special tool, namely a grinding machine. The organic fertilizer is packaged and stored to be used as plant fertilizer. Through organic waste recycling activities, it indirectly has a positive impact on the environment. It is certainly able to overcome the school's organic waste pile of at least 80%, in addition to reducing the amount of waste that will be disposed of in the landfill (Final Disposal Site)¹⁸. Paper waste and other recyclable waste that has a selling value are placed separately and on a regular basis, the staff will collect and manage the waste. The problem faced in waste management is the final waste that cannot be processed anymore or called residual waste, which is expected to have cooperation with outside parties to pick up the waste.



Fig 4. Waste Segregation and School Grounds

Through the Adiwiyata Program, there is also an environmental study on organic waste management. Conditions at SMA N 1 Godean include watery areas, but the water is not suitable for drinking so it needs to be processed. The water management is located near the physics laboratory with a filtrate or filter that must be replaced frequently. Thus, little by little the management of water and the environment at SMA N 1 Godean is getting better. Active participation of the school community in the water saving program at school starting from the planning and implementation stages of the program will have a good impact and ensure the success of the program¹⁹.

The school also works together with parents or guardians to reduce the use of plastic, for example the use of refillable bottles and lunches. Through this, it is hoped that the implementation of the adiwiyata program will continue to run better. School canteens are also encouraged not to sell food with preservatives and artificial colors, and not wrapped in plastic. The lack of cleanliness of traders and means of selling food snacks is a place for the development of E.coli bacteria that cause diarrhea in students. The adiwiyata program at SMA N 1 Godean will continue to be developed and improved so that it runs to the national level.

The requirements that must be met for the national level are definitely more and are required to have at least one assisted school²⁰.



Fig 5. Water Management and Canteen Conditions

Conclusion

SMA N 1 Godean has implemented the Adiwiyata program since 2017 and continues to increase every year. This can be seen from the observation results obtained a score of 84% which is categorized as qualified. The implementation of the Adiwiyata program at SMA N 1 Godean is inseparable from the role of all school members. Real activities are carried out both in the field and in the learning process to instill an attitude of environmental care and adiwiyata values. In addition, organic waste treatment and water conservation are also carried out. Currently, SMA N 1 Godean is preparing to continue the Adiwiyata program to the Provincial level which is targeted in 2023.

Acknowledgment

Thank you to all those who have helped in the preparation of this scientific article, including instrument validators and schools that have given permission for data collection and various related parties that we cannot mention one by one.

References

- 1 Mawardi, A. D. Peran lingkungan sekolah dalam hubungannya dengan prestasi belajar siswa kelas V di SDN Teluk dalam 6 Banjarmasin. *Pahlawan: Jurnal Pendidikan-Sosial-Budaya* **14**, 57-67 (2019).
- 2 Permana, B. I. & Ulfatin, N. Budaya sekolah berwawasan lingkungan pada sekolah adiwiyata mandiri. *Ilmu Pendidikan: Jurnal Kajian Teori Dan Praktik Kependidikan* **3**, 11-21 (2018). <https://doi.org/http://dx.doi.org/10.17977/um027v3i12018p011>
- 3 Purwanti, D. Pendidikan karakter peduli lingkungan dan implementasinya. *DWIJA CENDEKIA: Jurnal Riset Pedagogik* **1**, 14-20 (2017). <https://doi.org/https://doi.org/10.20961/jdc.v1i2.17622>
- 4 Rezkita, S. & Wardani, K. Pengintegrasian pendidikan lingkungan hidup membentuk karakter peduli lingkungan di sekolah dasar. *TRIHAYU: Jurnal Pendidikan ke-SD-an* **4**, 327-331 (2018).
- 5 Alsaad, I. *Panduan Adiwiyata Sekolah Peduli dan Berbudaya Lingkungan*. (Deputi Bidang Komunikasi Lingkungan dan Pemberdayaan Masyarakat., 2011).
- 6 Wardani, D. N. K. Analisis Implementasi Program Adiwiyata dalam Membangun Karakter Peduli Lingkungan. *Southeast Asian Journal of Islamic Education Management* **1**, 60-73 (2020). <https://doi.org/https://doi.org/10.21154/sajiem.v1i1.6>

- 7 Hidup, K. L. 12-26 (Lembaran Negara Republik Indonesia 2013, 2011, Jakarta, 2013).
- 8 Azizah, A. N. i. & Oktanova, M. A. Higiene Dan Sanitasi Kantin Sekolah Dasar. *JURNAL KESEHATAN LINGKUNGAN: Jurnal dan Aplikasi Teknik Kesehatan Lingkungan* **15**, 615-622 (2018). [https://doi.org:https://doi.org/10.31964/jkl.v15i2.77](https://doi.org/https://doi.org/10.31964/jkl.v15i2.77)
- 9 Julaiha, S. & Maula, I. Implementasi Manajemen Madrasah Adiwiyata di MAN 1 Samarinda. *Manageria: Jurnal Manajemen Pendidikan Islam* **3**, 353-367 (2018). <https://doi.org:https://doi.org/10.14421/manageria.2018.32-08>
- 10 Novitania, R. Evaluasi Pengelolaan Sarana Dan Prasarana Pendukung Ramah Lingkungan Pada Program Adiwiyata Di SMP Muhammadiyah 3 Yogyakarta. *Hanata Widy* **5**, 37-48 (2016).
- 11 Zaenab, S. *Peran Guru Pendidikan Agama Islam Dalam Mengembangkan Budaya Sekolah Peduli Lingkungan*, Jakarta: FITK UIN Syarif Hidayatullah Jakarta, (2018).
- 12 Suheri, A., Kusmana, C., Purwanto, M. Y. J. & Setiawan, Y. Model prediksi kebutuhan air bersih berdasarkan jumlah penduduk di kawasan perkotaan Sentul City. *Jurnal Teknik Sipil Dan Lingkungan* **4**, 207-218 (2019). <https://doi.org:https://doi.org/10.29244/jsil.4.3.207-218>
- 13 Sitisyarah, K. & Mustika, R. Penerapan program adiwiyata di SMP Negeri 13 Palembang. *JMKSP (Jurnal Manajemen, Kepemimpinan, dan Supervisi Pendidikan)* **2**, 143-155 (2017). <https://doi.org:https://doi.org/10.31851/jmksp.v2i1.1161>
- 14 Agustina, M. A. & Saragi, D. S. Studi Penataan Taman Sekolah Penerima Adiwiyata di Kabupaten Langkat Ditinjau dari Segi Prinsip Desain Taman. *Gorga: Jurnal Seni Rupa* **7**, 31-51 (2018). <https://doi.org:https://doi.org/10.24114/gr.v7i1.10849>
- 15 Riki, M. & Sumarnie. Manajemen Program Adiwiyata Di Smp Negeri 1 Mentaya Hilir Selatan Kabupaten Kotawaringin Timur. *Equity in Education Journal* **3**, 47-53 (2021).
- 16 Choerunnisa, D. K., Pharmawati, K. & Nurprabowo, A. Perencanaan Konsep Konservasi Air Gedung Universitas Swasta di Wilayah Utara Kota Bandung. *Jurnal Sumberdaya Alam dan Lingkungan* **7**, 124-134 (2020). <https://doi.org:http://dx.doi.org/10.21776/ub.jsal.2020.007.03.5>
- 17 Noferdian, N., Lisna, L. & Yusma, D. Pengembangan Sekolah Berwawasan Lingkungan Menuju Adiwiyata Mandiri Di SMAN 4 Kota Jambi. 145-146 (2020).
- 18 Widiyaningrum, P., Lisdiana, L. & Purwantoyo, E. Evaluasi partisipasi siswa dalam pengelolaan sampah untuk mendukung program sekolah Adiwiyata. *Indonesian Journal of Conservation* **4** (2016).
- 19 Wulandari, A. S. R. & Ilyas, A. Pengelolaan Sumber Daya Air di Indonesia: Tata Pengurusan Air dalam Bingkai Otonomi Daerah. *Gema Keadilan* **6**, 287-299 (2019). <https://doi.org:https://doi.org/10.14710/gk.2019.6750>
- 20 Candra, A. A., Setiawan, B. & Damanik, R. Pengaruh pemberian makanan jajanan, pendidikan gizi, dan suplementasi besi terhadap status gizi, pengetahuan gizi, dan status anemia pada siswa sekolah dasar. *Jurnal Gizi dan Pangan* **8**, 103-108 (2013). <https://doi.org:https://doi.org/10.25182/jgp.2013.8.2.103-108>