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Education Sustainability Development in the Effectiveness of Parents' Role to Build Students' Competence

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Abstract

This study aims to analyze parents' roles in building student competence oriented toward educational sustainability development (ESD) in Cirebon, West Java, Indonesia. In this study, ESD is discussed in the context of loving the environment and efforts to prevent contamination of air, water, and soil. The study adopted a qualitative research design with a phenomenological approach. The research location is Cirebon, a city of West Java in Indonesia. The research subjects consisted of parents and elementary school students from first to sixth grades as a form of self-education regarding sustainability development. The research was conducted between February 2022 and November 2022. The study data were collected using the participant interview method and observation of participation, supported by secondary data documentation. The validity of the data was increased by checking, rechecking, cross-checking, and prolonging their stay at the research location. Miles and Huberman's approach was used to analyze the data at hand. This approach consists of four research stages: data collection, data classification, data reduction, and conclusion. The study results show that parents have a very important role in cultivating student learning competencies with an educational orientation of sustainability development. From an early age, parents should instill competence in students that education must be oriented toward environmental sustainability and avoid actions that result in contamination of soil, water, and air in the framework of the survival of the earth and human survival. Children must go to school and be smart to become the next generation who will come in good condition and love preserving the earth and human life.

Keywords: *children, competency earth preservation, education, human preservation, parents*

Introduction

Human activities have destroyed various habitats of living things in the world because they exploit the environment beyond the maximum-tolerated capacity to produce a lot of pollution, which have changed the global climate (Schipper et al., 2008). The Millennium Ecosystem Assessment (NEA) report shows that most human activities in the last eight millennia have damaged ecosystems leading to the extinction of various species, and all of them have threatened human life (Adams & Klobodu, 2017).

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Considering this fact, early education about sustainability and development is needed to preserve the earth. Schools and parents are considered the spearheads (Bedawy, 2014) for education and socialization of the large role of the younger generation of elementary school age in terms of awareness of ecosystem sustainability.

Parents play a very strategic role in raising the competency of elementary school-aged students because, at that age, students' learning independence is still very low and requires parental involvement (Adams & Klobodu, 2017). While students study at home, parents have the role of accompanying students. As long as students study in elementary school, their teachers always accompany them, and they feel very comfortable (Sims & Falkenberg, 2013). Parents should be able to take on the role of teachers at home, that is, being a learning partner for elementary school-aged children at home (Scott et al., 2009).

Most of these roles have been performed by parents, but many are still unaware of this important role (UNESCO, 2003). Those with elementary school or high school education sometimes feel insecure when assisting children while they study at home because the subjects of today's elementary school children are much more advanced than what they studied in the past (Frantz & Mayer, 2014). As it should be, parents position themselves as student mentors while students study at home, do their assignments, or solve various student learning problems. Education undertaken by parents is more about life skills and experiences that have been made, seen, felt, and experienced so far (Cantu et al., 2021; Sylaj & Sylaj, 2020). Table 1 indicates environmental common problems.

Table 1

Environmental Problems in Indonesia

Number	Types of environmental problems	Condition/cause
1	Rubbish	66.5 million tonnes/year
2	Flood	Evenly distributed in all major cities in Indonesia, which occurs every year
3	Deforestation	1.47 million Ha/year
4	Change the function of the river	Narrowing of the river width of buildings and settlements
5	River pollution due to household and industrial waste	Very severe conditions in large and industrial areas
6	Global warming	Massive destruction of tropical forests
7	Air pollution	92.4 micrograms/cubic meter
8	Damage to the marine ecosystem	Use of fish bombs, cutting down mangrove forests for shrimp ponds, beach reclamation
9	Clean water difficulties	The use and extraction of groundwater exceed capacity
10	Tropical peatland degradation	Due to the mono-agriculture of oil palm plantations
11	Heavy metal pollution in livestock and fish	Excessive use of pesticides that stick to animal feed, and which enter river and seawater

Source: Ramdani & Lounela, (2020); Hudson, (2017).

As described in Table 1, various pollution shows the importance of education for children at school and home, all of which must be oriented toward sustainable development.

In connection with the learning orientation of students on ESD, parents should provide awareness to students always to love the environment, enjoy doing greenery around homes and schools (UNESCO, 2003), hate actions that destroy the earth, destroy forests, pollute the air, pollute river water, groundwater, and seawater (Frantz & Mayer, 2014).

Various actions of loving the earth must be instilled by parents early on to elementary school-age children because it is on their shoulders that this earth will be inherited in the future. The earth is entrusted by generations to come (Soubbotina, 2004). Children and grandchildren are the generations that will inherit this earth. Therefore, this earth must remain sustainable and free from contamination and various activities that damage the earth, such as illegal fishing, mining, and logging (Nomura, 2009).

Parents should instill the awareness in elementary school-age children to dispose of trash in its place and reduce the use of non-organic objects that are difficult to decompose (plastic bags, plastic bottles, glass bottles, etc.) so that the earth is not filled with various objects. This will reduce its function as the earth's greening place (Anijah-Obi, 2001). The earth must remain green, and the air and water must remain clean (Ramdani & Lounela, 2020). Parents must instill awareness in their children about the importance of the health of groundwater, river water, and seawater because, in this water, there is a very big role in the survival of all living things on earth. They all must be saved by avoiding water pollution (Sahin, 2006).

Air also has an important role in the life of all creatures on earth because all creatures need air in their survival process (Nomura, 2009). Parents must provide education and socialization to elementary school-aged children so that they grow in themselves and their minds about the great benefits of air for life, and the prohibition against polluting the air, both on a small scale, let alone on a large scale (Patz et al., 2005).

Parents should be aware that global climate change has caused shortness of breath, frostbite, kidney damage, coma, increased CO2 emissions, extinction of plants and animals, pollution, disease, drug resistance, viruses, and even malnutrition due to crop failure (Alexander et al., 2013). Various environmental damages in Indonesia have reached an alarming level, namely the damage to the coral reef ecosystem in Southeast Maluku (Uar et al., 2016), waste that was not appropriately handled (Juniman, 2018), forest destruction, river pollution, and household waste, industrial waste, clean water shortages, abrasion, and illegal logging (Pebrianto, 2019). In addition, forest degradation or tropical peatlands also occur (Ramdani & Lounela, 2020).

Parents can also teach children to send letters to large companies that dump their waste into rivers or seas so that they comprehend the importance of land and water for current and future generations (Sahin, 2006). Children can also send letters to companies holding forest tenure and management rights that seem to be destroying forests so that they can apprehend that their activities are very detrimental to the survival of all creatures, both humans and animals (Forehand, 2005). Likewise, children can send petition letters to companies that dump toxic waste into the sky in pitch-black chimneys without going through waste treatment first. See Table 2.

Table 2

Level of Parents' Awareness of Children's Competence

Number	Alternative answers	f	%
1	Very high	6	4,2
2	Tall	15	10.4
3	Currently	34	23,8
4	Low	54	37,8
5	Very low	34	23,8
Total		143	100

Source: data of pre-survey 2022

Table 2 shows that the level of parents' awareness of children's competencies based on educational sustainability development shows that most pest parents have low awareness of 54 people, followed by very low awareness of 35 people, medium 34 people, high only 15 people, and very high only six people. This means that parents still need to increase awareness of children's competencies, especially regarding educational sustainability development.

Hudson's study (2017) showed that the role of parents is very important for growing awareness of children's love for the environment. Berberyan et al. (2015) stressed that children are in the most important golden age to be given self-education in the movement to love the environment, love the earth, and hate air, soil, and water pollution. Vare & Scott (2007) reported that the love for the earth movement must be instilled in elementary school students from the start. Prabawani et al. (2017) concluded that the act of loving the earth is a sustainability defender movement that will produce the next generation who can carry the mandate of future generations in the form of a sacred promise to ''preserve their deposits'' in the form of an intact, undamaged earth. , and not polluted by various forms of soil, water, and air pollution (Luber et al., 2007).

Heavy metal contamination in fish, livestock, and marine products, can cause brain dysfunction, high blood pressure, severe anemia, miscarriage, decreased fertility in men, nervous disorders, kidney damage, DNA damage, and cancer (Agustina, 2014). Burck et al. (2015) reported that

Indonesia is the heaviest contributor to pollution, with an air quality index reaching 170, with pollution reaching 92.4 micrograms per cubic meter, far exceeding the World Health Organization (WHO) standard of 25 micrograms per cubic meter.

The novelty of this research lies in the process of imparting competence to elementary school-age students in the form of early education on awareness of preserving the earth toward sustainability for both the earth, humans, and other living creatures who both have the right to live on earth that is free from all forms of pollution that will cause disruption.

Research Questions

1. What is the role of parents in increasing elementary school students' competence in Cirebon City?
2. What is the role of parents in instilling ESD for elementary school-age children in Cirebon City?

Theoretical Background

The role of Parents in Education

Parents have an important role in children's education. Parents have more than 18 hours with children at home. While schools only have about 6–8 hours a day in the child's education process (Meinhold & Malkus, 2005). That means parents have three times more time than children spend at schools, so it is only natural that parents have more time in their children's education process (Hills, 2002). Competences taught to children's parents can be in the form of life skills, assistance with learning educational materials at school (Prabowo, 2022), working on learning assignments from teachers, working on hand skills, and cultivating good attitudes such as attitudes toward the preservation of the earth and all living things on earth (Prabawani, 2019).

Parents are not limited to teaching their manners and culture but should educate them on the importance of preserving the earth, which will be passed on to the next generations (Cebrián et al., 2015). Parents should be able to internalize the importance of protecting the earth and its contents to their children from an early age to ensure sustainability of life (Werbach, 2009). Education given by teachers at school and by parents at home should both be able to build children's competence in preserving education, namely education that can open the widest possible awareness to children as the next generation to be determined to protect the earth from various pollution that will destroy the earth. This education should be internalized early in students' minds (Hubbard, 2009). This

process is not easy, but you should go through daily life habits, from small things to large-scale activities in clean living, love of the earth, love of the environment, and anti-pollution movements. This difficult process has a higher chance of success when it is performed early in elementary school-age children (Kavaz, et al., 2021; Lavanya & Saraswathi, 2014).

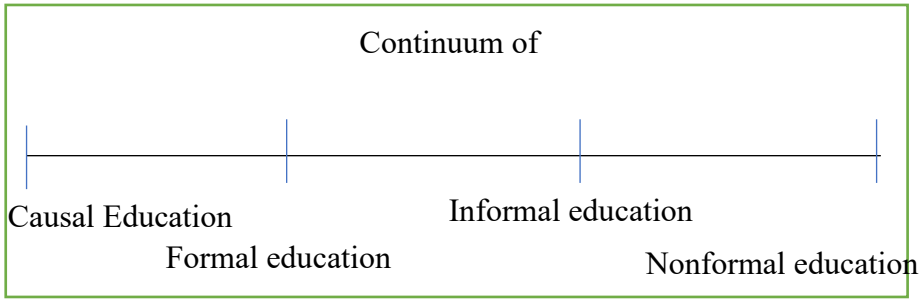
Educational Implanting Strategy of Sustainability Development in Children

Various strategies can be developed by parents for their children in the form of habituation of everyday life. Accustom children to dispose of garbage in its place according to the classification of both organic and non-organic. Parents no longer have the habit of using plastic bags, which can become soil waste because they cannot be decomposed for a long time (Elkington, 2013). Parents should always set an example of how to manage waste properly and should be able to provide various examples of activities that have the potential to damage the earth, such as poisoning fish, using pesticides in doses exceeding the dose that will dissolve into the ground, and drifting into rivers as heavy rains come and flow into rivers which will poison the fish (Benn et al., 2006).

Various examples of education instilling awareness of parents and teachers toward children can be seen in Figure 1.

Figure 1

Forms of Environmental Education (Todaro & Smith, 2009)



According to Figure 1, environmental education is acquiring knowledge, skills, attitudes, and experience. Second, education is performed formally in schools. When relatively organized environment within the family, non-formal education is relaxed. Even though it doesn't have content and methods, teachers and parents always instill awareness of environmental sustainability.

Another strategy parents can take is inviting their children to travel to beaches polluted by household and industrial waste (Prabowo, 2022). The parents explained the large amount of plastic

household waste that pollutes the beach and the many lumps of oil from industrial waste deliberately dumped into the sea by company management that does not implement green industry (Vega, 2004). From this activity, awareness grows in children about the dangers of seawater pollution for the preservation of living things, including fishermen whose livelihoods are threatened because fish move away from polluted beaches (Hadi, 2017).

Parents can also take their children to illegal mining sites, which allow damaged land to be abandoned without being fertilized again. The soil is turned over at illegal mining locations and dug deep to obtain gold ore. This is performed on a very large scale, so it is very damaging to forests and their habitats in them, including threatening human life in the long term (Hartono & Utami, 2016).

Parents can also invite their children to play in rivers polluted by household and industrial waste (Siraj-Blatchford et al., 2005). Children are explained the many peralons that protrude into the river as a channel for disposing of household waste into the river. Large peralons from industry are deliberately put deep into the water, so they are not visible from the surface. They are used to dispose of company waste without going through waste treatment that will damage the river's life and the drinking water of all residents (Lavanya & Saraswathi, 2014).

Children can also be invited to industrial areas with chimneys soaring high into the sky (Watanabe, 2015). At the end of the chimney, thick black smoke billows, incessantly polluting the air. From these activities, awareness grows among children about the dangers of air pollution for life in the world (Nasibulina, 2015).

These various strategies can be instilled in children to be highly aware of the importance of preserving the earth, which must be free from air, water, and soil contamination (Wilhelm et al., 2019). This competence must be instilled in students so that they have the awareness that education will have no meaning if it does not pay attention to the preservation of life. Sustainability is the key to the success of all aspects of educational activities (Suduc et al., 2014).

Sustainability-oriented education is the key to the sustainability and welfare of human life. This activity will provide a solution for efforts to achieve life sustainability (Nousheen et al., 2020). Without a good education, sustainability will not be achieved, and sustainability is the final point to be achieved through education (Hollstein, 2022; Tarman & Kent Kukurtcu, 2022).

Methods

Research Design

The research design uses a qualitative approach with an educational sociology approach. Sociology of education was chosen as a research approach because it is linked to the role of parents in increasing competence toward ESD. In the sociology of education approach, a social analysis is performed for the various roles played by parents in instilling the values of preserving the earth, which is free from soil, water and air pollution. Education is the most important tool for realizing the sustainability of both the sustainability of earth and the people living on earth.

Setting and Research Informants

The research setting is the industrial community polluted daily by industrial water, soil, and air activities. The second setting is coastal communities whose environment has been polluted, and the third research setting is riverside communities whose river water has been polluted. The research subjects who became key informants (Creswell, 2009) were parents of students, students, teachers, school principals, village heads, and environmental figures who knew very well about various pollution in their area, which greatly disrupted people's lives and life. The number of informants in three areas appears in Table 3.

Table 3

Research Subjects According to Place of Residence

Research location	N
Industrial Area	50
Coastal Area	48
Riverside area	45
Total	143

Research Time

The time for the research was between February and November 2022. The choice of time for the research is based on the effective time for learning for children at school, in which parents have an active role in facilitating children's learning at home. During this period, parents used holidays to take their children on environmental tours and conducted banc-marking to other areas that had different phenomena even though they both had environmental pollution.

Data Collection

Data were collected using three methods (Singh & Nath 2007): structured interviews and participatory observation (Twumasi. 2001) of data owned by the village and school. To make it easier for researchers to enter the research field, researchers try to match how they dress, talk, and behave with the local community (Mack et al., 2005). Thus, researchers can easily be accepted by the public because they stand the same height and sit the same low. Researchers try to make various adjustments with informants (Silverman, 2006), integrating all activities, cooperation, religious events, and cultural events carried out by the community.

Researchers try to increase the validity of the data by bracketing all data received, in the sense that they do not immediately trust but continue to check, recheck, and cross-check, and try to conduct interviews by snowballing to obtain complete, credible, and reliable data (Kumekpor, 2011).

The researcher remained at the research location until the data obtained was saturated (Kamal et al., 2005), so the data obtained is no longer new (Dunne & Akyeapong, 2007). Thus, the researcher can get clarity on the phenomenon being studied because he can already be in the deepest recesses of a research process.

Observation

Observation was made in the holidays when children have a break from schools, i.e. February and November. During the holidays, the researcher observed interactions at home, religious activities, social interactions, and program or planned activities in learning. The researcher conducted the observation once a week so overall the observations were conducted four times in February and four times in November.

Structured Interview

Structured interview was conducted differently in each area to achieve the saturated data. Topics of structured interview consisted of: (1) learning activities, (2) parents' care in guiding children in learning, (3) daily religious activities, (4) social activities, and (5) leisure time. Table 4 shows the saturated data in each area.

Table 4
Data saturation in each area

Research location	N	Saturated data
Industrial Area	50	17
Coastal Area	48	20
Riverside area	45	15
Amount	143	52

Data Analysis

The data analysis process was carried out since the researchers were in the field, but making conclusions while in the field was only temporary (Bracketing) or in temporary brackets. The conclusion becomes the conclusion when the research has been completed, the researcher has classified the data according to the themes found, and the researcher has carried out various data reduction steps. Researchers will return to the research location when doubts are found when drawing conclusions.

Data analysis was carried out using the Miles & Huberman (1992) approach, which included data collection using three methods, data classification according to the themes found in the field, data filtering by conducting data triangulation, and drawing conclusions from initial conclusions to conclusions. Data reduction is the most important step to getting clear conclusions that match reality.

Results and Discussion

General Description of the Research Setting

The research location consisted of 3 locations, namely the industrial area community, the riverside community, and the coastal community, all of which were selected based on whether there was pollution in the area. Table 3 shows the number of research subjects (informants) by locus. See table 5.

Table 5
Research Subjects According to Place of Residence

Research location	N	%
Industrial Area	50	35.0
Coastal Area	48	33,6
Riverside area	45	29,4
Amount	143	100

Source: Data of research 2022

Table 5 shows differences in the number of respondents between the three different locations, but the differences are not that significant, so they are relatively the same.

Table 6
Age and Sex of Informants

No.	Age	Gender	
		Male	Female
1	< 21	27	30
2	21-30	13	23
3	31-40	12	17
4	> 40	8	13
	Total	60	83

Source: Data of research 2022

Table 6 shows that out of 143 informants, 83 were female, and 60 were male. Informants under the age of 21 occupy the highest position, namely 57 people between 21–30 years, as many as 36 people, between 31–40 years, as many as 29 people, and more than 40 years as many as 21 people.

The Role of Parents

The role of parents in instilling children's competencies from an educational perspective of sustainable development varies considerably. Many parents instill in their children awareness of the importance of environmental cleanliness. Parents are happy to make it clear that environmental cleanliness is the most important factor compared to other factors, as it will affect the sustainability of human life today and in the future. Table 5 shows the existence of an education model that parents pass on to their children.

Table 7
Types of Student Competence Cultivation Activities

Number	Type of activity	Yes (%)	No (%)
1	Invite to dispose of trash in its place	98	2
2	Clean coast program	67	33
3	Clean times program	88	12
4	Do not use single-use plastic bags	59	41
5	Do not use glass bottles that cannot be processed using the recycling economy	65	35
6	Do not throw waste into the river	89	11
7	Do not throw waste into the sea	67	33
8	Do not use fish poison in the river	76	24
9	Do not use chemical drugs excessively for medicinal plants	78	22
10	Don't burn the forest	69	31
13	Average	75,6	24,4

Source: Research data 2022

Table 7 explains that 75.6% of parents instill education-oriented competencies in sustainability development. There are only 224.4% of parents who do not teach this. This shows that most parents

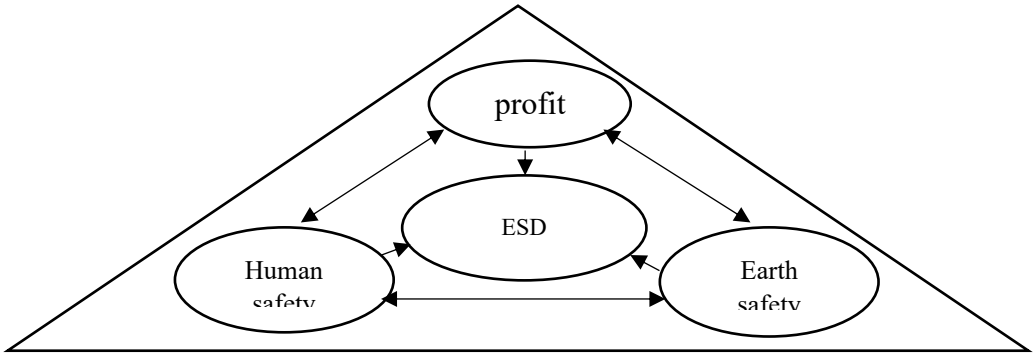
are very concerned about environmental sustainability and always instill this awareness in their children.

The results of the research above are basically in line with Hills' view (2002), which states that when teachers and parents always instill environmental education in children, harmony will be created, in which humans can exercise real control over nature (Werbach, 2009) so that if there is damage on a small scale is immediately resolved so that it does not turn into a major damage. The growing damage to the earth will injure the process of fulfilling basic human needs, which are decreasing day by day (Hubbard, 2009). Environmental education instilled by teachers and parents will always emphasize students' ability to consider natural and social dimensions in environmental preservation (Lavanya & Saraswathi, 2014).

Children can be taught the triad of earth preservation, starting from the planet earth, which must be looked after, saving the people on it, and prioritizing the benefits of using the earth in a friendly manner (Elkington, 2013). Children should be taught in such a way that people just take advantage of the earth without paying attention to the other two aspects.

Figure 2

Triple Bottom Line (Elkington, 2013)



UNESCO (0210) emphasized the importance of culture as an important dimension in instilling sustainable values, including ethics, religion, and culture, and all of them can affect people's ESD attitudes.

Table 8 shows parents' beliefs about the benefits of student competence in education oriented toward educational sustainability development.

Table 8
Parents' Belief in the Benefits of Sustainability Development

Number	Alternative Answers	N	%
1	Very sure	53	37.1
2	Certain	70	48,9
3	Doubtful	16	11,2
4	Not sure	4	2,8
5	Very unsure	0	0
Total		143	100

Source: Data of Research 2022

Table 8 provides an illustration that most parents believe and are very sure that educational sustainability-oriented competencies are beneficial for preserving the earth and other living things. There were only 16 people who doubted it and only four people who did not believe in its benefits. Parents should have high confidence in the benefits of environment-oriented education because students need the role of learners (teachers and parents) in the form of assistance, commitment, and belief in the importance of protecting the environment as much as possible (Sahin, 2006). Children will behave better toward the environment because they have a present and future orientation to themselves and others, including awareness of the importance of the environment for future generations (Nomura, 2009). From an early age, students should be invited to think about the relationship between environmental damage and its causes, think critically to find and create ways to deal with all damage to the earth, and invited to think about how to eliminate or minimize the impact of environmental damage on humans, animals, and plants (Ramdani & Lounela, 2020). Various steps taken by parents toward children's education related to sustainability are shown in Table 9.

Table 9 shows that parents' role in education for sustainable development has been fulfilled by 75.6% of the parents on average. Parents have confidence that students' cognitive abilities will be firmly built when taught from a young age, including remembering various messages from parents and teachers for environmental protection, not polluting the environment, and other recommendations.

Teachers and parents can influence knowledge about the environment, awareness knowledge, affect the ability to think practically, synthesize a phenomenon that damages the earth, principal knowledge, will be able to shape children's personalities and even become a guide for children in behaving in protecting the environment appropriately (Prabawani et al., 2017).

Table 9
The Role of Parents in Children's Education

Number	Type of activity	Yes (%)	No (%)
1	Instill a sense of concern for environmental issues	97	3
2	Instilling an environmentally friendly attitude for the harmony of nature and creatures	68	32
3	Train to control natural damage	85	15
4	Instill an attitude of abstinence from polluting the land because it is a part of life, not a commodity	61	39
5	Train the attitude of responsibility toward environmental sustainability	63	37
6	Instill knowledge and change the beliefs, behaviors, and attitudes of children	91	8
7	Instill an attitude of concern for waste in the river	65	35
8	Instilling a caring attitude toward waste in the sea	77	23
9	Instill a caring attitude toward waste in the air	75	25
10	Instill a caring attitude toward waste in the soil	72	28
	Average	75,6	24,4

Source: Data of research 2022

All environmental education for children being able to change the behavior of children at elementary school age is of great importance as elementary school-age children will more easily remember and implement various aspects of values and events, becoming knowledge and experiences that are remembered until the end of their lives to continue to practice in becoming a living environment (Berges Puyo, 2020; Forehand, 2005).

Strategies Implemented to Improve Competence

Teachers and parents use many strategies in instilling awareness of environmental sustainability, as listed in table 10 as seen in the appendix. .

As shown in Table 10 (see appendix), teachers and parents should apply education as a top priority, which is expected to be able to encourage the creation of social change in children from an early age to have a profound sustainability orientation so that when they grow up, they grow up determined not to harm the earth (Vare & Scott, 2007). Thus, education is considered the most important aspect of changing the world by changing attitudes toward caring for environmental sustainability through the attitudes, intentions, and behavior of society, which can be built from childhood age. Thus, when they grow up, they develop a serious awareness of protecting this earth from all pollution (Berberyan et al., 2015).

Teachers and parents have so far been oriented toward local knowledge around their homes to teach children various aspects that can foster environmental awareness. It can be seen in Table 10, among others.

Table 10

Strategies Used by Teachers and Parents

Number	Activity	The role of the elementary teacher	Parent war
1	Practical knowledge	Sing, dance, play, and watch videos	Invite practice in the home environment
2	Involve students in various ways	Involve students in various fun environmental-themed activities	Invite children to go around rivers, beaches, and forests that are still good and which have been polluted
3	student-centered active learning	Implementing student-centered active learning	Invite students to practice at home
4	Time table	Make programmatic plans that get students involved in the practice of theory taught in class	Make plans for a walk through the neighborhood with the kids
5	Videos	Watch videos related to environmental issues	Watching television related to geography, and YouTube on mobile phones
6	Green school	Schools make go-green programs such as greening, or greening and environmental drama	Plant various vegetables by involving children
7	Scarcity of resources	Awareness of resource scarcity	Save water, gas, and electricity
8	Environmental monitoring	Students write letters to companies that dump waste into rivers	Parents teach children by inviting people to live clean
9	Exhibition of innovative ideas	The teacher invites creative students to make recycle of economy products	Parents are creative with their children making various decorations from used goods
10	Express opinions	Teachers teach children to express ideas and ideas about the importance of the environment	Parents teach children to invite their friends to love the environment

Source: Data of research 2022

Table 11 is basically in accordance with the opinion of Nomura (2009), which stated that it is very important to teach local content to elementary school-age children so that they have practical experience in how to protect the environment properly. Local wisdom education related to the environment will be able to maintain a person's attachment to the natural and social environment so that responsibility grows to protect the environment (Frantz & Mayer, 2014).

Table 11
Various Local Content Related to Sustainability

No	Local content	Important meaning
1	It is forbidden to burn dry leaves indiscriminately	Cause forest fires and evaporate large amounts of groundwater
2	Do not throw broken glass carelessly	It may cause injury to others and pollute the environment
3	Prohibition of using poisons from plants and chemical drugs to find fish in the river	The little fish died, and the river water became polluted
4	Prohibition of defecation (feces) in stagnant water	The water becomes polluted and smells bad
5	It is forbidden to throw carcasses into the river (but they must be buried)	River water becomes polluted, and if there is an infectious disease, it will easily spread to animals and humans
6	Prohibition of eating crabs that are laying eggs	Kills prospective crab children and can cause allergic skin itching for eaters
7	Prohibition of killing rat-eating snakes	Protecting the soil & environmental ecosystem

Source: results of interview with the community

The study results are in line with the opinion that when the average child's attachment to the environment is high, empathy and the child's desire to preserve the environment will grow (Frantz & Mayer, 2014).

The results of the interview with Mr. Binbin [45 years old] explained that:

(1) "Parents always teach their children to dispose of trash in its place, don't litter, use eco-friendly plastic, and always try to use used items to make various skills, so they do not pollute the soil."

Thus, teaching environmental education to children does not have to be theoretical, but it can be directly applied to bigger things than trivial things. Mrs. Ina-ani (47 years old) explained in her interview that:

(2) "Children today are not like the children before. If the children used to be forbidden to throw garbage in the river, they would never dare to throw garbage in the river. Children should now be regularly informed not to throw garbage into the river. Rivers are not big trash cans that can hold all the soil."

The results of the interviews show that environmental education for children cannot be done once or twice but must be done many times so that it gets ingrained in the child's heart. Pipit (11 years old), an elementary school student, emphasized in the interview that:

(3) "At school, the teacher taught me to play the rope while going to the beach. There, the teacher told me how much dirt was on the beach. The teacher also held lumps of asphalt like oil and told them it was company waste. The teacher told me to look for fish or crabs on the beach, but there were not any because the beach water was polluted; maybe the fish drifted away to the middle of the deep sea."

The story describes how the teacher can bring children to study the environment directly to the shoreline to play. It is considered by students to be more concrete and easier to remember. As teacher Ida (34 years old) explained:

(4) "Children prefer realistic lessons. If I explain the importance of clean river water because everyone drinks it through filtering at the regional drinking water company, the children immediately feel disgusted; why does the source of the water flowing into homes come from very dirty river water with lots of household waste? , and it was black and smelled too bad."

Through such learning, children become aware of the importance of keeping river water clean. Other teachers, such as Akbar (32 years old), share their experience in teaching the environment:

(5) "I once took my children down a mountainous hill, which was dug up to make it look like a bald head. I told the children that it is not very good to destroy hills or mountains for soil and stones because it can cause landslides and floods, and make the earth look barren."

From the discussion, it appears that the teacher always tries to teach how to understand natural phenomena by bringing his students directly to the location to be studied, such as on the beach, polluted riverbanks, and bare hills. This will leave a lasting impression on generations so that awareness of taking good care of the environment at all times develops.

The village head said in an interview about the importance of children's education for environmental sustainability:

(6) "Children with high awareness of sustainability will practice this when they grow up, for example, not throwing garbage into rivers, not logging and clearing forests, not throwing plastic on the ground, not poisoning fish in rivers, not using pesticides too much, not burning forests, not dumping waste into the sea and so on."

In this case, the village head contributes considerably to the community, including children, living cleanly, not damaging the earth, and always keeping the environment clean properly. The findings of this study enrich the understanding that environmental education from self gives a more meaningful meaning than environmental education after adulthood. Children's thoughts and awareness are much more easily shaped and affected in a better direction than when they are adults. The results of the above research are in line with that of the study by Dividson (2003) that environmental education should involve all parties, not just teachers, but must include parents, the community, religious leaders, youth leaders, village leaders, and others. Likewise, Fajonyomi's research (2015) found that environmental education for children is theoretical in class and should

go outside the classroom to the immediate location where there is environmental damage. The results of this study also strengthen the opinion of Ilechukwu et al. (2014), who states that environmental education is a process of instilling values, beliefs, and attitudes to love the real environment, which becomes the provision for children as adults in class. Abiodan (2002) also found that it becomes difficult when children are easily given awareness after adulthood. Therefore, awareness of the importance of the environment for natural ecosystems is very important.

Johnson's research (2007) also found that teaching children about marine pollution must be performed at the seaside, teaching children about damaged forests must be in that location, teaching children about household waste must be in dirty rivers, and so on to create an integral understanding in children.

This study brings a novelty that values, beliefs, and attitudes are integral environment in teaching children. As a consequence, teaching children should be performed in the proper environment.

Conclusion

Based on the description above, both related to research findings and discussion, it can be concluded that, first, teachers and parents play a major role in creating students' understanding of a sustainable environment, as well as instilling new awareness for children that sustainable development cannot only be theorized in the classroom. However, it must be practiced in everyday life by inviting children directly to practice how to adequately protect the environment. Teachers have the role of formally instilling education toward sustainable development in their children, while parents have the role of instilling awareness of environmental sustainability both informally and non-formally.

Both teachers and students believe that environmental education from an early age will have a longer impact on children and will always be applied in a sustainable way for life. Classroom learning can be performed through case learning, problem solving, and role playing so that the instilling of sustainable values grows and develops in the hearts of children, which will be practiced as long as they live in the community. The novelty of this study lies in that values, beliefs, and attitudes in teaching children required true and appropriate environment.

This study, however, has a limitation in the research design. Future research is suggested to use ethnography approach as the basic research design.

References

Abiodan, A. A. (2002) Rebuilding the foundations of education in Nigeria *Newsletter of theSocial Science Academy of Nigeria* 5(2), 21–31.

Adams, S., & Klobodu, E. K. M. (2017). Urbanization, democracy, bureaucratic quality, and environmental degradation. *Journal of Policy Modeling*, 1–30. https://doi.org/10.1016/j. jpolmod.2017.04.006

Agustina, T. (2014). Kontaminasi Logam Berat pada Makanan dan Dampaknya pada Kesehatan. *Teknobuga*, *1*(1), 53–65.

Alexander, K. A., Carzolio, M., Goodin, D., & Vance, E. (2013). Climate change is likely to worsen the public health threat of diarrheal disease in Botswana. *International Journal of Environmental Research and Public Health*, *10*(1), 1202–1230. https://doi. org/10.3390/ijerph10041202

Anijah-Obi, F. N. (2001) *Fundamental of environmental education and management*. Clear lines Publications.

Bedawy, R. (2014) Embedding sustainable development into higher education: A case studyfrom Egypt. *International Review of Management and Business Research* 3(1). 446–484/

Benn, S., Dunphy, D., & Griffiths, A. (2006). Enabling change for corporate *sustainability*: An integrated perspective. *Australasian Journal of Environmental Management*, *13*(3), 156–165. https://doi.org/10.1080/14486563.2006.9725129

Berberyan, A. S., Ruzieva, D. I., Kotenko, L. V., & Sidorov, S. V. (2015). Problems of modern education. *VI International Scientific Conference*, 1–200.

Berges Puyo, J. (2020). A Value and Character Educational Model: Repercussions for Students, Teachers, and Families. *Journal of Culture and Values in Education*. https://doi.org/10.46303/jcve.2020.7

Burck, J., Marten, F., & Bals, C. (2015). The climate change performanceindex: Result 2015. In *Think Tank & Research,* 1, https://doi.org/citeulike-article-id:9385804

Cantu, N., Varela, D., Jones, D., & Challoo, L. (2021). Factors that Influence School Choice: A Look at Parents' and School Leaders' Perceptions. *Research in Educational Policy and Management*, *3*(1), 19-41. https://doi.org/10.46303/repam.2021.2

Cebrián, G., Grace, M., & Humphris, D. (2015). Academic staff engagement in education for sustainable development. *Journal of Cleaner Production*, *106*(2015), 79–86. https://doi.org/10.1016/j. jclepro.2014.12.010

Creswell, W. J., (2009). *Research design. qualitative, quantitative, and mixed methods approaches SAGE publications.*

Dividson, J. (2003). The challenge of education for sustainable development and globalcitizenship in wales. *Journal of Geography in Higher Education* 27 (3) 235–238.

Dunne, M., Akyeampong, K. and Humphreys, S. (2007). School Processes, Local Governance and Community Participation: understanding access. CREATE, Research Monograph, No. 6, London.

Elkington, J. (2013). Enter the triple bottom line. *The triple bottom line: Does it all add up*, *1*(1986), 1–16. https://doi.org/10.4324/9781849773348

Fajonyomi, A. (2015). Experiential learning, adult education and community development for justice and peace: empowering harmony in Nigeria. *Adult Education in Nigeria.* 20 (1).

Forehand, M. (2005). *Bloom's taxonomy: Original and revised*. emerging perspectives on learning, teaching, and technology.

Frantz, C. M., & Mayer, F. S. (2014). The importance of connection to nature in assessing environmental education programs. *Studies in Educational Evaluation*, *41*, 85–89. https://doi.org/10.1016/j. stueduc.2013.10.001

Hadi, D. W. (2017). *PROPER Mendorong Ketaatan Perusahaan Sampai 92%*. PPID. http://ppid.menlhk.go.id/

Hartono, G. C., & Utami, S. R. (2016). The comparison of sustainable growth rate, Firm's performance and value among the firms in Sri Kehati index and IDX30 index in Indonesia stock exchange. *International Journal of Advanced Research in Management and Social Sciences*, *5*(5), 68–81. http://www.garph.co.uk/IJARMSS/ May2016/7.pdf

Hills, M. D. (2002). Kluckhohn and Strodtbeck's values orientation theory. *Online Readings in Psychology and Culture*, *4*(4), 1–14. https://doi.org/10.9707/2307-0919.1040

Hollstein, M. S. (2022). Social studies, civics, and fracking: Ohio teacher perceptions of controversial environmental issues. *Journal of Social Studies Education Research*, *13*(1), 1–34. https://jsser.org/index.php/jsser/article/view/3414/548

Hubbard, G. (2009). Measuring organizational performance: Beyond thetriple bottom line. *Business Strategy and the Environment*, *18*(3 December 2006), 177–191. https://doi.org/Doi 10.1002/Bse.564

Hudson, A. (2017). Restoring and protecting the world's large marine ecosystems: An engine for job creation and sustainable economic development. In *Environmental Development* 22, Issue October 2016, 150–155. Elsevier Ltd. https://doi.org/10.1016/j. envdev.2016.10.003

Ilechukwu, L. C., Njoku, C.C. & Ugwuozor, F.O. (2014). Education and development disconnect in Nigeria: education for sustainable development (ESD) as the 21st century imperative for Nigeria's national transformation, sustainable development, and global competitiveness. *Journal of Economic and Sustainable Development. 5 (23), 44 – 56.* https://www.iiste.org/Journals/index.php/JEDS/article/view/16756

Johnson, A (2007). *Higher education for sustainable development*. final report of international action research project. Based on research conducted by Dr. Andy Johnson, second to the OECD from forum for the future, in October 2006–March2007.

Juniman, P. T. (2018). 5 Fakta Memprihatinkan Seputar Sampah. CNN Indonesia. https://www.cnnindonesia.com/gaya-hidup/20180119202025-282-270298/5-fakta-memprihatinkan-seputar-sampah

Kamal, A. J., Devarajan., S. Khemani S., and Shah, S., (2005). Decentralisation and service delivery" policy research working paper, World Bank.

Kavaz, T.., Kizgut-Eryilmaz, B.., Polat, B.., Amca-Toklu, D.., & Erbay, F. (2021). Investigation of Preschool Children's Perceptions to Protect the Environment Through Drawings. *Theory and Practice in Child Development*, *1*(1), 41–55. https://doi.org/10.46303/tpicd.2021.4

Kumekpor., K.B (2011). *Research methods and techniques of social research.* SonLife Press and Services.

Lavanya, B., & Saraswathi, S. (2014). Education for sustainable development. *National Conference on Management and Social Sciences – Its Impact on Sustainable Development*, *5*, 132–136. http://www.unesco.org

Luber, G., Ph, D., & Hess, J. (2007). Climate change and human. *Journal of Environmental Health*, *70*(5), 43–45.

Mack, N., Woodsong, C., Macqueen, KM., Guest, G., & Namey, E., (2005). Qualitative research methods: A data collector's field guide. Family Health International.

Meinhold, J. L., & Malkus, A. J. (2005). Adolescent environmental behaviors: Can knowledge, attitudes and self-efficacy make a difference? *Environment and Behavior*, *37*(4), 511–532. https://doi.org/10.1177/0013916504269665

Miles, M.B. & dan Huberman, A.M. (1992). *Analisis data kualitatif*, UI Pers.

Nomura, K. (2009). A perspective on education for sustainable development: Historical development of environmental education in Indonesia. *International Journal of Educational Development*, *29*(6), 621–627. https://doi.org/10.1016/j.ijedudev.2008.12.002

Nousheen, A., Yousuf Zai, S. A., Waseem, M., & Khan, S. A. (2020). Education for sustainable

development (ESD): Effects of *sustainability*education on pre-service teachers' attitude towards sustainable development (SD). *Journal of Cleaner Production*, *250*(2020), 119537. https://doi.org/10.1016/j.jclepro.2019.119537

Patz JA, D, C.-L., T, H., & JA, F. (2005). Impact of regional climate changeon human health. *Nature*, *438*(7066), 310–317.

Pebrianto, F. (2019). Forest Watch Indonesia: 1,47 Juta Hektare Hutan Hilang Tiap Tahun. *Tempo. Co*. https://bisnis.tempo.co/read/1259120/ forest-watch-indonesia-147-juta-hektare-hutan-hilang-tiap-tahun

Prabawani, B. (2019). *Business sustainability dan Peran triple Helix dalam Industri* (Issue March). Terra Media.

Prabawani, B., Hanika, I. M., Pradhanawati, A., Budiatmo, A., Musfirowati,I., Pradhanawati, A., & Budiatmo, A. (2017). Primary schools eco-friendly education in the frame of education for sustainable development. *International Journal of Environmental & Science Education*, *12*(4), 607–616.

Prabowo, LS. (2022). The effect of ISO and leadership quality on the sustainable development of academic competence and student performance. *Journal of Social Studies Education Research,* 13(3), 31-55. https://jsser.org/index.php/jsser/article/view/4232/575

Ramdani, R., & Lounela, A. K. (2020). Palm oil expansion in tropical peatland: Distrust between advocacy and service environmental NGOs. In *Forest Policy and Economics* 118, 102242. https://doi.org/10.1016/j.forpol.2020.102242

Sahin, I. (2006). Detailed review of rogers' diffusion of innovationstheory and educational technology-related studies based on Rogers' theory. *The Turkish Online Journal of Educational Technology*, *5*(2), 14–23.

Schipper, J., Chanson, J.S., Chiozza, F., Cox, N.A., Hoffmann, M., Katariya, V., Lamoreux, J., Rodrigues, A.S.L., Stuart, S.N., Temple, H.J., Baillie, J.E.M., Boitani, L., Lacher Jr., T.E., Mittermeier, R.A. & Smith, A.T. (2008). The status of the world's land and marine mammals: diversity, threat, and knowledge. *Science (Wash.) 322*(5899): 225-230. https://dx.doi.org/10.1126/science.1165115

Scott, B. J. L., Kraemer, D. G., & Keller, R. J. (2009). Occupational hazardsof carbon dioxide exposure. *Journal of Chemical Health & Safety*, *1*(March/April), 18–22. https://doi.org/10.1016/j.jchas.2008.06.003

Silverman, D., (2006). *Interpreting qualitative data: Methods for analyzing talk, text and interaction*. SAGE Publications Ltd

Sims, L. & Falkenberg, (2013) Developing competences for education for sustainable

development: a case study of Canadian faculties of education. *International Journal of Higher Education* 2 (4). 1–14.

Singh and Nath (2007) *Research methodology*. S.B Nangia APH Publishing Corperation.

Siraj-Blatchford, J., Smith, K. C., & Samuelsson, I. P. (2005). *Education for sustainable development in the early years*. *OMEP, World Organization for Early Childhood Education. Journal of Cleaner Production*, *184*(2018), 321–332. https://doi.org/10.1016/j. jclepro.2018.02.279

Soubbotina, T. P. (2004). *Beyond economic growth: An introduction to sustainabledevelopment*. Second Edition, The World Bank.

Suduc, A. M., Bîzoi, M., & Gorghiu, G. (2014). Sustainable development in Romania in pre-school and primary education. *Procedia - Socialand Behavioral Sciences*, *116*, 1187–1192. https://doi.org/10.1016/j.sbspro.2014.01.367

Sylaj, V. & Sylaj, A.K. (2020). Parents and Teachers' Attitudes Toward Written Communication and Its Impact in The Collaboration Between Them: Problem of Social Study Education. *Journal of Social Studies Education Research, 11*(1), 1-20. https://jsser.org/index.php/jsser/article/view/1649/435

Tarman, İ, & Kent Kukurtcu, S. (2022). The perceptions of the children attending the preschool education about nature and nature pollution. *International Electronic Journal of Elementary Education, 15*(1), 53–64. https://www.iejee.com/index.php/IEJEE/article/view/1900

Twumasi. P.A. (2001). *Social research in rural communities*. Second Edition, Ghana University Press.

Uar, N. D., Murti, S. H., & Hadisusanto, S. (2016). Kerusakan lingkungan akibat aktivitas manusia pada Ekosistem Terumbu Karang. *MajalahGeografi Indonesia*, *30*(1), 88–95.

UNESCO (2003) *United Nations decade of education for sustainable development(January 2005–December 2014):* Framework for a draft international implementation scheme.

Vare, P., & Scott, W. (2007). Learning for a change: Exploring the relationship between education and sustainable development. *Opinion Essay*, 1(2), 191–198 https://doi.org/10.1177/097340820700100209

Vega, R. M. C. L. de la. (2004). Awareness, knowledge, and attitude aboutenvironmental education: Resp. In *Electronic Theses and Dissertations*.University of Central Florida Electronic.

Watanabe, R. (2015). *Implementation of education for sustainable development (ESD) in Japan: A qualitative case study of formal education in Kesennuma City* [Stockholms Universitet]. http://su.diva-portal.org/smash/get/diva2:841571/FULLTEXT01.pdf

Werbach, A. (2009). *Strategy for sustainability: A business manifesto*. Harvard Business Press.

Wilhelm, S., Förster, R., & Zimmermann, A. B. (2019). Implementing competence orientation: Towards constructively aligned education for sustainable development in university-level teaching-and-learning. *Sustainability*, *11*(7). https://doi.org/10.3390/su11071891