

## Investigating Effects of Education for Sustainable Development in Junior High School in Central Java

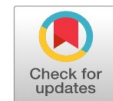
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**Abstract:** This research aims to recognize the effect of Education for Sustainable Development (ESD) towards forming students' character in a direction with the objective of Sustainable Development (SD). ESD is an education concept to develop sustainability, i.e., by embedding awareness and applying SD in the present and the future. This research is an exploratory study with a mixed-methods approach. The research took place in 3 cities/regencies in Central Java, namely, Semarang City, Salatiga City, and Regency Banjarnegara. The survey population was students of Junior High School in each appointed school from 1st to 3rd grader. Each school was taken 100 samples in total, consisting of various grade proportionally. Data collection for the survey used a questionnaire as well as observation towards students' activities. The result of the research shows that the application of ESD through *Adiwiyata program* has provided a positive effect on students character, supporting the objective of SD. The students' awareness of the importance of SD, including the aspect of Knowingness, Attitude, and Behavior, is shown by the students' awareness of the importance of SD. In particular, the results of this study have implications for the development of research on ESD in Indonesia and the world in general.

**Keywords:** *Adiwiyata*, Attitude, Behavior, ESD, Junior high school, Knowingness

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### INTRODUCTION

Human activities have caused some significant environmental damage. It needs awareness to have environment-friendly and empowering activities. The awareness could not be developed in a short period. It takes ESD to create an awareness to have environment-friendly and its empowering activities. SD could not be achieved through a technological solution, politic regulation or financial development. Qualified education and learning for SD at all levels and layers of society are highly needed. ESD is an education concept for SD in the present and future. ESD encourages people to constructively and creatively face global challenges as well as to create a strong and sustainable people.

ESD has been attached to some subjects at schools and even some of them inserted it in the subject of local content. However, it needs to study whether the innovation diffusion within the ESD has significantly been applied in junior and senior high schools in Central Java. This is important as a foundation to develop an environmentally friendly attitude started from the formal education stage. Besides, the factors that significantly influence the success of ESD need to be further explored, as such characteristics of school accreditation, the level of education, and the learning model.

ESD was developed by the United Nation and has been adopted from *The 2030 Agenda of Sustainable Development* for the survival of humanity. ESD aims to increase the knowledge, skill, attitude, and the growth of the values needed to establish SD (United Nations, 2017).

According to Suduc, Bizoi, and Gorghiu (2014), ESD is the correct education program to educate people starting from early age in order to reduce the dependency on natural and social environment, to actively participate, and to have the knowledge about the nature, equity, and social justice. A holistic approach is needed for ESD, since the academic community in the field of ESD does not understand the concept of SD holistically. They tend to emphasize more on the social and economic aspects of SD

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(Chang, 2016; Sinakou, Boeve-de Pauw, Goossens, & Van Petegem, 2018; Teng, Quoquab, Hussin, & Mohammad, 2016). Besides, a review is needed over the content, strength, structure, identity, value, and external checks and balances of the curriculum (Cicmil, Gough, & Hills, 2017; Taher, Shrestha, Rahman, & Khalid, 2016). As one of the efforts, Annan-diab and Molinari (2017) provided a sustainability module considering Principles for Responsible Management Education (PMRE).

In Indonesia, Santoso and Kuswanjono (2016) stated that ESD could not be adopted just like that. The cognitive, monotonous, and non-innovative ESD learning model needs to be modified with local wisdom so that the emotional and spiritual aspects are established. One of the models that could be developed is informal education. The academic community, with the knowledge they have (Almulla, 2018; Cruz & Prabawani, 2017), has high interest and motivation to be involved in ESD. They, however, are often be constrained by time, funds, level of understanding, curriculum structure, as well as the support from the institution, especially leadership and quality assurance. Permendikbud No 81A in 2013 facilitates the environment with local wisdom-oriented education to provide environment-friendly knowledge and skill in daily practice and even attached to form personal attitude within each student, not merely struggling with the ambition to pursue academic achievement.

Prabawani, Musfirowati, Pradhanawati, and Budiatmo (2017) found that elementary school students have a good understanding of the pillar of nature, social, and the benefit of ESD. However, there is not different understanding among classes. This shows that the knowledge about ESD could neither be a success of formal education product nor the success of the ESD curriculum.

### **Research objectives**

Research by Prabawani et al. (2017) shows the presence of innovation diffusion within ESD, i.e., knowledge absorption stage which at the end influence the attitude and behavior of the students. This research formulates the level of students' environmental awareness, explores ESD didaksiaspect by meeting the design and the concept developed by the school and students cognitive aspect. Furthermore, in this research, it is explained that the ESD influences students' characters. It was further formulated to answer the research question, "Does ESD influence students character along with ESD's objectives?"

## **LITERATURE REVIEW**

### **ESD**

ESD is important to be applied under an interdisciplinary approach and it needs multi-sector participation (Annan-diab & Molinari, 2017). Cicmil et al. (2017) explained that ESD involved complex, emerging, evolving, and non-linear processes. The learning pattern of project-based learning, multi-perspective, and interdisciplinary thinking is more effective for students in understanding the concept of sustainability (Molderez & Ceulemans, 2018). Therefore, ESD is better oriented in the combination of interdisciplinary, imaginative, creativity, fun, real-world experiences, and service-learning project (Molderez & Ceulemans, 2018). To measure it, Molderez and Ceulemans (2018) applied 5 competencies to measure the sustainability developed by Wiek, Withycombe, and Redman (2011). According to Lavanya and Saraswathi (2013), ESD aims to improve the capacity and commitment needed for developing a sustainable society, where the individual or group decision making considers austerity and natural ecological process so that the quality of life increases either in the present or in the future.

Suduc et al. (2014) stated that ESD implementation contents, could be inserted into these categories: 1. Education of health; 2. Education of Ecology; 3. Education of traffic; 4. Education of sports; 5. Education of emergency response; 6. Education of citizenship; 7. Education of democracy, etc. Those categories show that EDS does not merely emphasize the care for the natural environment, but also social elements, among other human beings.

ESD is an educational pattern adopting the Principles of Responsible Management Education (PRME). According to the Ministry of Education and Culture, ESD would encourage relevant education system with the knowledge, skills, and values into social life, environment and economic challenges of the 21st century. Encouraging innovative education transformation as well as student-centered learning through a various style of learning. ESD empowers students and makes them the agents in the process of

education, from an early age until they are old. The implementation of ESD would increase the sense of justice and respect for each other so that it helps the students to understand the situation, point of view and the needs of other people who live in other places or it belongs to the next generation. SD education would prepare the students to adapt to the effect of climate change and empower them to overcome the causes, as well as to establish an eco-friendly community to help in preserving or restoring the quality of the environment, and to increase the people's wealth and social justice.

Olsson (2018) found that awareness of SD refers to the experience and understanding of SD issues. This is a combination of thoughts, and senses as well as actions. SC concept is a multidimensional aspect that connects each other, as described in Figure 1 below:

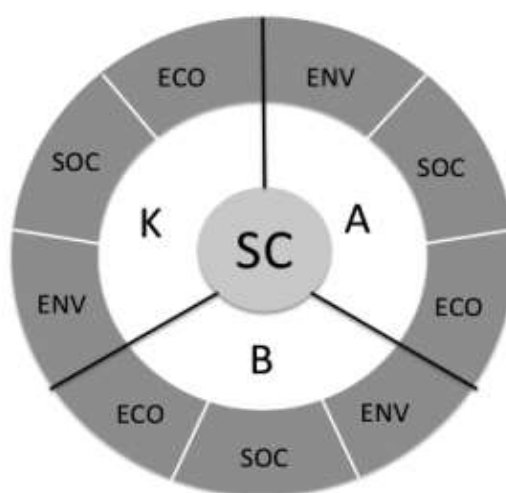


Figure 1. A representation of the concept of sustainability, consciousness. K = Knowingness; A = Attitude; B = Behavior; ECO = Economic; SOC = Social; ENV = Environmental; SC = Sustainability Consciousness

## METHODOLOGY

This research is an exploratory study where a study is needed recalling that relevant education with how eco-friendly education is applied in Indonesia is still limited (Collis & Hussey, 2009). The existing number of papers is limited as individual opinions, and not the result of research.

A qualitative approach was used in this research; then it was followed by a quantitative approach which made it called as mixed methods, which is, according to Creswell and Plano Clark (2007) "focusing on collecting, analyzing, and combining qualitative and quantitative data in a single or plural studies". Case studies, as the first study, are used to identify how eco-friendly education is attached to the education curriculum content of Junior High School. Besides, the case studies carried out in several schools would also explore how eco-friendly education process is applied in various levels of classes in each school, and recognize various obstacles encountered (Collis & Hussey, 2009).

### Data collection

The research took place in three cities/regencies in Central Java; they were Semarang City, Salatiga City, and Banjarnegara Regency. The survey population was students of Junior High School in each school appointed from grade 1 to grade 3. A team of researchers chose each Junior High School. The selection of A, B, and C accredited state schools was necessary since state schools and private schools might have had different policies in terms of eco-friendly education for their students. Moreover, since the government allows the 2013 curriculum to still be applied at schools under certain criteria. From each school, in total 100 samples were taken which consisted of various levels of class taken proportionally. Therefore, on average, each level of class would be represented by around 30 students.

### Data analysis

The researcher used five out of six sources of data collection from case studies in the form of documents, notes, interviews, simple observation, and physical evidence (Yin, 2009). Data collection for survey used questionnaire. Survey respondents were students of Junior High School from various levels of classes chosen under random sampling. Researchers also observed students' activities as well as the schools' facilities regarding ESD.

### RESULTS

Based on the data processing, the following result is obtained.

Table 1: School Identity of the respondents

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
SMP N 2 Banjarnegara	100	33.3	33.3	33.3
SMP N 39 Semarang	100	33.3	33.3	66.7
SMPN 7 Salatiga	100	33.3	22.7	100.0
Total	300	100.0	100,0	

Based on the following data, the research sample was 300 respondents consisting of 100 respondents from SMP 2 Banjarnegara, 100 respondents from SMP 39 Semarang, and 100 respondents from SMP 7 Salatiga.

The number of respondents was taken from the calculated amount formulated by Sloving i.e., by the entire sample of 650 students per school, and the standard error is 10%, so that it came out with 100 respondents per school.

Table 2: Class identity of the respondents

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
VII	34	11.3	11.3	11.3
VIII	34	11.3	11.3	22.6
IX	232	77.4	77.4	100.0
Total	300	100.0	100.0	

Table 3: Gender of the respondents

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Men	132	44.0	44.0	44.0
Women	168	56.0	56.0	100.0
Total	300	100.0	100.0	

Based on the data from Table 2, it is recognized that most of the respondents were Ninth graders as much as 77.4%. This shows that most of the respondents of this research were students who had been mastering the knowledge at the level of first junior high school. It is also recognized that most of the respondents were women as much as 56.0%.

This shows that most of the respondents in this research are the students who have mastered more about the knowledge at the level of junior high school. There have been more female samples since three objects of Junior High School have 70% more females than males.

According to Jiménez and Lafuente (2010) and Sharma and Bansal (2013) the concept of environmental awareness is a concept that could be used to measure the understanding of the environmental issues. Such a concept could be seen in three components of psychometrics i.e., Knowingness, Attitude, and Behavior.

In this part, Knowingness is divided into 19 questions consisting of 3 points of measurements; they are economic development, social development, and environmental development. Economic Development in questions Q1, Q11, Q14, Q15, and Q17 are related to the environmental friendliness which will bring

to a better economy. This is because upon the the economic development, there will be prosperity equalization in reducing poverty in Indonesia, as such designed by the United Nations regarding The 2030 Agenda for Sustainable Development.

The second measurement point deals with SD. And the question was given to points Q2, Q5, Q7, Q8, Q9, Q10, Q13 and Q18 related to the friendly environmental education that besides prioritizing the economic condition, social interest is also necessary to respect human rights in their surrounding environment, either in the cultural or political field.

Table 4: Descriptive statistics: Knowingness aspect

Question	<i>N</i>	Mean
Q1	300	3.88
Q2	300	4.33
Q3	300	2.87
Q4	300	4.47
Q5	300	4.23
Q6	300	4.01
Q7	298	2.66
Q8	297	2.38
Q9	299	3.84
Q10	299	3.47
Q11	300	3.57
Q12	299	3.88
Q13	300	3.85
Q14	300	3.48
Q15	300	3.03
Q16	300	3.56
Q17	300	3.52
Q18	300	4.32
Q19	300	4.03
Valid N (listwise)	296	
Average	3.65	
Maximum	4.47	
Minimum	2.38	

The last measurement point deals with Environmental Development. Besides, the questions concerned with environmental development are Q3, Q4, Q6, Q12, Q16, and Q19. Those points are related to the nature conservation which we need to preserve to prevent disasters causing problems from the economy and social sides. So, if the environment development encounters a problem it would affect the economy and social development.

Knowingness someone's knowledge about how important and how necessary SD is implemented (Olsson, 2018). Based on the result of this research, it is obtained that the level of Knowingness is 3.65 which is included in the category of fair, which means that the students had been aware of the importance of SD in daily lives. The highest score is obtained on the point of question about natural preservation is in the category of very good.

Table 5: Descriptive statistics: Attitude aspect

Question	N	Mean
Q20	300	4.41
Q21	300	3.35
Q22	299	3.66
Q23	299	3.47
Q24	299	4.21
Q25	299	3.37
Q26	299	2.77
Q27	299	3.79
Q28	299	3.02
Q29	299	4.39
Q30	299	2.94
Q31	299	3.86
Q32	299	4.16
Q33	299	3.78
Valid N (listwise)	299	
Average		3.66
Maximum		4.41
Minimum		2.77

The questions in this second part deal with the students' attitude. The measurement point used in this second part is similar to the part of Knowingness, i.e., economic, social and environmental. In the economic part, the questions that appear in number Q22, Q25, Q26 and Q31. Such economic measurement deals with environment pollution that needs to be decreased. Currently, many foods and beverage companies tend more in the use of disposable materials compared to reusable ones. It will affect the pollution of land, water, and air. Besides, it could cause larger poverty in remote areas, especially clean water pollution which is the only stream for the local people, as the consequences of industrial waste.

The second measurement point deals with social development which appears on the question numbers Q20, Q21, Q28, Q29, Q30, and Q32. It deals with social sensitivity in the neighborhood, such as education equity between men and women. Such equity is necessary since in Indonesia we still need educated people to be able to advance the nation like Indonesia as stated in the introduction of 1945 Constitution Paragraph 4. Besides, social sensitivity is also necessary to establish a safe and comfortable environment.

The last measurement point is Environmental Development. In this measurement, the questions that appear in this part are Q23, Q24, Q27, and Q33. This environmental point is closely related to the economy and social points. A good environment will make the economy and social development to become good and vice versa. If the environment is not well maintained, then the economy and social needs will also be affected in a bad way. The relevance of those three points is to shape the character since the school-age so that good and bad effects could be recognized when we care for the environment.

Based on the result from the Table 5 about descriptive attitude, it is obtained that the level of attitude of 3.66 is included in the good category. It means that the students' attitude has an inline character with the objective of SD in daily life. The highest score is obtained on the point of statement about the required environment-friendly education for all individuals of 4.41. This shows that students have a very positive attitude towards the issue of SD so that it could be expected that all people could have a common understanding of SD.

Table 6: Descriptive Statistics Behavior

Question	<i>N</i>	Mean
Q34	299	3.68
Q35	299	3.58
Q36	299	3.48
Q37	298	3.67
Q38	299	4.18
Q39	298	3.79
Q40	298	3.96
Q41	298	3.81
Q42	297	2.42
Q43	298	3.18
Q44	298	3.00
Q45	297	3.75
Q46	297	4.35
Q47	295	4.33
Q48	296	4.14
Q49	296	3.47
Q50	298	4.26
Valid N (listwise)	292	
Average		3.71
Maximum		4.35
Minimum		2.42

The third part of this questionnaire is a question about behavior. Similar to Knowingness and Attitude, on this part, there are also 3 common measurement points. Economic Development appears on the questions number Q39, Q42, Q44, and Q49. At that point, regarding the friendly environment education, students' behavior in taking care of the environment is also needed such as to help those living in poverty. Besides, establishing social sensitivity, it is also good to support the economy of the people in need.

The second measurement point is Social Development. At this point, the questions appear in number Q37, Q38, Q46, Q47, Q48, and Q50. Regarding the social sensitivity in the neighborhood, it is needed to maintain good communication among the people. Despite different cultural and educational background, the students must have some respects to each other. Therefore, hatred would not have a chance to emerge despite this difference with other people.

The third measurement point is environmental development. At this point, the questions appear in number Q34, Q35, Q36, Q40, Q41, Q43, and Q45. It deals with the care for the environment for example to rather choosing to ride a bicycle than to have a motorbike. Such behavior will contribute a bit in reducing air pollution which currently is still in the top rank of the world. Other behaviors such as throwing garbage in the garbage bin if we see garbage around.

Based on the result of Table 6 the descriptive about the behavior obtained that the level of behavior was 3.71 it was included in the category of fair, which means that the students and their behavior had reflected the SD character. The highest value was obtained in the questions points about students involvement in an organization as much as 4,35 which means that the students had a very good social attitude. Good social behavior would support the achievement of ESD objectives.

## DISCUSSION AND CONCLUSION

ESD is applied in Indonesia through *Adiwiyata* program by the Department of Environment. *Adiwiyata* has recently been applied for more or less 6 months. The achievement of *Adiwiyata* currently has been covering many schools throughout Indonesia. Started from the level of *Adiwiyata* of city/regency, province, national and independent. This research covered 3 schools with national level *Adiwiyata*.

Based on the research results, it is identified that the implementation of ESD through *Adiwiyata* program has contributed positive effects towards students character in supporting the SD goal achieving. This is shown by the students awareness over the importance of SD, including the aspect of Knowingness, Attitude, and Behavior.

The level of students knowingness related to SD is reflected in students awareness of the importance of SD in daily life. Students knowledge about SD shows that the students have sufficient information that it could be combined with the understanding and potential so that they can predict as well as to take actions in line with SD objectives.

A good knowingness would trigger the emergence of a positive attitude. This is reflected from the level of students attitude which is categorized as good regarding with SD. Awareness and feeling are causation effect. A good awareness of SD creates an attitude that is in line with the objective of SD. The continuity of Knowingness and Attitude is the establishment of Behavior.

Attitude predicts behavior in the future (Festinger, 1964). A positive attitude would cause the final result in the form of positive behavior and action as well. This is in line with the research result, which is known that the level of Behavior of the students regarding SD is in the category of good. The actions taken by the students are the implementation of ESD.

## **IMPLICATIONS OF THE RESEARCH**

This research supports the research results of Olsson (2018) that, “The importance of holism and pluralism in ESD for students’ Sustainability Consciousness (SC), regardless of whether schools were certified or not. Moreover, the findings reveal an adolescent dip in students SC as well as a gender gap, both of which were reinforced among students in the certified schools”. Based on this research result, it is identified that ESD provided an effect on students characters which is in line with ESD objectives. To achieve SD objective, it needs to start since school age. One of this is through the implementation of *Adiwiyata* program which is in line with ESD. This has been proven from the students character of the *Adiwiyata* school which is in line with the objectives of SD. *Adiwiyata* program needs to be applied in other schools which have not yet implemented it so that it could create a generation who have an awareness of the importance of SD. In general, the results of this study have implication for the development of junior high school education curriculum, to be more focused on the realization of SDGs. In particular, the results of this study have implications for the development of research on ESD in Indonesia, and the world in general.

## **LIMITATIONS OF CURRENT RESEARCH**

In this research, there were five limitations. The first was the measurement of students’ character which only employed a questionnaire without deep observation. The second limitation was that the sample used in the research was the schools that already had *Adiwiyata* program, without involving schools that had not. Along with that, this research was limited only to school with the national level *Adiwiyata* program, it had not involved school with *Adiwiyata* at the level of city/regency, province, and independent. Furthermore, the sample of this research only tested ESD in the level of Junior High School (SMP) and only to the state schools, leaving the private schools behind.

## **RECOMMENDATIONS FOR FUTURE RESEARCH**

Based on the research finding, there are several recommendations for further research, the first one is to use deep observation to measure the character of students regarding ESD. The second recommendation is to involve schools that have not implemented *Adiwiyata* program to compare as well as to involve schools with the level of *Adiwiyata* city/regency, province, and independence. A further recommendation is to involve higher-level schools as well as private schools.

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## APPENDIX

### SUSTAINABILITY CONSCIOUSNESS QUESTIONNAIRE

This questionnaire consists of a series of statements that you respond to by putting a cross next to them for the choices you make. Check your answers carefully, before you submit them to make sure you don't miss the question.

Thank you for your cooperation.

Name : \_\_\_\_\_

Origin : \_\_\_\_\_

School : \_\_\_\_\_

Class : \_\_\_\_\_

Activity :

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

Gender :

1. Male

2. Female

Do you know about Sustainability Consciousness?

1. Yes

2. No

If yes, where you know it? The answer can more than one

1. Association

2. School

3. TV

4. Friend

5. Radio

6. Newspaper

7. Website

8. Etc.....

Why do you choose this school? The answer can more than one

1. This school have a good reputation

2. Friend

3. Near from house

4. This School offers an interesting activity. If yes, explain it

5. No choice

**Part 1 (Knowingness Aspect)**

Choose one of the answers below that you think is the most correct.

		Strongly Disagree		Strongly Agree		Do Not Know
1	Environmentally friendly development requires a good economy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Environmentally friendly development requires a healthy community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Reducing water consumption is needed to realize environmentally friendly development.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Preservation of nature is necessary to realize environmentally friendly development.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Environmentally friendly development requires deliberation in solving common problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Environmentally friendly development demands that we humans reduce all types of waste.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Environmentally friendly development requires democratic people.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Gender equality will realize environmentally friendly development.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Respecting human rights is needed to create environmentally friendly development.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	To achieve environmentally friendly development, everyone must have access to good education.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	To achieve environmentally friendly development, companies must treat employees and customers fairly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	Preserving many different natural species is needed to realize environmentally friendly development.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	Respecting other cultures is needed to realize environmentally friendly development.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	In realizing environmentally friendly development, it requires the welfare distribution.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	Reducing poverty in the world is needed to realize environmentally friendly development.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	Environmentally friendly development requires us to turn to renewable resources.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	Good knowledge of the economy will support the realization of environmentally friendly development.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	Prevention of major infectious diseases such as HIV / AIDS and malaria is needed to realize environmentally friendly development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19	For environmentally friendly development, people need to be educated about how to anticipate natural disasters.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Part 2 (Attitude Aspect)**

Choose one of the answers below that you think is the most correct.

		Strongly Disagree		Strongly Agree		Do Not Know	
20	In my opinion, everyone must educate an environmentally friendly life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21	We who live now must ensure that people in the future will be the same as we are today.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22	The company has a responsibility to reduce the use of packaging and disposable products.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23	Using excessive natural resources saves health.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24	Stricter laws and regulations are needed for environmental protection.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25	It is important to reduce poverty.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26	Companies in rich countries must feed the same in every country (both poor countries in every rich country).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27	We must care about the problem of climate change.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28	The government must provide financial assistance so that people turn to environmentally friendly cars.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29	The government must support environmentally friendly development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30	Awareness not to abstain is needed in realizing environmentally friendly development.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31	People who pollute the soil, air or air must replace the damage they have caused to the environment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32	Men and women around the world must have equal opportunities for education and employment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33	If we use water excessively it will cause environmental problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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**Part 3 (Behavior Aspect)**

Choose one of the answers below that you think is the most correct.

	Strongly Disagree	Strongly Agree	Do Not Know
34 If possible, I choose to bike or walk when I go somewhere, rather than traveling by motorized vehicle.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35 I never waste water.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36 I recycle as much as I can.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37 I always treat other people in cyberspace with respect like I do in real life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38 I often do things that are good for my health.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39 I do many things to help the poor.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40 I take out the trash when I see it in my neighborhood or in a public place, and throw it in the trash.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41 I always think about whether the things I do can damage the natural environment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42 I often buy used items via the internet or in stores.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43 I always separate the leftovers before throwing them in the trash.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44 I don't buy things from companies that don't look after employees and the environment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45 I do a number of things to reduce waste (e.g., Throw less food and not waste paper).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46 I followed the curricular extracurricular activities at school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47 I treat everyone with the same respect, even if they have a different cultural background from me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48 I support social organizations or environmental organizations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49 I watch news programs or read news about economics.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50 I show the same respect to men and women, boys and girls.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

THANK YOU FOR YOUR PARTICIPATION