

DEVELOPING GREEN BEHAVIOUR IN INDONESIA: WHY DOES ADIWIYATA SCHOOL MATTER?

MOHAMAD HADI UTOMO¹, LIELI SUHARTI², GATOT SASONGKO², AGUS SUGIARTO^{2*}

¹Doctoral Program in Management, Universitas Kristen Satya Wacana, Indonesia. ²Universitas Kristen Satya Wacana, Jawa Tengah, Indonesia.

*Corresponding author: agus.sugiarto@uksw.edu

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Abstract: In line with the increase of complexity in environmental problems due to over-exploitation, it is necessary to care for the environmental program. Ecological literacy education needs to be realised in the programs of environmental care. One of the programs carried out by the government of the Republic of Indonesia to foster a sense of love for the environment for students is the Adiwiyata School program. This study aims to determine the importance of the Adiwiyata school program in an effort to increase students' ecological literacy. The method used in this research is qualitative descriptive with interview, observation and documentation as data collection techniques. The informants involved in this study are school stakeholders who have implemented national-level Adiwiyata schools, including principals, teachers, parents of students, students, officials of the environmental agency and officials of the education office. Results of the research show that the Adiwiyata school program is carried out in several dimensions: Integration of environmentally friendly behaviour in learning, carrying out environmentally friendly actions in the community around the school, establishing cooperation and communication networks, conducting campaigns and publications on environmentally friendly behaviour, forming and empowering Adiwiyata cadres.

Keywords: Green, adiwiyata, school, environment, sustainability.

Introduction

Environmental damage continues to evolve as human needs grow. The easiest way to meet the needs of human life is to take advantage of the surrounding environment. In utilising nature, man forgets to protect the environment from damage. This kind of situation does not happen if humans have environmental concerns. The character to always protect the environment is the hope to reduce the environmental damage that continues. Environmental damage in the form of illegal logging has brought bad humanitarian impacts to humans. As a result of this problem, 908 people died in 35 countries from 2002 to 2013. After 2015 the countries that have suffered the most from forest crimes are Brazil, Indonesia and Congo (Çaliskan *et al.*, 2022). This report shows that Indonesia is a country that is bad at handling the environment, especially logging.

Following up on the agreement, the United Nations (UN), through UNESCO, in charge of

education, knowledge and culture, is responsible for developing sustainable development through education. To achieve this goal, An Education for Sustainable Development (ESD) was formed as a form of continuation of the SDGs agreement. ESD is an approach where sustainable development materials are included in the school curriculum in ecology, social and economic (Parlupi, 2020). The realisation of ESD is a basic right for humans to carry out the life to come. The main activities of ESD are (1) teaching sustainable development materials, (2) encouraging various sustainable development research, (3) realising green schools, and (4) involving and utilising international networks to make sustainable development a success (Asdak, 2012). Education has a big hand in preserving the environment to achieve this great goal. Education for sustainable development provides key issues in Achieving Sustainable Development [Sustainable Development Goal (SDG)] (Azalea, 2019). Currently, Indonesia's

achievement in the 2020 SDG index is in 101st place out of 166 countries (Sarmila, 2020).

With the increasing urge to save the environment, various studies have been carried out related to how to build character and environmental care behaviours continue to be carried out. In various parts of the world, trying to save the environment manifests as Green Human Resource Development (GHRM). Chams and García-blandón, (2019) and Bombiak (2018) write that economic actors are beginning to realise the ethical, social and ecological objectives to be applied in managing the company. This study aims at sustainable development applied in companies by adopting ecological techniques implemented on sustainable human resources by applying sustainable strategy innovations.

In line with the above opinion, further Siyambalapitiya *et al.* (2018) and Sakka (2018) states that green HR management can improve company performance by involving environmental empowerment. The research results on applying green human resources in green supply chain management have a positive impact. The most positive impacts of green HR are green training and development, green employee empowerment, and green salaries and rewards. The obstacle in applying green HR in green supply chain management is resistance to change. Research in companies that implement environmentally friendly has been carried out by Yusoff *et al.* (2020). This is the first empirical study investigating the relationship between environmental performance and the hotel industry literature.

This study uses a research model that examines the relationship between green human resource practices and the environmental performance of the hotel industry in Malaysia. Research on preserving the environment was also conducted in hotels with different research subjects. Research has shown that green Human Resource management can encourage an organisation's commitment, foster environmentally friendly behaviour and maximise a company's performance (Kim *et*

al., 2019). Still, to build a green environment, Saeed *et al.* (2019) reported that the success of an organisation with a sustainable environment will be able to run depends on the behaviour of employees who have environmental awareness. Realising that environmental issues are a global concern, the world community jointly tries to preserve the environment. Research on building character and environmental care behaviour through the company's Green Human Resource Management (GRHM) concept has done a lot. As done by (Bombiak, 2018; Siyambalapitiya *et al.*, 2018; Sakka, 2018; Kim *et al.*, 2019; Saeed *et al.*, 2019; Chams & García-blandón, 2019).

In addition to research in the company, efforts to build the character and behaviour of caring for the company's environment, build character and behaviour care for environment are also carried out in the campus environment. As done by (Cristóvão *et al.*, 2012; Kim *et al.*, 2019; Saeed *et al.*, 2019; Zhu *et al.*, 2020; Yusoff *et al.*, 2020). The green campus program has a sustainability connotation where the development carried out today should not neglect the sustainability of the lives of future generations. Green campuses cannot be separated from three important dimensions: The environment, economy and society. The synergy between sustainable development and green campuses will always align with simultaneous development to fill each other (Zhu *et al.*, 2020). Four characteristics are developed in campus development: Scientific research, environmentally friendly, joint participation and cooperation with the community.

However, efforts to create environmentally caring character and behaviour are not all successful in the field. Still, regarding campus involvement in environmental stewardship, research by Cristóvão *et al.* (2012) sharpened the campus world's efforts to improve environmental quality. The application of a green campus also concerns campus operations, administration, organisation, campus leadership, learning, research, services to the community and campus activities. The concept of a green campus understood as a green environment, will

be more meaningful when the understanding of green is emphasised more on sociocultural aspects. As a generation that is expected to be able to provide changes in the environment, campuses need to have more awareness than other communities (Zhu *et al.*, 2020).

Numerous researchers have previously investigated the relationship between character building and environmental care behaviour. For instance, research in the corporate environment by Yusoff *et al.* (2020) in Malaysia and (Kim *et al.*, 2019) in Thailand. Saeed *et al.* (2019) also conduct something similar about the environment. In addition to research conducted in other research companies in Indonesia's campus environment, Anwar *et al.* (2020) have conducted research in Malaysia, Puspadi *et al.* (2016) also did the same at Parahyangan Catholic University and the National Institute of Technology in Bandung. However, these studies have never revealed how to form character and behaviours that care for the environment at the basic education level, especially at the junior high school level.

International Green School, Sumedang, carries out steps to cultivate character and environmental care behaviour through self-development programs, learning processes, and cooperation with related institutions (Nurellah *et al.*, 2018). The same thing is done by SMP Negeri 2 Adiluwih where character and environmental care behaviour are integrated through subjects (Rahmah *et al.*, 2014; Hafida & Wahid, 2018; Handayani *et al.*, 2020). At SMK Negeri 6 Malang, to instil character and behaviour of caring for the environment in schools, they carry out waste sorting activities through the waste bank program, clean Friday. Meanwhile, the practice carried out by teachers or education staff is giving examples, giving advice and warnings, and giving gifts (Oktariska *et al.*, 2018). Each school uses different ways to instil the character and behaviour of caring for the environment. As was done in Gujarat, India in instilling environmentally caring character and behaviour, exploring the use of social media to convey messages to school residents.

The social media used are Twitter, Facebook, text messages and other media. This effort has worked well to promote awareness of protecting the school environment (Puspadi *et al.*, 2016; Verma & Grover, 2021).

However, based on the many and varied steps taken by companies and campuses, schools in carrying out character education for the company and campus environment, it is necessary and urgent to make a more specific study that describes how guidelines build character and environmental care behaviour in schools by describing the steps of instilling environmental love that schools can do. Awareness to love for the environment among students in Indonesia is very urgent to do through environmental character education. The theme of the environment is very prominent today related to the increasing number of environmental damages in the form of disasters that cause misery for the wider community.

Rahmah *et al.* (2014) agree that schools are the right place to convey the message of nature conservation. The government realises this effort that the younger generation must get environmental character education. The cooperation between the environment minister and the national education ministry has issued a new regulation, the *Adiwiyata* program. This shows evidence of the importance of environmental conservation efforts starting from the scope of schools. According to its origins, the word *Adiwiyata* comes from Sanskrit, namely the word *adi*, meaning great, good and ideal.

Meanwhile, *wiyata* means a place to get knowledge, norms, and ethics in an environment of social life. The purpose of the *Adiwiyata* program is to make school residents aware of being responsible for managing the environment (Nurwaqidah *et al.*, 2019). While Rudy (2015) stated that the purpose of the *Adiwiyata* program is to condition the school to be used as a place for learning and a vehicle for awareness of school residents in the hope that in the future, they will have a sense of responsibility and efforts to preserve the environment and sustainable development. The character of caring for the

environment is highly emphasised for the success of the *Adiwiyata* program.

The motivation that drives this research is the researcher's distress when environmental damage continues to occur and has a tremendous impact on human life. All this happened due to the lack of human consciousness in preserving the environment. Therefore, it is necessary to find solutions to inhibit environmental damage by introducing character education and environmental behaviour to students in Indonesia. It is hoped that with this step, the school can contribute to understanding its environment to preserve it. This study describes the steps taken by schools in implementing *adiwiyata* school programs that aim to build character and environmental care behaviour at the best national *Adiwiyata* schools in Semarang City.

Various studies have been carried out related to how to build character and behaviour of caring for the environment in various fields and efforts to build character and behaviour care for the environment continue to be carried out. In different parts of the world, they are trying to save the environment, manifested in the development of human resources *adiwiyata*. Chams and García-blandón (2019) and Bombiak (2018) reported that economic actors are beginning to realise the ethical, social and ecological objectives to be applied in managing the company. This study aims at sustainable development applied in companies by adopting ecological techniques implemented on sustainable human resources by applying innovative sustainable strategies.

This concept is used to structure the framework of the phenomenon and use the acquired theory to decide the problem (Bergsteiner *et al.*, 2010; Irfianti *et al.*, 2016). In line with the above opinion, Renger (2021) states that the most meaningful learning in humanistic theory is learning built human-centred. This theory states that humans have the potential to learn. Learning will be meaningful if humans carry out activities with the same feelings. This experience will permeate your life

in the long run. As technology develops, work done together will benefit a person where life tends to be individual.

The purpose of this study is to explore the implementation of how to shape students' environmental care behaviour at the best national *Adiwiyata* school in Semarang City. The benefits of this research are expected to provide the following benefits to contribute thoughts to researchers on building character and behaviours that care for the environment through the *Adiwiyata* school.

Seeing such conditions, it is very necessary and important to carry out steps to find solutions for how schools can contribute to the handling of environmental conservation through *Adiwiyata* schools. With this step, it is hoped that students will be able to understand and carry out environmental conservation so that when they grow up they can become agents who spread the spirit of love for the environment. Based on the above motivations, we are exploring solutions to the above problems by conducting field studies to get an overview of how green schools are being implemented at the best national *Adiwiyata* schools in the city of Semarang, Indonesia. This article contributes to providing literacy on increasing the appreciation of the young generation, including students for the environment. Success in raising environmental awareness among the younger generation today will greatly determine their attitude and behaviour towards the environment in the future.

Material and Methods

The method used in this research is qualitative descriptive with interviews, focus group discussion, observation and documentation as data collection techniques. Data were collected in three schools (the best *Adiwiyata* school in Semarang City). Meanwhile, resource persons obtained written documents from observation and interview methods. Data collection involved three schools each consisting of one principal, two teachers, two students and one parent. While the informants from the government are the Education Office and the Environment Service,

each one person. In detail, the informants involved were from three schools each: (1) one principal (code A1-A3); (2) two teachers (code B1-B6); two students (codes C1 –C6); (3) and one parent (code D1-D3); one informant from the Education Office (code E1), one from the Environment Agency (code F1). The total informants involved in this study were 20 peoples. The FGD involving three schools was conducted to find out how and to what extent the *Adiwiyata* school program was implemented in schools.

Interviews were also conducted with officials from relevant government elements to learn about school policies regarding *Adiwiyata*. The interview was conducted in a semi-structured manner where the researcher used a question guide that contained questions with the development of questions outside the interview guidelines that were still related to implementing the *Adiwiyata* school development. The FGDs conducted in schools were group discussions in which each school was represented by the principal, teachers, students, and parents. Discussion using one room guided by the researcher using short questions and documented in audio recordings. Observations were made by observing the existing facilities and infrastructure in schools related to *Adiwiyata* school development activities in schools.

Qualitative data analysis techniques include data reduction, data presentation and conclusion. At the same time, the data validation used a triangulation technique of data sources, namely data obtained from several research informants, the principal school group, teacher informant group, parent informant group, student informant group, and government informant group.

Results and Discussion

In implementing the *Adiwiyata* school program, identification steps need to be carried out to clarify the steps to realise the *Adiwiyata* School, which aims to build character and environmental care behaviour. Regulation of the Minister of Environment and Forestry of the Republic

of Indonesia Number P.52/Menlhk/Setjen/Kum.1/9/2019 concerning the Movement for Environmental Care in Schools (GPLHS) states that the implementation of the GPLHS includes (1) learning that is integrated with the application of environmental behaviour in schools; (2) apply environmentally friendly behaviour to the community around the school; (3) establish work and communication networks; (4) conduct campaigns and publications on environmentally friendly behaviour; (5) form and empower *Adiwiyata* cadres.

Related to the First Dimension

Namely learning that is integrated with the application of environmental behaviour in schools, the following are the results of interviews with various informants.

Since we became champions of healthy schools in 1995, in 1996 we began to declare as an adiwiyata school. Since then, we have integrated the environment into classroom learning planning (B1). Some studies have introduced environmental conservation by using used materials for learning media. We try to minimise the waste thrown out of the school (B6).

The informants said that in implementing intracurricular learning, schools with the status of *Adiwiyata* schools had the awareness to insert environmental messages in their learning plans. In environmentally friendly learning planning, all learning steps from beginning to end always relate to environmentally friendly awareness. The learning process includes hygiene, sanitation and drainage functions, waste management, tree planting and maintenance, water conservation, and energy conservation.

In making projects, used goods that can still be used as much as possible will be reused. Teacher assignments to students related to the environment, such as water purification assignments, environmentally friendly slogans,

To foster a sense of love for the environment, we schedule every Friday

as a day of cooperation. On that day, all school residents worked together to take care of the environment by cleaning the environment by planting one of them (B3).

The results of an interview with a teacher said that for environmental action, it is necessary to make habituation that is carried out regularly every week by inserting one day a week, about 40 minutes to carry out environmental activities. The activities carried out are cleaning the environment, caring for and planting plants, and cleaning facilities and facilities in the classroom environment.

In carrying out the adiwiyata program, we schedule the habit of loving the environment on Friday. However, sometimes they do not return the tools they brought. This habit empowers adiwiyata cadres (B3). Adiwiyata is a movement to educate school residents on environmental conservation through habituation. Adiwiyata is not a competition (B5).

From the information above, it can be concluded that in addition to taking special time for habituation, it is necessary to establish rules regarding the regulation of the tools used in environmentally friendly habituation. Habituation materials that can be done in schools are cleanliness in the school environment, sanitation function and the smooth running of water in schools. The material that can be applied during habituation is waste management by reducing waste through reduction, reuse and recycling. Tree planting and maintenance are necessary. The more school residents participate in planting trees, the better the number of trees planted will be.

In habituation activities that can be done is water conservation by saving water, reusing water that has been used, treating wastewater to be reused, utilising rainwater to be absorbed by the soil, utilising water reservoirs such as making biopores, infiltration wells, and planting trees. Save energy as much as possible. Making

energy use rules is emphasised. Furthermore, it is necessary to try to make power plants from the potential available in the school environment, for example, using water, air and other sources.

The storage of this item needs to be made rules so that the cleaning tools used can be stored properly.

Pancasila Student Profile Development Project (P5) is intended to shape character and this activity is not related to the subject matter in intracurricular activities (B2). There, students learn a lot about the existing characters, namely (1) having faith, fearing God Almighty and having noble character; (2) global diversity; (3) mutual cooperation; (4) independent; (5) critical reasoning; and (6) creative (B4).

The interview above reveals that apart from intracurricular learning activities, there is a place for students to develop character, namely the Pancasila Student Profile Development Project (P5). A sustainable lifestyle is one of the P5 materials that focus on environmental awareness.

Based on the results of interviews and Focus Group Discussions (FGD), the dimensions of intracurricular, extracurricular and self-accustoming learning activities that are integrated with environmental behaviour in schools can be seen in Table 1.

From the table above, the first dimension is learning that is integrated with the application of environmental behaviour in schools, where this can be applied to intracurricular learning activities, habituation activities, project activities to strengthen the profile of Pancasila students, extracurricular activities (Asdak, 2012; Kerret *et al.*, 2020). This aligns with the opinion that environmental learning will be more enjoyable if environmentally friendly messages are inserted into learning at school. The learning process with various choices will provide a comfortable feeling for students, so it is hoped that students with feelings of pleasure can accept

Table 1: The first dimension of learning activities that are integrated with the application of environmental behaviour in schools

Sub-Dimensions	Actions Performed
Intracurricular Activities	The theme of environmental conservation is included in the lesson plan. The learning process from beginning to end always relates to elements of environmentally friendly awareness, for example waste management.
Habituation Activities	Activities are carried out regularly every week by inserting one day a week, about 40 minutes to carry out environmental care activities through mutual cooperation in cleanliness in the school environment.
Pancasila Student Profile Development Project Activities	Learning is carried out in conjunction with intra-curricular learning that focuses on building sustainable lifestyle characters.
Extracurricular activities	The formation of environmental care characters can be obtained by students from extracurricular activities given once a week outside of learning hours.

the environmental message according to their choices. Environmentally friendly awareness students possess during learning will foster a character to love the environment. Growing environmental knowledge in students will foster caring and responsible characters, which can be a solution for handling the environment (Suryani *et al.*, 2019).

This is also in line with what Somwaru (2016) conveyed: Environmental programs implemented in schools through learning will affect positive behaviour in the environment in which students are located. Introducing biodiversity, waste management, recycling, water conservation, and electricity will influence positive attitudes towards environmentally friendly characters. In line with opinion, Karunakaran and Verayiah (2018) said that the scope of the environmental program includes water efficiency, thermal comfort, air quality, lighting, visual health and space utilisation. Contrary to the results of this study, a previous study on *adhiwiyata* schools did not include the Environment-Based Curriculum Implementation component (Roswita, 2020).

Related to the Second Dimension

Implementing actions in environmentally friendly behaviour to the community around the school, the following are the results of interviews

with several informants. The following three informants share almost the same view regarding the need for school-community collaboration. Here is an excerpt from the interview:

We often hold social services with the local community and the TNI for real work planting bare and arid hills as an effort to reforest and conserve the environment (B3).

Carry out environmental clean-up activities in the school environment every first Friday. There has been an activity to clean the river/river around the school (A3).

Schools and communities in the school environment must establish good cooperation in maintaining a friendly environment. Together, schools implement collaborative activities that implement joint activities. By carrying out this collaboration, the community can feel the benefits of the school's existence on the environment. The form of activities that schools can carry out is to carry out environmental hygiene through collective work, cleaning waterways and sorting waste using 3R, reduce, reuse and recycle. A2, who conveyed the relationship between schools and agencies outside the school in creating environmentally friendly activities, did the same thing.

We also educated on the importance of making rainwater absorption in natural biopores when we made 1033 biopore holes in collaboration with the association of parents, committees, and universities (A2).

In establishing cooperation in building an environment with the community, planning a schedule that includes when and what will be done is necessary. The following are the results of interviews with B3 informants who scheduled when the collaboration will be carried out.

....Teachers and employees are involved in the daily scheduled agrowiyata management. Management of agrowiyata is one of the requirements of Adiwiyata school (B3).

In their interviews, informants B3 and A2 mentioned who was involved and what was being done. Waste sorting can be done by OSIS, MPK and the cleaning team (cardboard, plastic paper, bottles) collected and sold, and the sales proceeds are put into the *Adiwiyata* Cash managed by the *Adiwiyata* (B3) team.

One of the recommendations of the committee and parents' association so that many children make patterns from waste, including making planting media. which also received an award from Lepid (A2). When carrying out healthy walks, we also pick up garbage, garbage is collected and then thrown into its place, and students are given twelve sacks to pick up trash along the way (B5).

Based on the results of the interview above, an overview of the second dimension of implementing environmentally friendly behaviour in the community around the school can be seen in Table 2.

The second dimension is the application of environmentally friendly behaviour to the community around the school with the understanding that the community is a partner of the school with environmental home behaviour actions. To realise environmental friendliness, it is necessary to take joint action with the schedule and agenda that has been planned. As stated by Zhao *et al.* (2015), the school as a special community does not only live within the walls of the school but needs to be an effort to spread the spirit of love for the environment to the surrounding community.

Jaszczak, Vaznonienė and Vaznonis, (2018) stated that in implementing environmental education, schools must build participation with the surrounding community through various activities. Social consciousness will be formed by carrying out activities like this, which was originally passive into an active figure. Further afied Dos Santos *et al.* (2019) as a methodological tool and interdisciplinary practices related to family agriculture. A descriptive methodology and field study was used. The community's wishes on the school were diagnosed, and recyclable materials that could be inappropriately discarded in the environment were used. For better representation was used AutoCAD software. Through this study, it was possible to plan two types of vegetable gardens (nursery bed and mandala style added that

Table 2: Applying environmentally friendly behaviour to the community around the school

Sub-Dimensions	Actions Performed
Partnership	Partnering with the surrounding community, the Indonesian National Armed Forces (TNI), school committees and non-governmental organisations to carry out environmental hygiene actions.
Environmentally friendly behaviour	Activities are carried out in the form of community service to clean the environment, the river around the school, social services by distributing tree seedlings to the community, and planting trees on some arid lands.

collaborating with parents in the environment is very important to be implemented in schools. A positive inner atmosphere will be formed between students and parents by carrying out activities with parents. While Addi-Raccach *et al.* (2018) emphasise that the relationships between students and parents will impact social, and institutional change. This collaboration will eliminate barriers between students in schools and communities outside the school. Previous research also suggests that *Adiwiyata* School is expected to be an agent of change for the community in the environment around the school (Kamil *et al.*, 2020). In addition, this finding is also in line with the results of a previous study showing that environmental preservation is carried out not only in the internal context of the school. Environmental preservation is primarily focused on preserving the Brantas River basin. External parties involved in this project consist of non-profit organisations, civil society, and other stakeholders (Syaifulloh *et al.*, 2022).

The Third Dimension

Forming a network and communication, was discussed following interviews with several informants. The following is an excerpt from an interview with informant A2:

In carrying out the school program, we form an important network and it is necessary to implement the realisation of an environmentally friendly school, including the fishery department, the agriculture office, the environment office and a creative house owned by one of the student's parents (A2).

He said that it was necessary to cooperate between schools and the community in realising environmentally friendly schools. Communicating with parties outside the school, such as the agriculture office, fishery office and other parties, is much needed. A1 conveyed another point of view related to establishing relationships in the following interview that establishing relationships with other parties is necessary because of the limited funds provided

by the government to preserve the environment. This collaboration aims to assist related parties in financing environmental programs.

This was done considering that to develop a very wide school, the allocation of BOS funds was not sufficient so that networks and communications needed to be built with outside parties to help schools seek plant seeds, fish seeds, perennials, rare plants, procurement of supporting facilities for school hygiene, waste management, and others (A1).

The form of network building can be done through competitions, as stated in his interview with B1 as follows:

To excite school environment activities, participate in a green school management competition organised by Semarang State University (B1). Adiwiyata socialisation at every opportunity to meet guests, parents, and stakeholders anytime. Work with associations in "school inspection" activities to assist schools in environmental care (B5).

Networks that have been established with other agencies can even provide donations in the form of assistance or environmental cleaning tools. As stated by C1 as follows:

The environmental service always provides support in the form of education about the environment as well as assisting in the form of a trash can (C1).

Based on the results of the interviews above, an overview and summary of activities from the third dimension to form a network and communication can be seen in Table 3.

The third dimension is the formation of networks and communication. In this dimension, it is necessary to establish a process of building communication, building a communication network with several parties and parties involved

Table 3: Forming a network of work and communication

Sub-Dimensions	Actions Performed
The process of building communication.	Building communication with various ideas and parties, infrastructure for environmental management, and potential resources that can be synergised.
Using the communication network	The communication network is carried out through community meetings, training, socialisation, aid proposals, and green school management competitions.
Parties involved in networking	Those involved in the network are agencies related to the environment, universities, the business world, waste management, committees, environmental activists, and environmental NGOs.

in networking. The principal's role is decisive in building networks with environmental communities outside the school. The role of the community in growing environmental programs in schools has a big role. Schools can create environmental empowerment programs in the community to build environmental understanding (Green, 2018).

Lee, Vare and Finlayson, (2020) revealed that schools need to develop public opinion as institutions that play a role in the environment. Development in this field will be successful if the school can synergise with the outside world. Denan (2017) explained how Non Governmental Organisations (NGOs) need to collaborate to build synergies to create green education in schools. The benefit of this partnership is how to make the shortcomings in schools can be supplemented by environmental institutions such as NGOs. Mustika *et al.* (2020) focus more on how schools improve communication skills and adaptability. Partnerships with institutions that are of environmentally friendly concern need to be constantly developed.

The Fourth Dimension

Conducting campaigns and publishing environmentally friendly behaviour along with excerpts of interviews with several informants. In his interview, A2 informant conveyed the form of publication used to change the mindset of being environmentally friendly.

...When parents gather, the school provides information about the school's efforts to install love for the environment (A2).

Meanwhile, Informant A3 conveyed about the media used to campaign for environmental conservation through logos and writings installed in various school places.

In conveying messages to school residents, we put the Adiwiyata school logo in every corner of the school using MMT/ or other mediaseeks to carry out campaigns and publications of environmentally friendly behaviour through flyers, MMT and posters posted in the school environment as well as social media (facebook, instagram) and school bulletins (A3).

The results of the interview with Informant A3 revealed that there need to be parties who must have a common understanding of environmentally friendly programs to be given an environmentally friendly understanding.

...we provide adiwiyata socialisation at every opportunity when meeting with guests, parents, and stakeholders in every moment (A3). In addition to counselling internally, we also counsel mothers who live outside the school environment (B5).

Informant A2 tried other media in campaigning for environmental care through other forms. Here are the results of the interview.

Socialisation about environmental friendliness is delivered through online media such as IG Instagram and Facebook websites and WhatsApp groups. It is also documented through TVRI Kompas TV and other print media (A2).

Based on the results of the interviews above, an overview of the fourth dimension of conducting campaigns and publishing environmentally friendly behaviour can be seen in Table 4.

The fourth dimension is the campaign and publication of environmentally friendly behaviour that tries to change the mindset, campaign materials and publications, conduct campaigns to internal and external parties and use the media as a message conveyer to the wider community. This is in line with what is done by Verma and Grover, (2021) who said that the role of social media in campaigning and publicising school environment programs is very important. With the effective use of media, sustainable environmental practices in schools will gain popularity in both internal and external spheres of the school.

Soomro *et al.* (2020) wrote that efforts to campaign for the environment in schools could be done in various ways, such as distributing leaflets, print and digital as well as other forms of promotion. Verma and Grover (2021) emphasise social media more in spreading environmental information. This media is used to disseminate and publicise green campaign activities. In addition to efforts to campaign for school environment programs, Verma and Grover, (2021) place more emphasis on the internal development of schools by improving the quality of understanding of green education through improving the methods and teaching of environmental curricula. The method is taken through training and socialisation of environmental teaching materials.

The Fifth Dimension

Relates to forming and empowering *adiwiyata* cadres and excerpts of interviews with several informants. The interview results with A2 can be obtained information that the *adiwiyata* cadre was formed to drive environmental programs in the school.

... was also initiated by committees and groups so that in addition to having a cadre of change agents in high schools, it is also important to have cadres (A2).

Table 4: Campaigns and publications of environmentally friendly behaviour

Sub-Dimensions	Actions Performed
Changing mindsets	Various forms of campaigns and invitations to build the environment through the learning process in the classroom, committee and parent meetings, and socialisation counselling to the community around the school.
Campaign materials and publications	Materials related to efforts to preserve the school environment include waste management, tree planting, and biopore making.
Campaigns to internal and external parties.	Parties who need to understand school policies related to the environment through outreach activities and outreach to students and the community around the school.
Media used	Media used to campaign for environmentally friendly school websites, Instagram, Facebook, WhatsApp, posters, school magazines, printed mass media, and television.

Furthermore, informants A3 and A2 added about the formation of *adiwiyata* cadres by giving the name of the cadre group. Here are the results of the interview.

In order to encourage the team of cadres of adiwiyata school formed an extra-curricular ACIL (I Love the Environment) which is held every Tuesday. Their task is to be pioneers in creating eco-friendly schools (A3). This Adiwiyata cadre was taken from the hygiene section of each class in the trust to educate his friends to make works from waste (A2).

A1 informants provided data that after the cadres were selected, they carried out the program the school's *adiwiyata* team had created. The program they will do is as follows.

Adiwiyata Cadres were formed through the Decree of the Adiwiyata Cadre committee which has a work program covering 6 areas, namely hygiene of sanitation and drainage functions, waste management, planting and maintenance of trees/plants, water conservation, energy conservation, and innovations related to environmentally friendly applications (A1).

The A3 informant revealed that the *adiwiyata* cadres were selected based on a selection process made by the school.

In determining the cadre of adiwiyata we organise a selection of students and

the committee for the selection of cadre members is selected by the teacher (A3).

After being elected, the school leaders will provide a certificate of appointment as a cadre of the school's *adiwiyata*. The number of *adiwiyata* cadre members in the school should ideally be at least 20% of all students. The results of the interview with B3 showed that the formation of *adiwiyata* cadres was not only recruited from students but also from teachers and school employees.

Based on the interview results above, an overview of the fifth dimension, namely forming and empowering *adiwiyata* cadres, can be seen in Table 5.

The fifth dimension is the formation and empowerment of *adiwiyata* cadres. For this reason, it is necessary to determine the purpose of the formation of cadres, the selection process and the main duties of *adiwiyata* cadres. In providing an understanding of the environment to students, schools need to provide environmental projects to students, such as creating a school garden where the process of planning to maintenance is all carried out by students with the community formed (Serra, 2020).

Taşar (2020) said that environmental materials in green schools consist of environmental awareness, environmental management, and sustainable development. This material is given at school by various methods. Djuwita and Benyamin (2019) said that applying environmental education to teacher

Table 5: Forming and empowering Adiwiyata cadres

Sub-Dimensions	Actions Performed
Formation of Adiwiyata cadre community	Formation by the leadership through the Decree of the Principal. The knowledge and skills that <i>adiwiyata</i> cadres must master are divided into several fields. The school's Adiwiyata cadre team consists of elements of students, teachers and parents,
Selection process for <i>adiwiyata</i> cadres	The selection process for Adiwiyata cadres is carried out in each class. Teachers and students agreed to select a few students to become Adiwiyata cadres.
Determining the main duties of Adiwiyata cadres	Compile a list of duties and responsibilities of Adiwiyata cadres.

playgroup children must focus on environmental knowledge and internalising pro-environmental values through habituation. Karunakaran and Verayah (2018) broadly explained green school materials, including energy efficiency, water, thermal comfort, indoor air quality, lighting efficiency, visual health, acoustics, and room utilisation.

At the end of the discussion, the following is a summary of the dimensions of the implementation of the *adiwiyata* school environmental care movement as a result of exploration from various research informants.

Figure 1 shows that the first dimension carried out by the *Adiwiyata* school is to integrate the learning process with the application of environmental behaviour in the school. This is done in intracurricular learning activities, habituation activities, project activities to

strengthen the profile of pancasila students, and extracurricular activities.

The second dimension is the application of environmentally friendly behaviour to the community around the school by applying that the community is a partner of the school and the behaviour action of the environmental house. To realise environmental friendly, it is necessary to take joint action with the schedule and agenda that has been planned. The third dimension is the formation of networks and communications. In this dimension, it is necessary to form a process of building communication and communication networks with several parties involved in networking. The fourth dimension is the campaign and publication of environmentally friendly behaviour that tries to change the mindset, campaign materials and publications, conduct campaigns to internal and

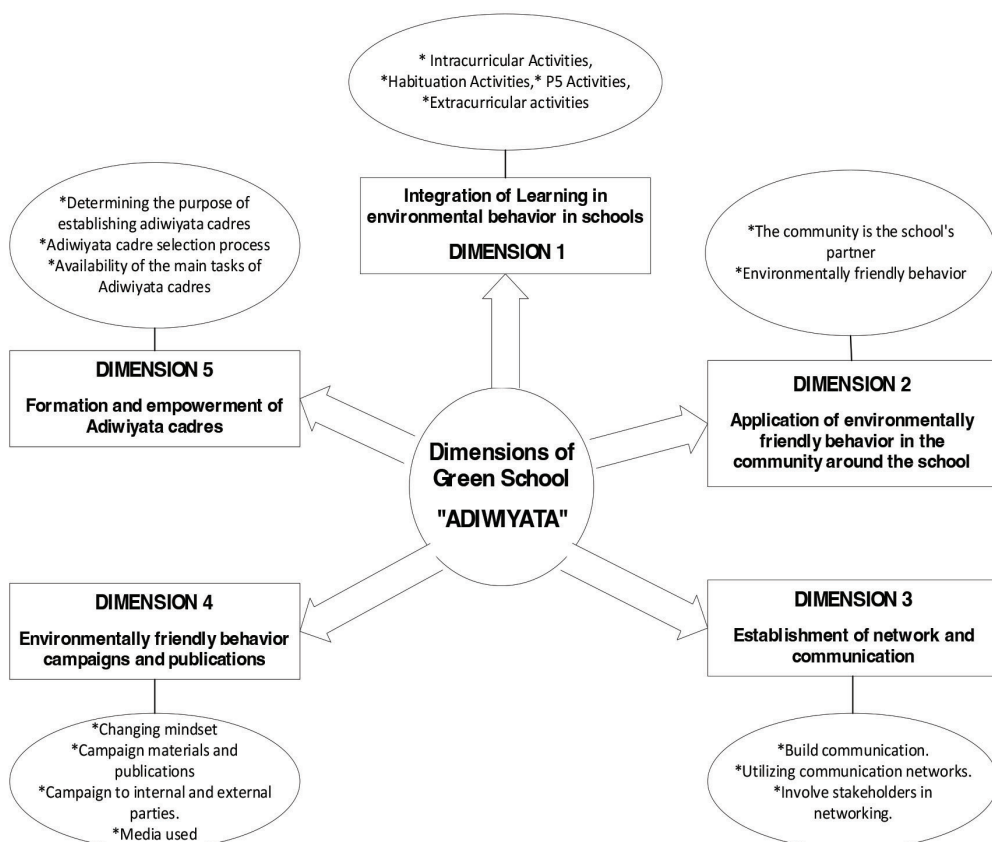


Figure 1: Dimensions of Adiwiyata School Activities in Indonesia

external parties and use the media as a message conveyer to the wider community. The fifth dimension is the formation and empowerment of *adiwiyata* cadres. For this reason, it is necessary to determine the purpose of the formation of cadres, the selection process and the main duties of *adiwiyata* cadres.

The five dimensions of environmentally friendly activities at the *Adiwiyata* school are related to several supporting references. The implementation of the built environment program cannot be separated from the learning process provided through learning. Lee and Kim (2017) conveyed that environmental learning in schools can raise students' awareness of being environmentally friendly. The results of this study are also in line with the results of previous studies, which suggest that the *Adiwiyata* Program enhances learning and action, thus providing an effective method for increasing students' environmental literacy (Kamil *et al.*, 2020). It was also conveyed that increasing environmentally friendly awareness requires partnerships with external parties of the school related to the environment.

In addition, it was also conveyed that student organisations engaged in the environment play a very important role in environmental conservation. The results of this study are also in line with the results of previous studies which show that the design of strengthening cultural literacy in *Adiwiyata* schools includes aspects related to river culture into the four components or standards of *Adiwiyata* schools which consist of environmentally sound policies, implementation of an environment-based curriculum, participatory environmental-based activities. environment, and management of supporting facilities that are environmentally friendly (Fahlevi *et al.*, 2021).

Further Shay-Margalit and Rubin (2017) state that environmental education formed from learning in schools involving students positively affects environmental attitudes. It is also said that environmental education will form a direct impact on students' awareness of the environment. Related to satisfaction in

participating in environmental activities Kerret *et al.* (2020) convey that students who are involved in environmental activities at school will feel more satisfied with the environmental conditions in their school. Somwaru (2016) highlights environmental programs in schools that impact improving the quality of learning. Meanwhile, Hennemann *et al.* (2021) highlight the principal's dominant role in networking and communication with environmental policymakers. With the various collaborations by the principal, more and more external parties will participate in building the school environment.

It is said that it is necessary to establish cooperation with the environmental community. The dimensions that support the school environment program by Shehu *et al.* (2018) said that to build green schools, it is necessary to form green social media that continues to voice the environmental programs carried out in schools. In addition, it is also said to be a green network that cooperates with parties who care about the environment. The results of this study are in line with Nurrochmat *et al.* (2022) research results which show that several factors include environmental awareness, use of open space and facilities, extracurricular activities, creativity and innovation of school members in the form of environmental management, and promotion of environmental preservation. Student participation increases due to school governance (vision, mission, and goals), teachers, facilities and infrastructure, parents, school community, and stakeholders. Such a situation is considered the main goal of establishing an *Adiwiyata* school.

Conclusion

Becoming a green school can be done through the *Adiwiyata* School program. *Adiwiyata* school has a standard of action that needs to be done. The government has set the implementation of the *Adiwiyata* school action program, in this case, the Ministry of the Environment in five dimensions of action. The five dimensions of action are first, by conducting integrated

learning on applying environmental behaviour in schools. These activities are carried out through several things, namely intracurricular learning activities, habituation activities, project activities to strengthen the profile of Pancasila students, and extracurricular activities. The second dimension of action is to carry out environmentally friendly behaviour actions in the community around the school. This is done by partnering with the community as school partners and taking environmentally friendly behaviour actions around the school. The third dimension of action is to establish a network and communication. This is done by building a communication process, using a communication network, and involving the parties. The fourth dimension of action is conducting campaigns and publishing environmentally friendly behaviour. This includes changing mindsets, preparing campaign materials and publications, conducting campaigns with internal and external parties, and using the right campaign media. While the fifth dimension of action is the formation and empowerment of *Adiwiyata* cadres. This is done by establishing the *Adiwiyata* cadre community, conducting a selection process for *Adiwiyata* cadres, and arranging the main tasks of *Adiwiyata* cadres.

Some of the programs carried out to support the implementation of the *adiwiyata* school environmental care movement are intracurricular activities, habituation activities, program activities to strengthen the profile of Pancasila students, extracurricular activities, the community as school partners, environmentally friendly behaviour actions, the process of building communication, communication networks used, parties involved in networking, changing the mindset, campaign materials and publications, campaigns to internal and external parties, the media used, the purpose of the formation of *adiwiyata* cadres, the process of selection of *adiwiyata* cadres and main *adiwiyata* cadres.

The theoretical implications of previous studies conducted by Berkowitz (2014) are that schools are suitable places to cultivate

environmental character, while the practical implications of this study are aimed at the city or district education office in Indonesia. It is specifically aimed at schools that implement the *Adiwiyata* program. The steps for implementing this environmental care movement align with the Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number P.52/Menlhk/Setjen/Kum.1/9/2019 concerning the Environmental Care Movement in Schools.

The implication of the theory is to contribute thoughts to researchers on how to build character and behaviour of caring for the environment through *Adiwiyata* schools, enriching existing theories about building character and environmental care behaviour through *Adiwiyata* schools. Meanwhile, the applied implication is to give an idea of the steps taken by *Adiwiyata* schools in building character and behaviour that cares for the environment.

The limitation of this study is using more subjective informants who have a strong risk of reducing the objectivity of the research results. In addition, this research was carried out during the COVID 19 pandemic, so there was limited time to conduct face-to-face interview interactions. Meanwhile, the advantages of this research involve three schools that have had a reputation as national-level *adiwiyata* schools. In addition, the data obtained through this study is more in-depth than the results of other studies so that it can better describe the real conditions related to the formation of environmentally friendly behaviours for students through the *adiwiyata* school program.

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