AWARENESS AND ENVIRONMENTALLY FRIENDLY BEHAVIOR OF STUDENTS AT FMIPA UNP CAMPUS

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Abstract

Problems in the environment are a problem that must be a concern for all parties. Destruction of forests, pollution of rivers and seas, uncontrolled waste, depletion of the ozone layer, and global warming is a problems in the environment and should be of concern to all humans, especially students. The need to instill awareness and environmentally friendly behavior. therefore this study aims to determine the level of awareness and environmentally friendly behavior of students on the FMIPA UNP campus. The research was conducted using quantitative research methods with a survey approach with a sample size of 60 campus students FMIPA UNP. The results showed that the level of students' environmentally friendly awareness in the knowledge and attitude dimensions was in a strong category and in the action dimension was sufficient. And on the environmentally friendly behavior of students on the dimension of energy conservation, the category is strong, while on the dimensions of recycling, environmentally friendly consumption, and transportation the category is sufficient. This shows that the level of awareness of students in the category is in strong category but the behavior is still in the sufficient category.

Keywords: Awareness; Behavior; Student; Environmentally friendly.

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Introduction

According to Presidential Decree No23 of 1997, an environment is a spatial unit that includes all living things, including humans and their behavior, as well as all objects, forces, and conditions that affect their survival and well-being(President of the Republic of Indonesia, 1997).

Environmental issues are still frequently discussed by various parties(Herlinawati et al., 2022). Global warming, oil spills at sea, land crisis, deforestation, depletion of the ozone layer, fish dying in rivers due to chemicals, and deforestation are examples of things that have a negative impact and become topics of discussion.(Priliantini et al., 2020). The problem of waste management is also one of the current environmental problems(Herlinawati et al., 2022). The destruction of the natural environment changes the balance of the environment. Destruction of the natural environment has caused many negative impacts. A series of disasters, including fires, floods, landslides, and pollution add to the list that makes the earth's condition worse(Sugiarto & Gabriella, 2020). The widespread environmental crisis is also exacerbated by destructive exploitation(Waskito & Harsono, 2012).

Kollmuss and Agyeman (2002) unbraked state that envi stattally conscious behavior is defined as "behavior that consciously seeks to minimize the negative impact of one's actions on nature and the built world." In this context, eco-friendly behavior includes things like recycling and environmentally conscious consumption (such as using clean, reusable bottles), saving energy (such as water and electricity), and using environmentally friendly modes of transportation. Environmental awareness refers to actions or attitudes that, among other things, are aware of the importance of maintaining a clean and healthy environment.When someone is free from

pressure, their behavior, and actions show that they are aware of their environment(Amos, 2008). Since verbal statements of environmental concern are not sufficient, environmental planning must be demonstrated and documented(Waskito & Harsono, 2012). The community is an important resource for environmental management.(Priliantini et al., 2020).

According to the BPS report on IPKLH (Environmental Ignorance Index), Indonesia's 2017 IPKLH is based on a calculation of 0.51. Indifference to Environmental Behavior (IPKLH) is calculated between 0 and 1. A lower IPKLH score (closer to 0) indicates a lower level of ignorance (greater concern) in the area, while a higher IPKLH score (closer to 1) indicates greater indifference to the environment in the area(Statistics, 2018). This shows that Indonesian people still lack concern for the environment.

Because of this, efforts are needed to minimize environmental damage due to the phenomenon that occurs. The idea of being environmentally sound or also known as "going green" is one of the ways people can reduce environmental damage. Concern for the environment must be shown in order to foster environmentally conscious behavior. Reducing the adverse effects of some human activities on the environment is the goal of conscious action taken by humans in relation to the environment on an ongoing basis, either directly or indirectly, improving environmental conditions is an additional fundamental goal. Despite the fact that there are still many environmental problems that cannot be solved at present, Sugiarto & Gabriella, 2020).

As a means of environmental management and fulfillment of human needs, conscious action is required to maintain or improve environmental quality (Sugiarto & Gabriella, 2020). The most important thing to do is protect to the environment widely and sustainably. To be able to continue to carry out sustainable environmental maintenance, awareness is needed right from each individual to be able to do it. People will be more inclined to act in a way that does not harm either humans or nature if they have the right awareness in protecting and managing the environment(Budiman & Objantoro, 2022). Recognizing the importance of a sustainable environment requires movement at all levels of society. Businesses, communities, and governments must work together to save the planet(Sugiarto & Gabriella, 2020)

Children must be educated about the environment, especially waste management, from an early age. This will help them become aware of environmental issues and develop a habit of caring for the environment. Waste management in the environment is the foundation for environmental care behavior patterns. Environmental education through proper waste management is a basic concern that must always be instilled in early childhood so that children have concern for their environment. Children's ecological concerns will be shaped by their awareness of the environment(Purnami, 2021). This is in line with the opinion of Sumarni (2008) and in Sabardila et al., (2020) statuette that the main approach that must be taken to ensure that the next generation has a strong understanding of the environment is early exposure to it (Sumarmi, 2008).

Higher education institutions should also assist environmental preservation as a forum for the growth and development of human resources. This can be done through programs to strengthen the character and behavior of students who are environmentally responsible(Sugiarto & Gabriella, 2020). Based on this, this research was conducted to record environmentally friendly behavior specifically for FMIPA UNP students.

This research was conducted to get an idea of how far FMIPA UNP students are environmentally aware and to what extent they act in a sustainable manner. As a reference for the development of the Green Campus program on university campuses, this study is useful for describing student awareness and behavior toward the environment.

Research methods

This study uses a quantitative research method with a survey approach. Quantitative descriptive research is research that begins with data collection, continues with data interpretation, and ends with presenting the results to produce an objective

picture or picture of a situation using numbers. (Arikunto, 2006). The author chose a sample, namely UNP FMIPA students for the 2022/2023 academic year. The number of samples from this study were 60 people. Researchers use a questionnaire to collect data. Questionnaires are distributed via Google forms where respondents will answer based on the choices that have been made available.

The data analysis method used in this study is the percentage descriptive analysis method. The percentage descriptive analysis method can be used to describe the variables studied. The percentage descriptive analysis method is processed by dividing the frequency by the number of respondents and then multiplying by 100%. The following is the formula for percentage descriptive analysis:

$$p = \frac{f}{N} x100\%$$

Information:
p.s = percentage
f = frequency
N = number of respondents
100% = fixed number

Results and Discussion

Awareness of UNP FMIPA students for the 2022/2023 Academic Year of Environmental Management.

Awareness is interpreted as a condition of an individual who has a variety of indepth knowledge and is closely related to the surrounding environment (Nurcahyo & Ernawati, 2019). Awareness can also be interpreted as individual activities in observing, knowing and reacting themselves in the social world. Awareness stimulates humans to make changes-changes themselves towards the better.

Awareness of environmental management that is attached to oneself has a very important role during the process of forming a positive attitude towards environmental management. Individuals who have awareness of good environmental management can be seen from the knowledge they have, their responses in addressing the surrounding environment, and their behavior towards the environment.(Hamdan et al., 2018). Awareness is composed of three dimensions, namely knowledge, attitudes and actions.

Table 1. Knowledge Dimension Indicator

Indi office	**Fri is Item s**	**Score**	**F**	**Total Average Score**	**Pe rse nta se**
Peng Dime nsion you know	14	always (4)	392	1568	59 %
		often (3)	317	951	36 %
		someti mes (2)	0	0	0%
		Never	131	131	5%
Amount			840	2650	10 0%
Max Score			3360		
Average Percentage			79%		
Criteria			Strong		

Based on the knowledge dimension indicator table, it was obtained that the percentage that answered always was 59%, those that answered often were 36%, and those who answered never were 5%. The average percentage of FMIPA UNP student responses for the 2022/2023 academic year is 79% which is relatively strong. This means that FMIPA UNP students for the 2022/2023 academic year generally have the basic knowledge needed in environmental management activities such as being able to explain the importance of awareness and behavior in managing the environment, caring about the importance of maintaining and managing the environment so that it remains clean, comfortable and maintained and understand the various causes and impacts of environmental pollution.

Table 2. Attitude Dimension Indicator

Indi Kator	Fri is Item s	Score	F	Total Avera ge Score	Perce nt Tase
Attitude Dimensi on	9	always (4)	27 2	1088	62%
		often (3)	19 5	585	34%
		sometim es (2)	0	0	0%
		Never	73	73	4%
Amount			54 0	1746	100%
Max Score			2160		
Average Percentage			81%		
Criteria			Strong		

Based on the attitude dimension indicator table, it was obtained that the percentage who answered always was 62%, who answered often was 34%, and who answered never was 4%. The average percentage of FMIPA UNP student responses for the 2022/2023 school year is 81% which is relatively strong. Attitude is an individual's tendency to act or behave. Attitude is closely related to the way an individual is able to accept, respond, appreciate and be responsible for an object (Amalia et al., 2021). The attitude of caring for the environment must be instilled from an early age an individual is able to manage the environment wisely(Ubaedillah et al., 2020).

Based on research data, the attitude dimension indicator for FMIPA UNP students for the 2022/2023 academic year obtained the highest percentage on the always scale and was included in the strong criteria. So, it can be said that the student already has a good attitude towards environmental management. Like, caring for the environment, always campaigning for environmental awareness and being aware of the importance of saving electricity and water usage.

Table 3. Action Dimension Indicator

Indi office	Fri is Item s	Score	F	Total Avera ge Score	Perce nt Tase
Action Dimensi on Right	11	always (4)	13 0	520	39%
		often (3)	14 4	432	32%
		sometim es (2)	0	0	0%
		Never	38 6	386	29%
Amount			66 0	1338	100%
Max Score			2640		
Average Percentage			51%		
Criteria			Enough		

Based on the action dimension indicator table, it was obtained that the percentage that answered always was 39%, those who answered often were 32%, and those who answered never were 29%. The average percentage of FMIPA UNP student responses for the 2022/2023 academic year is 51%, which is quite sufficient. Action is onethe mechanism of observing activities that originate from the perception of an individual so that a reaction occurs to take action(Putu et al., 2020). Action and behavior are two different things. Action is defined as an activity of a person to solve the problem immediately. Meanwhile, behavior is defined as a person's behavior in everyday life.

Based on the data obtained, it is known that the environmental management actions of FMIPA UNP students for the 2022/2023 academic year have not been satisfactory. This can be seen from the fact that there are still many students who have not actively

carried out activities to separate organic and inorganic waste, there are still many students who are indifferent to scattered waste and the passiveness of students in participating in activities that are environmentally concerned.

Environmentally Friendly Behavior of FMIPA UNP Students for the 2022/2023 Academic Year towards Environmental Management

Environmentally friendly behavior is interpreted as an act of paying attention to and caring for the surrounding environment. This behavior is repetitive and closely related to the maintenance of natural resources and the surrounding environment (Kurniawan, 2021). Environmentally friendly behavior consists of four dimensions, namely the dimensions of recycling,eco-friendly consumption, energy conservation and transportation.

Table 4. Recycle Dimension Indicator

Indikator	Number of Items	Score	F	Total Average Score	Percentase
Recycle Dimensions	4	always (4)	40	160	34%
		often (3)	53	159	34%
		sometimes (2)	0	0	0%
		Never	147	147	32%
Amount			240	466	100%
Max Score			960		
Average Percentage			49%		
Criteria			Enough		

Based on the recycling dimension indicator table, the percentage that answered always was 34%, that answered often was 34%, and that answered never was 32%. The average percentage of student responses FMIPA UNP students for the 2022/2023 Academic Year49% which is quite sufficient. This shows that students quite often recycle organic and inorganic waste, for example making organic fertilizer from vegetable waste, leaves and other materials which are then used as plant fertilizer. In addition, several students have also used inorganic waste to make valuable handicrafts. Recycling itself is interpreted as the process of converting waste into something new. Waste recycling depends on its ability to recover the properties it has.

According to(Maf'ulah Syarifatul et al., 2021)the behavior of reprocessing waste into a useful product needs to be increased through various creative and innovative activities such as making bags from various food packaging wastes, making pencil boxes from paper or plastic waste, making mats from patchwork and much more. According to(Kustanti et al., 2020)Reusing waste through recycling is a very appropriate solution as an effort to prevent environmental pollution and to be able to reduce the level of landfill waste in TPA (Final Disposal Sites).

Table 5. Dimension Indicator Environmentally Friendly Consumption

Indi office	Friis Items	Score	F	Total Average Score	Percentase
Dimen the Con said Friendly Lingkungan	2	always (4)	35	140	49%
		often (3)	31	93	32%
		sometimes (2)	0	0	0%
		Never	54	54	19%
Amount			120	287	100%

Max Score	480
Average Percentage	60%
Criteria	Enough

Based on the table of indicators for the dimensions of environmentally friendly consumption, it was obtained that the percentage that answered always was 49%, those that answered often were 32%, and those who answered never were 19%. The average percentage of FMIPA UNP student responses for the 2022/2023 Academic Year is 60% which is quite sufficient. Based on the results obtained, in using environmentally friendly products. It was concluded that students are still quite aware in terms of buying environmentally friendly products so that it needs to be reaffirmed in the student environment regarding environmentally friendly products. Furthermore, the use of eco-friendly products such as shopping bags made from used cloth is also in the sufficient category, students prefer to store using plastic rather than environmentally friendly products such as the shopping bag earlier.

Efforts (reducing plastic bags) must be made for the benefit of the environment because students today tend to demand the right to receive plastic for their groceries. Disposal of plastic waste will produce carbon emissions which will contribute to climate change and global warming. Burning plastic bags will endanger human health and cause air pollution. In addition, because plastic bags cannot be decomposed by microbes, they will block the flow of water if they are disposed of carelessly. Through seminars or workshops, students can gain awareness of how and what components are needed to become an environmentally friendly person. Smart building ideas need to be implemented like the Ahmad Dahlan University Yogyakarta project which was created to be efficient in energy use and reduce waste (Gabriella and Sugiarto, 2020).

Table 6. Energy Conservation Dimension Indicator

Indi Kator	**Fris Items**	**Score**	**F**	**Total Average Score**	**Percentase**
Dimension Con Energy servicing	5	always (4)	159	636	66%
		often (3)	90	270	28%
		sometimes (2)	0	0	0%
		Never	51	51	5%
Amount			300	957	100%
Max Score			1200		
Average Percentage			80%		
Criteria			Strong		

Based on the table indicating various dimensions of energy conservation, it is known that 66% of respondents always answer, 28% often answer, and 5% never answer. For the 2022–2023 academic year, the average student response from FMIPA UNP is 80% which is considered strong. Energy conservation is a form of conservation that emphasizes saving energy. Respondents who said they always avoided using electricity at the same time were 28%, followed by those who said often (35%), sometimes (0%), and never (37%). It can be concluded that some students still use electricity simultaneously.

Regarding the question of using enough water, 38% of respondents said they always do it, 43% said they often do it, and 18% said they never did it. We can conclude that students have saved water. As many as 67% of respondents said they always turn off the electricity when not in use, 28% said they often did it, and 5% said they never did it. The conclusion is that students have realized the need to turn off electricity when not in use. As many as 60% of respondents said they always use a vehicle, 23% said they often did it, and 17% said they never did. It can be concluded that students only use vehicles when absolutely necessary.

Table 7. Transport Dimension Indicator

Indi office	Fri is Item s	Score	F	Total Avera ge Score	Perce nt tase
Trans Dimensi on Portion	3	always (4)	27	108	33%
		often (3)	34	102	31%
		sometim es (2)	0	0	0%
		Never	11 9	119	36%
Amount			18 0	329	100%
Max Score			720		
Average Percentage			46%		
Criteria			Enough		

Based on the transportation dimension indicator table, the percentage of respondents who always answered was 33%, who often answered was 31%, and who never answered was 36%, according to the transportation dimension indicator table. For the 2022–2023 academic year, the average student response from FMIPA UNP reached 46%, which is a number with sufficient criteria. To determine how the level of student transportation dimensions is related to the public and private vehicles they use, a measurement is carried out for the transportation dimension. The most common choice, with a percentage score of 52%, is "never", when using public transportation to get to campus. This could be due to the absence of public transportation facilities provided by the campus.

According to research (Cattaneo et al. 2018), that teaching students about environmental issues makes them more likely to use sustainable modes of transportation, which results in an average reduction of private transport use of 5.8 percent. It is not possible for students to use private vehicles and online-based public transportation more frequently at this time. The solution that can be offered is through the bike to campus movement. The bicycle-to-campus movement needs to emphasize sustainable mobility.

Conclusion

Based on the results of the study, it showed that the level of awareness of students towards environmental management in the dimensions of knowledge and attitudes was in the strong category, but in the action category the category was sufficient. Meanwhile, the environmentally friendly behavior on the dimension of recycling, environmentally friendly consumption and transportation is in the sufficient category, and the energy conservation dimension is in the strong category. This illustrates that students have strong knowledge and attitudes in environmental management, but are still in the sufficient category in terms of action on its management. In environmentally friendly behavior, students already have behavior that is categorized as broad in conservation, but is still sufficient in the dimensions of recycling, environmentally friendly consumption and transportation.

Based on the conclusions from the research data above, there are research suggestions. The important role of the campus in facilitating efforts to increase student awareness of environmental management and student environmentally friendly behavior. The form of support and the role of the campus can be provided by the campus through the provision of extracurricular activities in the form of supporting courses that can increase student awareness and behavior. As well as the provision of environmentally friendly facilities to be able to support student awareness and behavior towards environmentally friendly actors.

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