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THE IMPACT OF STUDENT PARTICIPATION IN ENVIRONMENTAL EDUCATION PROGRAMS ON PRO-ENVIRONMENTAL BEHAVIOR

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Abstract
The low awareness and behaviour of environmental care and the increasing cases of environmental damage caused by human behaviour are the background of the research. Environmental problems caused by humans continue to occur and increase every year, ranging from the destruction of ecosystems to the emergence of waste that damages the environment. Environmental care behaviour is an important part that must be owned by every human being on earth, because this is related to the survival of every creature, both plants, animals, and other humans. This study aims to determine the effect of students' participation in environmental education programmes on pro environmental behaviour. This research is a type of quantitative research with survey method. Data collection techniques were obtained by means of observation and questionnaires. The research subjects were 5th grade elementary school students totalling 45 people. Data analysis was conducted using paired sample t test to measure the influence between variables and linear regression analysis to measure the amount of influence given. The results showed that there was a positive influence of student participation on pro environmental behaviour with sig. 0.004 < 0.005, with rcount = 0.419 > rtable = 0.294 so that it can be interpreted that the higher the participation of students in the environment, the better the environmental care behaviour, where R2 = 0.175 shows the influence of student participation with pro environmental behavior by 17%, while 83% is influenced by other factors. From these results, it shows that students' participation in environmental education programs plays an important role in supporting environmental care behaviour that leads to attitudes to protect the environment. The implication of the research is as a database and evaluation of education, especially in the environmental care behaviour of elementary school students.
Keywords: *student participation; environmental education; pro environmental behaviour*

Abstrak
Rendahnya kesadaran dan perilaku peduli lingkungan serta meningkatnya kasus kerusakan lingkungan yang disebabkan oleh perilaku manusia menjadi latar belakang dilakukannya penelitian. Permasalahan lingkungan yang disebabkan oleh manusia terus terjadi dan mengalami peningkatan setiap tahunnya, mulai dari rusaknya ekosistem hingga timbulnya limbah yang merusak lingkungan. Perilaku peduli lingkungan merupakan bagian penting yang harus dimiliki oleh setiap manusia di muka bumi, karena hal ini berkaitan dengan kelangsungan hidup setiap makhluk, baik tumbuhan, hewan, dan manusia lainnya. Penelitian ini bertujuan untuk mengetahui pengaruh partisipasi peserta didik dalam program pendidikan lingkungan terhadap *pro environmental behavior.* Penelitian ini adalah jenis penelitian kuantitatif dengan metode survei. Teknik pengumpulan data diperoleh dengan cara observasi dan kuisioner. Subjek penelitian adalah siswa kelas 5 sekolah dasar berjumlah 45 orang. Analisis data dilakukan dengan menggunakan paired sample t test untuk mengukur pengaruh antar variabel dan analisis regresi linier untuk mengukur besar pengaruh yang diberikan. Hasil penelitian menunjukkan bahwa terdapat pengaruh positif partisipasi peserta didik terhadap pro environmental behavior dengan sig. 0,004 < 0,005, dengan r_{hitung} = 0,419 > r_{tabel} = 0,294 sehingga dapat ditafsirkan bahwa semakin tinggi partisipasi peserta didik pada lingkungan, maka akan semakin baik pula perilaku peduli lingkungan, dimana R^2 = 0,175 menunjukkan besar pengaruh partisipasi siswa dengan *pro environmental behavior* sebesar 17%, sedangkan 83% dipengaruhi oleh faktor lain. Dari hasil tersebut menunjukkan bahwa partisipasi peserta didik dalam program pendidikan lingkungan berperan penting untuk mendukung perilaku peduli lingkungan yang mengarah pada sikap-sikap menjaga lingkungan. Implikasi penelitian adalah sebagai basis data dan evaluasi pendidikan khususnya dalam perilaku peduli lingkungan siswa sekolah dasar.
Kata Kunci: partisipasi siswa; pendidikan lingkungan; *pro environmental behavior*

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Introduction

The environment is a place where living things take place in carrying out various activities as a gift from God Almighty. Talking about the environment is also related to the environment. The environment according to (Manik, 2016) is a comprehensive unit of interaction between nature and humans. This interaction has a reciprocal and dependent relationship. Humans as one of the living things that depend on the environment as a source of life. In line with that (Malik, 2022) said that the environment is not an object that can be exploited freely, but something that should make humans more aware to better understand the strong relationship between humans and the interrelated environment. Because environmental damage will also have an impact on human survival. (Siskayanti & Chastanti, 2022) argue that the main factor of global environmental damage is human behaviour. One of the impacts of human behaviour on environmental damage to waters can be seen from the 2017 LIPI (Indonesian Institute of Sciences) records where coral reef ecosystems continue to decline, recorded in Indonesia the area of coral reefs around 2.5 million ha, with 6.39% in excellent condition, 23.40% in good condition, 35.06% in fair condition and 35.15 in poor condition. The statistical data. The 2018 Environment and Forestry statistics recorded that the area of forest land has continued to decline since 2011 from 98.7 million ha to 93.5 million ha at the end of 2018, this is due to fires and the expansion of land conversion. This is in line with Keraf in (Iswari & Utomo, 2017) who said that environmental damage both national and global scope such as damage to the sea, atmosphere and land comes from humans who are irresponsible, uncaring and only selfishness.

For this reason, environmental care behaviour is very important for humans. Environmental care behaviour according to (Casaló & Escario, 2018) is a contributive action towards the preservation and protection of the environment carried out by humans which aims to protect nature and resources or reduce damage. (Schmitt et al., 2018) suggested that pro-environmental behaviour is prosocial, meaning that it has positive consequences for others and the environment. This pro-environmental behaviour can provide welfare for living things and the environment around them if instilled in each individual. (Shyang Chyuan Fang, 2021) revealed that if pro-environmental behaviour can cause feelings of pleasure, there will be intrinsic motivation from within a person to continue to do environmental care behaviour. Pro-environmental behaviour can be said to be an action taken to minimise behaviour that can damage the balance between nature and living things by taking actions that can maintain natural harmony and increase awareness of the importance of protecting the environment. Pro-environmental behaviour that is carried out properly and correctly will ensure a life that is in harmony and balance with nature in the future. Pro-environmental behaviour is the key to environmental sustainability (Křepelková et al., 2020), so it is important to keep our planet sustainable and protect natural ecosystems and the quality of human life. Everyone can contribute to this endeavour by taking small daily actions to care for the environment.

In this regard, three theories of pro-environmental behaviour have been developed, including Normative Activation Theory (NAT), Theory of Planned Behaviour (TPB), and Kaiser Model. NAT theory developed by Schwartz (de Groot & Steg, 2009) relates to pro-social behaviour. This model assumes that each person has different moral obligations. A person will carry out their personal obligations depending on their moral obligations. NAT predicts prosocial behaviour with three variables: personal norms, awareness of consequences,

and assignment of responsibility. In contrast to NAT theory, the theory of planned behaviour (TPB) is a theory that can measure and predict planned and intentional human behaviour. The TPB theory developed by Ajzen (Icek, 1991) has three variables to predict behavioural intention, namely attitude towards behaviour, subjective norms, and actors' perceived control. Meanwhile, Kaiser's model theory assumes that environmental knowledge, environmental values, and feelings of responsibility can be used as predictors to predict pro-environmental behaviour. According to him, pro-environmental behaviour can be predicted more accurately by including the concept of personal obligation with feelings of responsibility. There are six dimensions of environmental care behaviour, namely energy conservation, mobility, and transportation, while avoidance, recycling, consumerism, and representative behaviour towards conservation (Kaiser et al., 2007). A person's indifference to the environment is caused by a lack of understanding and awareness of the environment so that participation in maintaining and preserving the environment is also lacking (Iswari & Utomo, 2017). Human indifference to the environment is a global problem that has a serious impact on our planet. Various factors can contribute to this attitude and behaviour. For this reason, it is necessary to understand the environment so that people can be more concerned about the future of this earth and actively participate in protecting the environment from damage and trying to repair environmental damage that has occurred.

Environmental participation refers to the active and sustained involvement of individuals, groups, or communities in efforts related to the preservation and protection of the natural environment. This participation can include a variety of activities and roles that help maintain and improve the state of the environment. In the field of education, student participation in environmental conservation efforts is key in educating future generations to become environmentally conscious citizens. By engaging students in activities that focus on environmental conservation, we can help them develop the awareness, knowledge and skills needed to play an active role in protecting and caring for the environment. (Chozaipah, 2018), explains that student participation is the mental and emotional state of a person involved in a group situation that makes him fully contribute to the group to achieve goals and responsibilities within the established rules.

Participation is an important aspect in this case, because if students are considered to have knowledge about the environment, then their sense of awareness of the environment must also be good, and lead to good behaviour and skills so that the level of involvement in the environment is also high. Environmental participation refers to the involvement of individuals, groups, or communities in efforts related to the preservation, protection, and restoration of the natural environment. It involves various activities and roles that can contribute to the improvement of the environment. According to (Hernawati et al., 2013) the types of participation include mind, energy, mind and energy, expertise, goods, and money. Indicators of the success of student participation in the environment are mentioned to consist of three stages, namely the planning stage, the implementation stage, and the evaluation stage (Dewi, 2015). The planning stage is the contribution of ideas that a person gives to the programme to be implemented, the implementation stage is a person's involvement in the programme being implemented and the evaluation stage is a person's response to the implementation that has been carried out.

Environmental participation is an important way to address global environmental challenges and preserve our planet. By working together and being actively involved in various environmental efforts, we can contribute to the positive changes needed to protect our earth. (Rahmawati & Suwanda, 2015) said that one of the drivers in shaping environmental care

behaviour is education. Environmental education obtained from an early age is expected to motivate the younger generation to participate in saving and preserving the environment. In that sense, when discussing Environmental Education, it is not only focused on behaviour but also on the ability to participate in solving environmental problems. Planting and shaping pro-environmental behaviour can be started and familiarised through primary school education. Environmental education obtained from an early age is expected to motivate the younger generation to participate in saving and preserving the environment. One of the private schools in Karawang that has implemented a school with an environmental awareness programme is the Islamic Primary School. The private elementary school has run an environmental care programme with activities outside the classroom to contribute to protecting the environment.

Based on the above, researchers are interested in conducting research related to the influence of student participation in environmental education programs on pro-environmental behaviour. The purpose of this study is to determine the impact of student participation and how much it affects pro-environmental behaviour in strengthening environmental care activities carried out in elementary schools. The novelty in this study is to determine the effect of student participation on environmental care behaviour that leads to efforts to protect the environment. The urgency of this research is as a database, producing research and evaluation in the field of education, especially environmental care behaviour.

Research Methods

This study uses a quantitative approach with a survey method to measure variables, test predetermined hypotheses, and draw conclusions based on responses given by respondents. This study involved 45 grade V students who had undergone the full pro-environment programme in stages. This research was conducted using purposive sampling technique. The instrument used in this study is a questionnaire using a Likert scale consisting of an instrument of student participation in the implementation of environmental education programs as many as 13 items and an instrument of pro-environmental behaviour developed by Kaiser and Wilson (2004) in general ecological behaviour scale (GEBS) consisting of 31 items with six dimensions namely energy conservation, mobility, and transportation, while avoidance, recycling, consumerism, and representative behaviour towards conservation. The data collection technique was taken by filling out a questionnaire by students. This research was conducted in October-November 2022, at a private elementary school located in Karawang city. The procedure of this study began with the questionnaire filling conducted at the school with permission from the school and the delivery of information to students regarding their involvement in the study, then with the help of the class teacher, the questionnaire was distributed for data collection. Data analysis was conducted using Paired Sample T-test to measure the influence between variables and linear regression analysis to measure the magnitude of influence between variables. This research was conducted with the following steps: conducting initial observations, selecting books and journals related to pro-environmental behaviour, student participation in the environment, reviewing comprehensively, designing research, conducting research, and analysing research results that create new meaning for society.

Result and Discussion

Data analysis was conducted to measure the effect of student participation on pro-environmental behaviour in environmental education programs and how much influence student participation has on pro-environmental behaviour. Hypothesis testing aimed at

answering research questions was carried out with the help of SPSS version 25. The results of the study are shown in the following table:

Table 1. Research result

Aspect	r_{hitung}	r_{tabel}	Sig.
The impact of student participation on pro environmental behaviour	0,419	0,294	0,004
Much impact of student participation on pro environmental behaviour		R^2 0,175	

In measuring the influence between variables, namely student participation on pro-environmental behaviour using paired t-test analysis. The results of the analysis show that there is a relationship between student participation in environmental programs and pro-environmental behaviour through sig. = 0.004 <0.005, with rcount = 0.419> rtable = 0.294 so that it can be interpreted that there is a positive influence of student participation on pro-environmental behaviour. It means that the higher the student participation in the environment, the better the environmental care behaviour. Student participation in environmental programs contributes to pro-environmental behaviour. Referring to the research results presented, it can be stated that the hypothesis analysis shows a positive influence on pro-environmental behaviour, which can be interpreted that student participation affects a person's pro-environmental behaviour. This is in line with research (Křepelková et al., 2020) which confirms that natural interactions in childhood or children's involvement in the environment will affect pro-environmental behaviour in the future. The higher the student participation, the higher the pro-environmental behaviour. (Jin, 2017) in his research also explained that the factor that influences a person's participation to be involved in an activity is the special awareness given to that person. This special awareness is in the form of self-motivation given to him so that the person wants to get involved and participate in activities.

In this study, student participation is measured after students implement and run the environmental care programme implemented in nature-based schools. Nature-based schooling is an educational approach that places the natural environment and sustainable learning at the core of the curriculum and school culture. This approach aims to increase students' understanding of nature, encourage responsibility for the environment, and motivate conservation action. The programme is designed and implemented in nature-based outdoor learning. The environmental education programme has activities such as life skills, survival, tracking, waste management and farming. The activities involve not only the school community but also the community around the school by considering the child's development and grade level. The activities carried out are natural resource management by raising catfish, utilising the results of catfish farming as a business opportunity, visiting villages to participate in cleaning the environment, recycling waste, conducting eco-printing activities, and farming with two media, namely soil and hydroponics. This farming activity utilises the school grounds for soil media and the roof of the house for hydroponic media. To implement this programme, the school provides facilities for students by preparing special land for nature activities and utilising the rural environment around the school as a medium for environmental learning for students. The school also has a field trip activity carried out by upper grade students, which is to live in a resident's house for a certain time to train life skills and society, such as participating in the processing of natural resources and maintaining the ecosystem in the community. This activity is a form of outdoor activity that organises activities by involving learners in direct observation of nature, field research, and environmental projects. This can help learners develop a sense of connection with nature and

appreciate the diversity of ecosystems. This is in line with research (Díaz Grijalva et al., 2021) which says that environmental education taught in schools has an important role and teaching practices should be delivered through materials, institutional support, and resources that focus on improving environmental attitudes, skills, and values in children.

Unlike other public schools, there are no food vendors and canteens in the school environment, but the school prepares food for students in the form of heavy meals and snacks. This is one of the efforts to teach waste reduction practices to students, such as reducing the use of single-use plastics. For this reason, the school facilitates a kitchen, a large kitchen, and a small kitchen to prepare food for students. The large kitchen is used for heavy food processing and the small kitchen is used for light food processing. The school kitchen prepares food dishes that are directly managed by the school for students from Grade 1 to Grade 6. Apart from safeguarding the school environment from the impact of the accumulation of waste generated from the canteen and outside hawkers, thus allowing the absence of plastic and other rubbish, they also aim to protect the health of students from contamination of unhealthy food. In addition to preparing dishes, large kitchens and small kitchens can also be used at any time by students to process food as a field of entrepreneurship as one of the programs to strengthen environmental care behaviour. This is in line with research (Gifford & Nilsson, 2014) that social activities outdoors or in nature tend to have more pro-environmental behaviour. These activities are further divided into consumptive and non-consumptive activities. A person or group that does not do consumptive activities such as hiking or cycling is more concerned about the environment than a person or group that does consumptive activities such as hunting.

In the previous discussion, it has also been stated that student participation affects pro-environmental behaviour. Furthermore, data analysis to measure the effect of student participation on pro-environmental behaviour in the environmental education program was carried out by calculating linear regression analysis. The amount of influence given in the research results shows R2 = 0.175 or 17%, meaning that student participation affects pro-environmental behaviour by 17%, while 83% is influenced by other factors. As stated by (Gifford & Nilsson, 2014) several factors that influence pro-environmental behaviour include 1) Childhood experiences, 2) knowledge and education, 3) personality, 4) responsibility, 5) gender, 6) social class, 7) social activities, 8) region. Based on the area of residence, it is stated that children raised in rural areas are more likely to behave pro-environmentally than children raised in urban areas because someone who lives in the countryside is closer to nature and gender differences also influence pro-environmental behaviour, where women have higher pro-environmental behaviour than men, especially in women who have children in the home environment. A person's personality will affect the awareness of caring attitudes towards environmental problems when associated with nature. Pro-environmental behaviour is also mediated by personality (attitude) and relationship with nature. Personality will affect awareness of caring attitudes towards environmental problems if it is connected to nature. This concern will be related to the activity he chooses. In research (Mori & Tasaki, 2019), it is mentioned that intention affects a person's participation in performing pro-environmental behaviour. A person who has a stronger intention tends to be more effective in participating in society and raising awareness of the importance of environmental care behaviour.

In line with that (Putra, 2017) argues that knowledge, attitudes, and values are factors that can influence the emergence of pro-environmental behaviour. This is in line with research (Akhtar & Soetjipto, 2014) which states that knowledge and attitudes together contribute 33.3% to waste reduction behaviour in a group of people. Knowledge is believed to be a means

to increase awareness in behaviour based on the knowledge possessed. Individuals who have knowledge and education on environmental issues have greater potential to care about the environment. (Otto & Pensini, 2017) also said that environmental knowledge and connectedness with nature have a positive impact on environmental care behaviour. The relationship between connectedness to nature and environmental knowledge on environmental care behaviour shows significant but weak results. The influence of connectedness to nature is stronger than environmental knowledge, but low environmental knowledge will also affect individual behaviour. The combination of connectedness to nature and environmental knowledge in education has a function as a supporter of pro-environmental behaviour in individuals.

Another study conducted by (Sari et al., 2023) also argues similarly that knowledge affects a person's pro-environmental behaviour, the better a person's environmental knowledge, the better the environmental care behaviour. On the other hand, not only knowledge influences, it is also mentioned that a person's place attachment and eco-literacy affect environmental care behaviour. Ecoliteracy is also said to be a determinant of pro-environmental behaviour. External factors that can influence a person to act pro-environmentally are positive additional actions for pro-environmental behaviour and feedback for pro-environmental behaviour. This is also supported by (Manika et al., 2018) which explains that a person's participation in an activity will be high if the person has high enough knowledge, and vice versa. The knowledge he has will affect the attitude and behaviour beliefs he will display, thus causing participation in an activity to vary. In addition, the factor that determines a person's behaviour in carrying out an activity is self-awareness. On the other hand (Widyasari, 2017) explains that a factor that is quite influential on pro-environmental behaviour is the economic level of a community. The higher a person's economic level, the better their pro-environmental behaviour. Sustainable actions often require an investment of time and resources. It is concluded that the results of research on social influence with pro-environmental behaviour and student participation in environmental education programs with pro-environmental behaviour there are other factors such as knowledge, attitudes, special awareness in the form of self-motivation, childhood experience, education, personality, responsibility, pro-environmental behaviour. There are other factors such as knowledge, attitude, special awareness in the form of self-motivation, childhood experience, education, personality, responsibility, gender, social class, social activity, region, and one's economic level. These factors are interrelated and complex. Pro-environmental behaviour change often requires a holistic approach that includes education, awareness, and changes in social values and norms. When individuals feel compelled to act pro-environmentally, they can play an important role in the preservation and protection of the natural environment.

Conclusion

Based on the results and discussion, it can be concluded that student participation in environmental education programs can affect a person's pro-environmental behaviour. The higher the participation of students in environmental education programs, the higher one's pro-environmental behaviour will be. A person's involvement in environmental care behaviour can affect the way individuals interact with the environment and motivate them to take sustainable actions. Efforts to encourage sustainable behaviour and environmental conservation often include social approaches involving communities, groups and cultures that promote social values and norms that support a healthy natural environment. This shows the importance of schools that support action in the form of programs or learning that integrates

pro-environmental behaviour. Activities that can involve students to play an active role in maintaining and caring for the natural environment. The factor that influences a person's participation in an activity is the special awareness given to that person. Learner participation in pro-environmental behaviour is an important element in educating future generations who care about the environment. Involving learners in environmental conservation and preservation efforts can help them develop the awareness, knowledge and skills necessary to become responsible citizens of our planet. Learner participation in schools can be realised by schools' efforts to integrate environmental education into their curriculum. This can include learning about environmental issues, environmental science and sustainable solutions. Through environmentally-focused learning, learners can develop a deeper understanding of environmental challenges and solutions. In addition to learners' participation in pro-environment programmes, there are other factors such as knowledge, attitude, special awareness in the form of self-motivation, childhood experience, education, personality, responsibility, gender, social class, social activity, region and one's economic level. For this reason, students who have played an active role in environmental program activities at school should also be balanced with adequate factors so that their pro-environmental behaviour is good. However, this study has research limitations in terms of sample size and potential research bias. The implications of this study are to fill the scientific knowledge gap and become the basis for further research, as a database, and evaluation in the field of education as well as a foundation for stakeholders such as government, researchers, educational institutions, and the community to consider every step in fostering environmental care behaviour. For this reason, future research can examine pro-environmental behaviour from various aspects, gender and age.

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