

## The relationship of environmental knowledge and environmental care attitude of students

Louis Ivana Sasea, Ibrohim Ibrohim, Sueb Sueb

Universitas Negeri Malang, Indonesia

\*Corresponding author, email: louis30sasea@gmail.com

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**Abstract:** The environment as a place where living things live has undergone significant changes which have resulted in a decrease in environmental quality. The level of students' understanding and awareness of the environment greatly influences the existing environmental conditions. However, the fact is that environmental knowledge possessed by students has not been fully applied in their environment. This study aimed to ascertain the relationship between students' environmental knowledge and environmental attitudes. This study employed a survey method with a correlational design for its research. Class X MIPA students from SMA Negeri 1 Banyuputih comprised the entire study population. The technique of sampling employed is saturated sampling. The data collection technique is by using a questionnaire on environmental knowledge and environmental attitudes which contains statements based on a Likert score. Students' environmental knowledge correlated with their environmental care attitude, with a Sig.  $0.00 < 0.05$ .

**Keywords:** Environmental attitude, environmental knowledge, learners

**Abstrak:** Lingkungan sebagai tempat tinggal makhluk hidup telah mengalami perubahan yang signifikan yang mengakibatkan penurunan kualitas lingkungan. Tingkat pemahaman dan kesadaran siswa terhadap lingkungan sangat mempengaruhi kondisi lingkungan yang ada. Namun faktanya, pengetahuan lingkungan yang dimiliki siswa belum sepenuhnya diaplikasikan di lingkungannya. Penelitian ini bertujuan untuk mengetahui hubungan antara pengetahuan lingkungan siswa dan sikap lingkungan. Penelitian ini menggunakan metode survei dengan desain korelasional untuk penelitiannya. Siswa kelas X MIPA SMA Negeri 1 Banyuputih merupakan seluruh populasi penelitian. Teknik pengambilan sampel yang digunakan adalah sampling jenuh. Teknik pengumpulan data dengan menggunakan angket pengetahuan lingkungan dan sikap lingkungan yang berisi pernyataan berdasarkan skor Likert. Pengetahuan lingkungan siswa berkorelasi dengan sikap peduli lingkungan mereka, dengan Sig.  $0,00 < 0,05$ .

**Kata kunci:** Sikap lingkungan, pengetahuan lingkungan, siswa

### INTRODUCTION

The environment is a combination of various physical and biological components that affect the life of the living things in it (Nabilah et al., 2018). Human life is inseparable from the use of the surrounding environment (Fah & Sirisena, 2014; Muliana et al., 2018; Nusantari et al., 2020). It is known that several development activities in land and sea areas still have a negative impact on the environment (Pramudyanto, 2014). This causes the environment as a place where living things live to experience significant changes which result in a decrease in environmental quality (Chuang et al., 2016; Kasim et al., 2018; Pooley & O'Connor, 2000; Sasea et al., 2022; Yusup, 2019).

Environmental problems that occur indicate that people's attitudes towards the environment are relatively low (Osman et al., 2014; Putri et al., 2018). Students who are members of society are expected to be environmentally conscious (Zulfa et al., 2016; Handayani et al., 2022). It is known that human attitudes will determine the good and bad conditions of an environment (Agustin & Maisyaroh, 2020). Students who care about the environment will be able to preserve the environment through protection, maintenance, management, and conservation (Suhartinah et al., 2019).

As stated by Muliana et al. (2018), the level of students' awareness and understanding of the environment greatly influences the existing environmental conditions. This agrees with Desriana (2020) assertion that students' attitudes about the environment are impacted by a variety of variables, one of which is the students' level of environmental knowledge. Environmental knowledge is a process of instilling concepts and values in developing abilities and is a necessary medium for understanding and appreciating the interrelationships between humans and their culture and biophysical environment (Muliana et al., 2018; Sueb et al., 2021). So it can be said that environmental knowledge and attitudes are basically related to one another.

An understanding of critical environmental issues can be an effort to change student behavior so that students with an attitude of environmental stewardship are formed to improve environmental conditions in the future (Zulfa et al., 2016). Planting environmental knowledge and attitudes can be familiarized at the education unit level. Known Education helps a person to be rational, aware and become familiar with information that supports environmental awareness. The higher the education level, the more aware a person is about environmental aspects (Muliana et al., 2018; Munawar et al., 2019; Sueb et al., 2019).

Based on a needs analysis at SMA 1 Banyuputih, Situbondo Regency in February 2021. Through observation and questionnaires to students, It was discovered that some students' environmental knowledge and attitudes were lacking. This can happen because the learning process at school does not contain environmental problems so that students are not motivated to care for the environment. This is in line with the observations made by Handayani et al. (2022), that environmental knowledge possessed by students has not been fully applied in their environment. The same thing happened in several schools where students still lacked an attitude in preserving their environment (Azhar et al., 2016; Suhartinah et al., 2019). The results of observations made by Agustin et al. (2019) found that there were still students who were not responsible for their environment.

Inequality that occurs encourages researchers to find out whether there is a relationship between students' environmental knowledge and the environmental care attitude at SMA Negeri 1 Banyuputih.

## **METHOD**

This study employed a survey method with a correlational design for its research. All students in class X MIPA at SMA Negeri 1 Banyuputih for the 2020/21 academic year

comprised the study population. The technique of sampling employed is saturated sampling. The data collection technique uses a questionnaire on environmental knowledge and environmental attitudes which contains statements based on a Likert scale with 5 answer choices. The questionnaire used is the environmental knowledge questionnaire developed by Dunlap et al. (2000), and Van Petegem and Blicek (2006) and the environmental attitude questionnaire using the environmental attitude questionnaire by Badria et al. (2021) adapted by Milfont and Duckitt (2010). The data collected from the study results were first carried out by Normality and Homogeneity Tests and then analyzed by simple linear regression tests and Pearson Correlation statistical tests with the help of the SPSS 20.0 program.

## RESULTS AND DISCUSSION

Research has obtained data that reveals the relationship between environmental knowledge to the environmental care attitude. Research data are presented in Tables 1 – 3.

**Table 1.** Data normality and homogeneity test results

Variables	Kolmogorov-Smirnov	Levene Statistic
Environmental knowledge	0.200	0.234
Environmental attitude	0.148	0.104

The results of the Kolmogorov-Smirnov normality test were performed on both measured variables. Table 1's normality test results indicate that all data have Sig. > 0.05. The data can be stated to be normally distributed. Levene's Test to determine homogeneity between two variables. Based on the homogeneity test (Table 1), conclusions are drawn for each group of homogeneous data. It can be seen that each data has a Sig. >  $\alpha$  (0.05).

**Table 2.** The results of the linearity test

Linearity	Deviation from linearity	Annotation
Environmental Knowledge and Environmental Attitudes	0.733 > 0.5	Linear

The findings of the linearity test in Table 2 show that environmental knowledge and environmental attitudes also have a linear line with the acquisition of  $p$  (0.733) >  $\alpha$  (0.05).

**Table 3.** Correlation test results of environmental knowledge and environmental attitudes

Correlation	Sig.	Annotation
Environmental Knowledge and Environmental Attitudes	0.000 < 0.05	Correlated

The results of the correlation test are in Table 3, for the variables of environmental knowledge and environmental attitudes using the Pearson Correlation test. Correlation test results show that environmental knowledge and environmental attitudes have a correlation indicated by a sig value of 0.00 < 0.05. This means that there is a relationship between environmental knowledge and environmental care attitudes of students at SMA Negeri 1 Banyuputih.

Based on the results of the study it can be said that students who have adequate environmental knowledge tend to care more about their surroundings. This is consistent with the findings of Munawar et al. (2019), students with greater environmental knowledge will be more concerned with preserving their environment.

It is known that environmental knowledge is an insight that a person has regarding the environment which can influence his ecological concerns and attitudes (Handayani et al., 2022; Yusup, 2019). It is known that knowledge of the environment is very important for students today. With knowledge of the environment, students can apply values of sensitivity to nature and animals so that they can preserve and care for the earth for the better (Gani, 2022; Shidiq & Widodo, 2018). Because of this, can be asserted that there is a considerable connection between one's level of knowledge and their attitude. According to Hamz, (2013) any knowledge possessed will be the basis of a certain attitude because that knowledge is essentially a product of thinking activity. The low level of education and knowledge about the environment also affects the decline in environmental quality (Saputro et al., 2016). Adequate knowledge of students about the environment will manifest actions in protecting and caring for the environment (Ardoin et al., 2020; Desfandi, 2015; Prihadi et al., 2018; Sadik & Sadik, 2014; Saputro et al., 2016; Yusup, 2019).

Therefore the Education Unit must be the best place to develop environmental knowledge. SMA Negeri 1 Banyuputih as an educational unit needs to enhance environmental knowledge so that students understand more about environmental problems and can preserve their environment. According to the facts presented, it shows that there is a positive relationship between Environmental Knowledge and environmental attitudes of students. This shows that the research hypothesis is accepted, meaning that environmental knowledge has a relationship with students' environmental attitudes.

## CONCLUSION

Based on the analyzed data, it can be concluded that students at SMA Negeri 1 Banyuputih have a relationship between environmental knowledge and environmental caring attitudes. Based on the research results and the discussion, it is necessary to conduct additional research into the relationship between environmental knowledge and students' environmental care attitudes, according to the suggestions that can be made.

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