

Teachers' and Students' Green Behaviour of *Adiwiyata* Targeted School

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Abstract. This research has three aims; knowing the socialization and internalization of four *Adiwiyata* components by foster school to targeted school, explaining regulations that are implemented at foster school towards becoming *Adiwiyata* school, and describing teachers' and students' green behaviour at targeted school. Case study method is used and the research subjects are the principal (and/or vice-principals), *Adiwiyata* team of the school also teachers and students of targeted school. The finding of the research shows that the main obstacle in carrying out the socialization and internalization of four *Adiwiyata* components is miscommunication. In addition, the regulations implemented by principal in targeted school give more emphasis on school facilities and infrastructures. However, teachers' and students' green behaviour at targeted school is supported by environmental based repetitive activities.

1. Introduction

The dynamic relationship beyond environmental awareness, self-regulation, and environmental competency will cause a tendency to protect the environment. The environmental awareness is very needed to create a healthy environment. That awareness is called the Eco literacy which is had to be taught and be understood since early stage, so it could be a good habit that will become a characteristic. One of this Eco literacy's results is the green behaviour. If the green behaviour is continuously implemented, it will prevent any damaged environment in the future.

This research will discuss about the teachers and the students' green behaviour at *Adiwiyata* targeted school. *Adiwiyata* is a program of The Ministry of Environment co-working with The Ministry of Education and Culture that makes the formal educations (elementary school, junior high school, and senior high school) become its target. This goal is to manifest a cultured environmental awareness at the school. In 2014, Bandung City has 50 schools (20 elementary schools, 20 junior high schools, 6 senior high schools, and 2 vocational schools) that got *Adiwiyata* Awards. One of the awarded schools is 015 Kresna elementary school. 015 Kresna elementary school cultivates 9 different elementary schools to be an *Adiwiyata* School. One of them is 154 Citepus elementary school. 154 Citepus elementary school was elected as research location. It is based on whether as a targeted school of 015 Kresna Elementary School and failed on *Adiwiyata* Award in 2016 [1]. According to the explanation above, the statements of problem are:

- a) How does 015 Kresna Elementary School socialize and internalize four *Adiwiyata* Components onto 154 Citepus Elementary School?
- b) What is the implemented policy at 154 Citepus Elementary School to become an *Adiwiyata*



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School?

- c) How the teachers' and the students' is green behaviour at 154 Citepus Elementary School?

With those statements of problem above, the teacher will know how 015 Kresna Elementary School socializes and internalizes four *Adiwiyata* Components onto 154 Citepus Elementary School, the implemented policy at 154 Citepus Elementary School to become an *Adiwiyata* School, the teachers' and the students' green behaviour at 154 Citepus Elementary School.

2. Methods

This is a qualitative approaching with case study. Qualitative research is used to explore a phenomenon. It will be generated that the teachers' and the students' green behaviour of *Adiwiyata* targeted school, is a research object counting heavily on a case. So, the case study is obviously a right method which is included into qualitative approaching. This research is an intrinsic case study, because it's meant to understand more about the teachers' and the students' green behaviour of *Adiwiyata* targeted school. *Adiwiyata* and green behaviour have a correlation to each other, because both are related to environment. Green behaviour may be increase as well as the school preparation to be an *Adiwiyata* School. It's because the foster school its self has continuously sunk one's teeth for the school society.

The location of research is in 015 Kresna Elementary School and 154 Citepus Elementary School. 015 Kresna Elementary School is located at Jl. Kresna No. 47 Kel. Arjuna Kec. Cicendo, Bandung. This school was chosen as the place of the research because of the *Adiwiyata* awarded school which cultivates 154 Citepus Elementary School as one of its nine targeted schools. 154 Citepus Elementary School is located at Jl. Citepus II, Astana Eyang which is next to Simaraga public graves. 015 Citepus Elementary School was chosen as the second researched school because: It's been a targeted school of 015 Kresna Elementary School and It was failed to get *Adiwiyata* Award in 2016.

This research used purposive sampling, so the subject of the research was determined with some criteria as followed:

- a) The headmaster or his representative

This research was used as the same time with the rotations of headmasters in Bandung, so either the previous headmaster or his representative would have been interviewed. The interview was all about the socialization activity at the targeted school and the policy that would be implemented there. The headmaster would also be observed about the green behavior, if he or she was there.

- b) The *Adiwiyata* team

The *Adiwiyata* team on this research is the main team also called the coordinator in every fields handling *Adiwiyata* at both the foster school and the targeted school. There will be different collected information from every *Adiwiyata* team. The collected information from the main team or the coordinator about the foster school (015 Kresna Elementary School) is about the internalization and the socialization of four *Adiwiyata* components that implemented at targeted school (154 Citepus Elementary School) to be an *Adiwiyata* school. On the other hand, the collected information from the main team or the coordinator of targeted school (154 Citepus Elementary School) is all about coaching from 015 Kresna Elementary School and the preparation become an *Adiwiyata* School. Interview and document analysis would be used as the data collection technique from the main team or the coordinator at the targeted school and the foster school.

- c) Teachers and Students of 154 Citepus Elementary School

Involving the implemented policy into learning activities is one of many ways to implement the policy its self. The teacher designs an exciting learning activity, so the students could actively contribute by that time. This is according to the achievement of *Adiwiyata* awards' scoring standard. So, the document analysis in the form of taught lesson plan related to the environment would be involved in data collection. Another collected information from the teachers overall (not in individual) is about the practice of the green behavior at the targeted school. It is the same as the

collected information from the students overall at the targeted school, since they have been the object of this research. Meanwhile, the students randomly would be interviewed about the socialization of *Adiwiyata* and its activity with environmental insight.

Basically, the instrument of qualitative research is the researcher itself. However, the researcher is supported by the interview guidelines, field notes and photograph documentations. These are the explanations about the data collection technique that would be used during the research.

a) Interview

The structured interview is used to get the data about teachers' and students' green behavior at the targeted school, and its socialization and internalization held by the foster school. The parties that would be interviewed are the headmaster or his representative, *Adiwiyata* team and the random students both in the foster school and the targeted school. In particular, the interview materials for the *Adiwiyata* team at the targeted school would be all about the environmental awareness behavior or the green behavior. Meanwhile, the random students would be interviewed about their knowledge of 154 Citepus Elementary School that is processing to be an *Adiwiyata* school and related materials about the environmental awareness behavior or the green behavior.

b) Observation

Participatory observation used as the observation method and the field notes as its instrument. The researcher has noted the observation subject's activity. The focus materials of this observation are the teachers' and the students' green behavior and the cleanliness at *Adiwiyata* targeted school. All behavior, especially related to the environmental awareness, would be written on the field note.

c) The study and document analysis

The documents in this research are referred to the archives related to *Adiwiyata* both at the targeted school and the foster school. The agreement letter between 015 Kresna Elementary School and 154 Citepus Elementary School, 154 Citepus Elementary School's *Adiwiyata* certificate and 154 Citepus Elementary's planning program would be the observation focus materials. Besides, the lesson plan and the photograph documentation of the school's environmental activities would be analyzed to strengthen the necessary information.

Data analysis in this research consists of pre-field and on-field data analysis. Field analyses are based on Miles and Huberman methods which are divided into a number of stages which is data reduction, data presentation, and conclusion.

3. Results and Discussions

Based on interview with the *Adiwiyata* Team from foster school and targeted school regarding the socialization and internalization of the four *Adiwiyata* components, there are four findings discovered, firstly, Miscommunication between foster school and targeted school's *Adiwiyata* team: The foster school's *Adiwiyata* Team (015 Kresna Elementary School) has done an socialization activity with all of the targeted school during the signing of MoU on the date of March, 8th 2016. The foster school's *Adiwiyata* Team was expecting that the socialization that carried out in the initial meeting would later motivate other school's *Adiwiyata* Team. Apparently, it did not occur on the 154 Citepus Elementary School's *Adiwiyata* Team. 154 Citepus Elementary School assumed that they would take in direct coaching from 015 Kresna Elementary School in the Citepus vicinity. This also firmly stated with statements from the coordinator of the program whom states that previously 015 Kresna Elementary School as the foster have not given any kind of coaching.

According to the targeted school's *Adiwiyata* Team, a coaching activity would contribute to a greater effect for the continuance of *Adiwiyata* program in their schools. The targeted school would also help out with the knowledge shared by the foster school's *Adiwiyata* Team. Students from the targeted school would be facilitated with the distribution of knowledge and training regarding waste processing, the making of fertilizer, biopores, and other participative activities. This would also

parallel with the school foster's *Adiwiyata* Team that attempted to give coaching activity but required to be given permission from the new headmaster in order to held a coaching activity. The permit coped with forwardness of the new headmaster and 015 Kresna Elementary School itself on coaching other targeted schools.

Secondly is Miscommunication takes place in targeted school's circle : Based on interviews with the coordinators of the program, the coordinators of the program claimed that they were unaware that 154 Citepus Elementary School is one of the targeted school of 015 Kresna Elementary School for the *Adiwiyata* program. Some teachers said in interviews that they were disoriented about what should be done as a result of the absence of direct order from the school's headmaster or the *Adiwiyata* Team chairman. Despite of that, the chief of each *Adiwiyata* Team from the targeted school consistently carry out activities related with environment. One of the examples are turning a no longer used globe into a media to write down student's pledge to love the environment. The implementation of the program is confirmed by the students.

Thirdly is Lack of preparation from the school's headmaster: The appointment of Mr. MS as the chief for the targeted school's *Adiwiyata* Team is as result of suggestions to make a step into *Adiwiyata* School which submitted by Mr. MS himself into the previous headmaster Mr. S which served as the headmaster at the moment. Based on confessions made by Mr. MS, the headmaster was surprised and confused because he does not comprehend anything about *Adiwiyata* so the headmaster assigns a full responsible for the event.

Fourthly is The Unideal Structure of the *Adiwiyata* Team: Dissimilar with the structure of the foster school, which is precisely arranged, the *Adiwiyata* Team in the targeted school is overlapped, which means a person must handle double assignments. For example Mr. HJ whom in charge as coordinator for both Environmental Care School Policy Development and Environmental Friendly Infrastructure divisions. Mr. HJ had already become coordinator of infrastructure work program outside the *Adiwiyata* Team structure. Other occurring problem is the number of members in each division did not spread evenly. This is one reason that there it is urgent to structure of targeted school's *Adiwiyata* Team. Each coordinator would be able to focus on their expertise if placed precisely.

Findings that related with the implementation of the school's headmaster policies to aim as an *Adiwiyata* School that obtained from Mr. MS as the chairman for targeted school's *Adiwiyata* Team are as the following: (1) Replacing the paved field ground's surface with paving block: This action was done to create more water infiltration spots in the targeted school area to prevent water puddles when the rain pours down. The use of paving block were also considered to externalize their school into *Adiwiyata* school; (2) adding more decorative plants and trash bin: The number of trash bins had already been increased but due to the actions of irresponsible persons, the trash bins had been damaged. The decorative plants also damaged. Decorative plants received from the Park Services (Dinas Pertamanan Kota Bandung) in 2016. The decorative plants placed on five large pots located besides the school field and as a result of the small area of the school, the plants damaged because hitted by soccer ball played by the student numerous times; (3) Separating male and female toilets: Each toilet had five bathrooms complemented with water dippers, a ceramic-made bathtub and urinoirs for male student toilets. Unfortunately, some of the urinoir were already rusty in some parts. Water shortage often occurred in male student's toilet which resulted annoying smell inside the toilet. Figure 1 shows the condition of school toilets; (4) Electricity saving: Each room in the targeted school had already equipped with 1-2 electricity saving light bulbs. The lights were switched on only when required. Electricity saving done with changing the lights with electricity saving lights, using window films and ventilation in every bathrooms; (5) Water saving: One of the methods to save water done by the targeted school is to place water buckets in the wudhu area's tap water which also used to water the plants.



Figure 1. Water closet which hollow

There are four routine activities implemented at 154 Citepus Elementary School. There are GPS/Gerakan Pungut Sampah (picking up trash), Jumat Rohani (religious Friday), class duties, and nail checking. Referring to the four routine activities above, it can be concluded that teachers and students of 154 Citepus Elementary School have a good green behavior although their school is not an *Adiwiyata* school yet and not receiving direct foster from 015 Kresna Elementary School. It is noticeable that the students show responsibilities towards the school environment they inhabit. This is also supported by their school surroundings which is always clean (Figure 2) with the total of 1.210 students.



Figure 2. Front yard and backyard during recess time

3.1. Socialization and Internalization of *Adiwiyata* Components

Socialization and internalization of four *Adiwiyata* Components from 015 Kresna Elementary School as foster school to 154 Citepus Elementary School as targeted school do not go well. The main cause of this problem is miscommunication. Miscommunication takes place among *Adiwiyata* team members and internal people at 154 Citepus Elementary School. Due to the miscommunication, other problems arise such as lack of preparation from the principal and overlapped organization of *Adiwiyata* team. The finding of the research entitled *The Implementation of Environment Education Regulation at 11 Senior High School Semarang towards Adiwiyata School*) is also shows miscommunication as the problem that takes place. Although the research is not carried out at elementary school level, it similar findings which is the lack of communication in coordination regarding program execution. This affects the competencies of human resources concerning regulation content [2].

Communication is a key aspect to accomplish the goals of a program. Communication skill is a requirement of an effective leadership [3]. If good communication occurs within all team members, it can guarantee fruitful result since there is no misunderstanding in carrying out any instructions. The statement is in line with the research findings regarding *Bringing Communication Up To Agency: UNESCO Reforms Its Visibility* [4]. It was states that success comes to pass not only when there is good communication within an organization but also when the organization itself can communicate its needs for a better change. Communication is a recurring activity of any individual human being as their role as a communicator, not of an organization. In addition, Hogard and Ellis explain in their

research entitled Using a Communication Audit to Evaluate Organizational Communication, there are other factors that contribute to effectiveness and satisfaction of team members such as personality of a leader, considerations of individual and intellectual stimulation [4].

One of the ways to prevent miscommunication is by decision making. The matter of decision making is discussed in Doyle and Paton's research entitled Decision-Making: Preventing Miscommunication and Creating Shared Meaning between Stakeholders [5]. Doyle and Paton express that decision making will prevent misunderstanding among members of a team or organization. In the research, the subjects are categorized into three roles; science advisors, emergency managers and key decision makers. Those three important roles, if they are manifested in this research, would be 154 Citepus Elementary School *Adiwiyata* team leader as the science advisors, teachers of 154 Citepus Elementary School as emergency managers and the principal of 154 Citepus Elementary School as key decision makers. It is an obligation for the leader of *Adiwiyata* team to appreciate the diversity of opinions, needs, and goals in order to come into an effective decision making.

The leader of 154 Citepus Elementary School *Adiwiyata* team says that there is no direct coaching from 015 Kresna Elementary School as foster school. The socialization is done merely during the signing of MoU. This statement is supported by *Adiwiyata* core team of 015 Kresna Elementary School who is being interviewed. 154 Citepus Elementary School *Adiwiyata* team leader and 015 Kresna Elementary School *Adiwiyata* team leader have different opinions. Based on the interview with Mr. AS as 015 Kresna Elementary School *Adiwiyata* team leader, the communication between 015 Kresna Elementary School and 154 Citepus Elementary School does not turn out well. However, miscommunication does not occur between 015 Kresna Elementary School and its other targeted schools.

According to Mr. AS, 154 Citepus Elementary School does not participate during coaching activity done by 015 Kresna Elementary School. It means that there are lack of participation from targeted school [6, 7]. It was also indicates that the lack of participation from the schools holds back the implementation of policy from the environment minister [6] and that labels participative aspect is the weakest element [7].

On the other hand, internal situation of 154 Citepus Elementary School also is not aware of the socialization and coaching activity from 015 Kresna Elementary School. Miscommunication that takes place within internal setting can cause disharmony in carrying out school mission and vision. The matter of disharmony also occurs at the Manukan Kulon III/540 Elementary School Surabaya [8]. Manukan Kulon III/540 Elementary School in Surabaya has successfully passed the town level selection but failed during the assessment to be *Adiwiyata* School. One of the causes is the disharmony among educators of the school itself.

Communication during coaching activity is written and discussed in Panduan *Adiwiyata* or the manual of *Adiwiyata* [9]. The said communication is discussed in ethical codes of *Adiwiyata* team. One of the codes is communicating mannerly and professionally in carrying out coaching and evaluation. Mannerly and professionally means inoffensive, factual, based on the field of expertise, and linked with the condition of surroundings. The ethical code is not performed well both by 015 Kresna Elementary School and 154 Citepus Elementary School.

3.2. The Implementation of Regulation towards Becoming *Adiwiyata* School

The implementation of regulations done by the principal is mainly about facilities and infrastructures. Apart from facilities and infrastructures, another important thing to do to be *Adiwiyata* school is transforming school current mission and vision. The former vision of 154 Citepus Elementary School is "Producing Faithful, Dutiful, Notable in Skillful Achievement, and Excellence in Technology" has transformed into "Moving Forward to an Excellent School with Accomplishment Grounded on Faith and Devotion with Noble Quality, Governing Knowledge and Technology with the Philosophy of Environment." Unfortunately, although the interviewee states that there is the change in school mission and vision, there is no realization in carrying out the new school missions by 154 Citepus Elementary School. The only visible thing is the renewal of school vision. School mission and vision

is fundamental in making up school curriculum and other school related activities. It can also be said that vision is a guide to refer on for every activity done by everyone at school [10].

Additionally, the application of repetitive activities and curriculum should be done towards becoming *Adiwiyata* school. The unique thing about this is the application repetitive activities and curriculum it supports the “Bandung Juara” program of Bandung City, such as GPS / Gerakan Pungut Sampah (picking up trash) and Bandung Masagi. Curriculum used in 154 Citepus Elementary School is the national Curriculum 2013. However in its implementation, teachers of 154 Citepus Elementary School are still in the process of integrating KTSP and Curriculum 2013. PLH (Environment Subject) is a part of Educational Sustainable Development (ESD) which has been the concept of environment education development in Asia Pacific including Indonesia [11].

Before introducing the lesson of environment subject, it is better for teachers to study Earth Charter and makes it a guide by still adapting to situation and needs of their surroundings. Studying Earth Charter will change teachers’ way of thinking and habits about environment since Earth Charter is a vision that is whole and integrated for life sustainability that can direct human beings into a better life [12, 13]. Teachers can help students to create a bond or relation between their own life and others life, even with nature. In this case, teachers as a leader can assign responsibilities for students to know their capabilities to make world a better place [14].

3.3. Teachers and Students’ Green Behavior

Based on the observation and interview, it is shown that teachers and students of 154 Citepus Elementary School are used to perform deeds with realization of the environment. One of the deeds that reflect teachers and students’ green behavior is GPS / Gerakan Pungut Sampah (picking up trash) which is done every Monday, Wednesday and Friday. During GPS, teachers and students will roam around inside and outside school and pick up trash they find on the ground. Aside GPS, teachers and students of 154 Citepus Elementary School perform various activities that are in line with development of core principles and green behavior [15]. The development of core principles and green behavior cited from The Earth Charter are as follows:

- a) Prevent and protect the environment
 - Do not litter
 - Protect plants
 - Use electricity wisely
 - Use water wisely
 - Plant trees and plants
- b) Adopt pattern of production, consumption, and reproduction
 - Do recycling of materials
 - Avoid the use of styrofoam
 - Avoid the use of plastic bag
 - Bring homemade lunch and snack

The first aspect ‘prevent and protect the environment’ is a dominant aspect which is performed by teachers and students of 154 Citepus Elementary School. Among five points of the aspect, the activity that is rarely performed is plant trees and plants. The activity is only performed when students are assigned to bring plants from home or when the school gets plants from other party. It is explained that teachers and students have done the aspect ‘prevent and protect the environment’ dominantly, it does not imply that they do not perform the ‘adopt patterns of production, consumption, and reproduction’ aspect. Students are taught to recycle materials and the principal sets the rule not to use Styrofoam.

One way to practice and develop green behavior is by *Adiwiyata* program. *Adiwiyata* program has successfully improved green behavior of people from 2 Vocational School Semarang [16]. Teachers and students realize the importance of nature sustainability for the future. That way, teachers and students never hesitate in reminding each other to keep the school environment. There is not carried out in elementary school level, there is similarity that reflects the improvement of green behavior as an outcome of *Adiwiyata* program [16]. The improvement itself does not take place at once, but instead it

happens gradually. They consider seeing the positive change which happens continuously as the most important thing.

4. Conclusions

Based on research discussion and findings regarding teachers and students green behavior at Adiwiyata targeted school. Socialization and internalization done by foster school (015 Kresna Elementary School) to targeted school (154 Citepus Elementary School) does not go well due to miscommunication between the two parties. Regulations implemented by the former principals emphasize more on the facilities and infrastructures. Some programs at the school are adopted from Bandung City programs such as GPS (*Gerakan Pungut Sampah*) and Bandung Masagi which are integrated with applied curriculum. GPS (*Gerakan Pungut Sampah*) program at targeted school can still be seen and is currently a routine. Program of the school regardless has no direct coaching and tutoring from foster school. People at targeted school believe that award is only an additional benefit for every effort they have performed through.

References

- [1] Keputusan Walikota Bandung 2014 Nomor 660/Kep429-BPLH/2014 regarding the Stipulation toward becoming Adiwiyata School in Bandung
- [2] T M Sudarwati 2012 *Implementasi kebijakan pendidikan lingkungan hidup Sekolah Menengah Atas Negeri 11 Semarang menuju sekolah Adiwiyata*, MAP thesis (Universitas Diponegoro, Semarang, Indonesia)
- [3] E Hogard and R Ellis 2006 *Using a communication audit to evaluate organizational communication*, *Evaluation Review* vol **30**, pp 171-187
- [4] R Dimitrov 2014 *Bringing communication up to agency: UNESCO reforms its visibility*, *Public Relations Inquiry* vol **3**, pp 293-318
- [5] E E H Doyle and D Paton 2017 *Decision-making: Preventing miscommunication and creating sharde meaning between stakeholders*, *Volcanology* vol **15**, pp 31-53
- [6] H A Jayantie 2016 *Implementasi peraturan menteri lingkungan hidup no 5 tahun 2013 tentang Program Adiwiyata*, *Jurnal Administrasi Publik* vol **4**
- [7] R D U Juliari, M Amin, and B Yanuwiyadi 2015 *Strategi pembinaan sekolah Adiwiyata di Kota Batu*, *Wacana* vol **18**, pp 241-246
- [8] Y D Rahmah, S S Indradi, and Riyanto 2014 *Implementasi program sekolah Adiwiyata (studi pada SDN Manukan Kulon III/540 Kota Surabaya)* *Jurnal Administrasi Publik* vol **2**, pp 753-757
- [9] Kementerian Lingkungan Hidup 2012 *Panduan Adiwiyata Jakarta* (Indonesia: Kementerian Lingkungan Hidup)
- [10] E W Chance and M L 1990 *Grady Creating and implementing a vision for the school* (NASSP Bulletin) pp 12-18
- [11] Y Tatemono 2011 *Environmental education at Sakado Senior High School*, University of Tsukuba *Journal of Development in Sustainable Agricultural* vol **6**, pp 136-139
- [12] P B Cocoran and P M Osano 2010 *Young people, education and sustainable development: Exploring principles, perspectives and praxis* *Journal of Education for Sustainable Development* vol **4**, pp 307-312
- [13] R M Inojosa 2010 *Promoting the Earth Charter in São Paulo's Municipal Education System*, *Journal of Education for Sustainable Development* vol **4** pp 235-242
- [14] S Cherkowski 2010 *Leadership for diversity, inclusion and sustainability: Teachers as leaders, Citizenship, Social and Economics Education*, vol **9**, pp 23-31
- [15] The Earth Charter website (nd) [Online] Available <http://www.earthcharter.org>
- [16] N Hidayanti 2013 *Perilaku warga sekolah dalam mengimplementasikan Program Adiwiyata*, MIL thesis (Universitas Diponogoro, Semarang, Indonesia)