



Responsible Environmental of Stdi Students Toward the Environment

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Abstract. This study aims to determine the level of environmental care behavior of students at the Interstudi College of Design as a design campus. This is seen from several aspects of caring for the environment which include water management, energy management, waste management, caring for the surrounding environment. This research is a type of descriptive research with a quantitative approach. The research was conducted at the Interstudy Design College. The population in this research is 571 students. The number of samples is 150 students. Sampling used a proportionate stratified random sampling technique and the determination of the number of samples used the Isaac and Michael formula with an error rate of 5%. The validity test uses the product-moment correlation technique while the reliability test uses the Alpha Cronbarch formula. Data collection techniques used were documentation and observation questionnaires while data analysis techniques used descriptive statistical analysis. The results showed that the level of environmental care behavior of students at the Interstudi Design High School was in the good category. This is shown from the indicators of water management, energy management, waste management and care for the surrounding environment which are in the good category. Indicators of transportation use are included in the sufficient category. The indicator that gets the highest average score is the water management indicator, while the indicator that gets the lowest average score is waste management.

Keywords: Design · Responsible Behavior · Student

1 Introduction

Interstudi College of Design or STDI is a private tertiary institution in Jakarta with good accreditation and currently has three majors, namely Product Design with a specialization in Fashion Design and Visual Communication Design with a specialization in Multimedia Design. And interior design courses. The Interstudy College of Design currently undertakes 60% of practical teaching and learning and 40% of theoretical teaching and learning. Interstudy College of Design offers design courses that have a lot to do with the environment. The hands-on teaching and learning activities utilize a variety of materials to support the billing product of each course. The management of waste generated from the lecture activities of students at Interstudi Design High School

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has created new environmental problems that are currently being faced by the campus environment. The environment and humans are a reciprocal relationship that cannot be separated from one another. Pollution of soil, water and air, global warming, climate change, depletion of natural resources and reduction of biodiversity are major problems.

The limitations of the carrying capacity of the environment due to human activities protect the earth and guide environmental sustainability so that sustainable life can be adequately maintained. Article 1(2) RI Law No. 32 of 2009 states that environmental protection and management are systematic and integrated actions aimed at maintaining environmental functions and preventing environmental pollution and/or damage, including planning, operating, controlling, maintaining, controlling and law enforcement.

Green behavior is influenced by five aspects: demographics, environmental attitudes and values, green behavior trends, green behavior motivation, and behavioral consequences. Students are the dominant population group of the campus environment and agents of change, and environmentally responsible behavior is also expected from the pillars of sustainability facilitators in the future. This indirectly shows that the knowledge, attitudes and behavioral values of students are related to a sustainable environment as agents of change and future leaders.

2 Literature Riview

Environmentally responsible behavior is an activity aimed at protecting the environment or respecting a healthy environment [1]. An example of responsible behavior is trying to reduce negative environmental impacts [2].

In addition, the notion of environmental knowledge includes all one's experiences and knowledge about caring for and responsibility for the natural environment, which consists of two factors, namely external factors (eg institutional, economic, social and cultural) and internal (eg B. motivation, knowledge about environmental responsibility, awareness, values), attitudes, feelings, locus of control, responsibilities and priorities) [3].

A person's tendency to act on the environment (about actions) is based on dimensions such as knowledge, feelings and tendencies to act (actions) [4].

Defined more fully and in depth, personality is a characteristic or characteristic of a person who is relatively stable in responding and reacting and interacting with other people or their environment. What distinguishes one personality from another is based on five factors: Conscientiousness, Agreeableness, Neuroticism, Openness, and Extraversion to achieve environmental sustainability [5].

Based on Blaikeie & Ward's environmental behavior model by Hines et al. [6] (Fig. 1).

Therefore, it is hypothesized that environmental knowledge is related to students' environmentally intelligent behavior. So it is assumed that someone who has an attitude towards the environment, in this case the foundation of the house, has a positive attitude towards ecological products and is naturally involved in environmentally conscious behavior. In addition, it can be assumed that there is a relationship between personality and intelligent environmental behavior (citizen behavior).

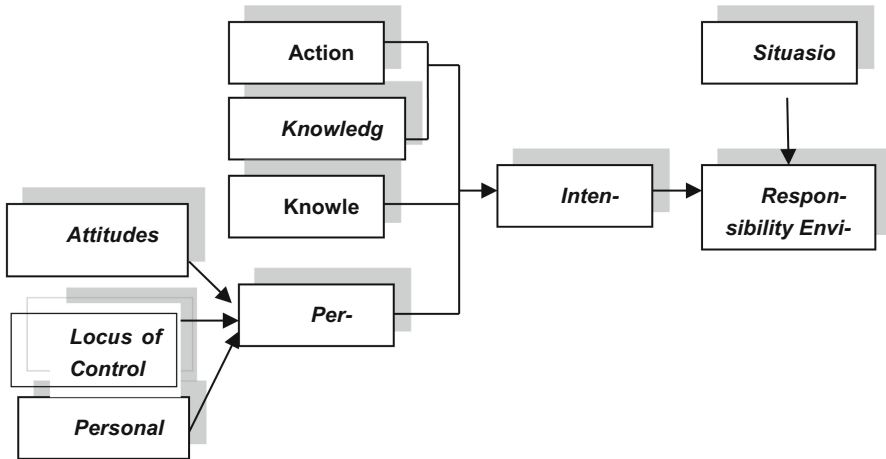


Fig. 1. Model of environmental behavior adapted

3 Research Methods

3.1 Research Design

This research is a type of descriptive research with a quantitative approach. The purpose of this study was to describe the degree of environmental protection behavior of Interstudi Design College students. This study uses a quantitative approach because all information is presented in the form of numbers and is analyzed based on statistical analysis.

3.2 Place and Time of the Exam

This research was conducted at the Interstudy Design College in Jalan. Wijaya Province South Jakarta Special metropolitan area in Jakarta. The research was conducted in December 2022–January 2023.

3.3 Study Population and Sample

All students from the Interstudy College of Design were involved in this study, a total of 571 students. Sampling in this study was carried out using the Isaac and Michael formula with a 5% margin of error. Based on this formula, the number of samples in this study was 150 students.

3.4 Data Collection Technology

In this study, questionnaires, documentation and observation were used as data collection techniques. The questionnaire used in this study is a closed questionnaire, because respondents only need to choose one of the alternative answers given. This questionnaire is the main data source for measuring student environmental behavior at Interstudi Design College. With this research documentation, documents regarding environmental

care behavior of Interstudy Design High School students were obtained, documentation of activities related to environmental protection and other documents. At the Interstudy Design High School, students' environmental behavior was observed.

3.5 Research Tools

The instrument used in this research is a questionnaire. The questionnaire in the form of a list of questions was filled out by Interstudy Design College students. The questionnaire measures the level of students' environmental protection behavior on a Likert scale. The way to fill out the questionnaire is for students to put a check mark (V) next to one of the alternative answer choices.

3.6 Data Analysis Techniques

To test the validity of the instrument, it was presented to 50 students who obtained calculation results ranging from -0.319 to 0.802, with a table value of 0.349. The test results showed that 42 out of 51 expressions were valid and 9 expressions were incorrect and were not used in the study. A device is considered reliable if it can provide consistent data. Alpha Cronbach formula is used to test the reliability of this study. The results of the reliability test showed that the reliability of the instruments used in this study was 0.915. The value of trust is classified as "very strong".

3.7 Data Analysis Techniques

The data analysis technique used in this research is descriptive analysis. Descriptive analysis is used to describe the data by determining the central tendency. This includes calculating the mean (Mean), median (Me), mode (Mo), highest score (Max), lowest score (Min) and standard deviation (SD).

4 Research Results and Discussion

4.1 Research Results

1. The level of environmental care behavior of Interstudy Design High School students. The general distribution of pro-environmental behavior among Interstudy College of Design students can be seen in Table 1.

The Interstudy College of Design students' average score for their environmental behavior was 112.06. Table 1 shows that the average student environmental care behavior varies from 105 to 105.136.5 with a frequency of 108 (68.7%) and is in the Good category.

2. Interstudy Design level of high school students' environmental care behavior on each indicator

Table 1. Results of Student Environmental Preservation Behavior Intern at Design University

| Interval | F | (%) | Category |
|----------------------|------------|---------------|-----------------|
| $X \geq 136,5$ | 8 | 3,5 | Very Good |
| $105 \leq X < 136,5$ | 108 | 68,7 | Good |
| $73,5 \leq X < 105$ | 34 | 27,8 | Good Enough |
| $73,5 > X$ | 0 | 0 | Not Enough Good |
| Total | 150 | 100,0% | |

Table 2. Water supply indicator points

| Category | Interval | F | (%) |
|-----------------|--------------------|------------|---------------|
| Very Good | $X \geq 19,5$ | 8 | 22,6% |
| Good | $15 \leq X < 19,5$ | 108 | 70,4% |
| Good Enough | $10,5 \leq X < 15$ | 34 | 7% |
| Not Enough Good | $15 > X$ | 0 | 0 |
| Total | | 150 | 100,0% |

A: Water supply

The distribution of the tendency for the level of environmental protection behavior of Interstudy College of Design students in the field of water management is shown in Table 2.

The average acceptance of environmental management behavior among students of the Interstudy Design High School (STDI) in water management is 17.7. Table 2 shows that the average study time for water management students is 15–15 years. 19.5 with a frequency of 108 (70.4%) and is included in the “good” category.

4.2 Energy Management

The distribution of the tendency for the degree of environmental protection behavior of the students of the Inter College of Design of Energy Management Studies can be seen in Table 3.

The average utility of students in energy management is 14. Table 3 shows the average utility of students in energy management is 13. 16.25 with a frequency of 52.6 is included in the Good category.

Table 3. Energy management indicator values

| Category | Interval | F | (%) |
|-----------------|---------------------|------------|---------------|
| Very Good | $X \geq 16,25$ | 8 | 19,1% |
| Good | $13 \leq X < 16,25$ | 108 | 52,2% |
| Good Enough | $8,75 \leq X < 13$ | 34 | 26,1% |
| Not Enough Good | $13 > X$ | 0 | 2,6% |
| Total | | 150 | 100,0% |

Table 4. Indication points for waste management

| Category | Interval | F | (%) |
|-----------------|------------------|------------|---------------|
| Very Good | $X \geq 26$ | 8 | 13,1% |
| Good | $20 \leq X < 26$ | 108 | 64,3% |
| Good Enough | $14 \leq X < 20$ | 34 | 21,7% |
| Not Enough Good | $14 > X$ | 0 | 0,9% |
| Total | | 150 | 100,0% |

4.3 Waste Disposal

The distribution of the tendency for the environmental care behavior of Design Interstudy students in waste management is shown in Table 4.

The average value of waste management students is 21.8. Table 4 shows that the average student’s environmental care behavior in waste management is once every 20 days. 26 with a frequency of 108 (64.3%) and is included in the “good” category.

The student’s average environmental protection score is 40.2. From Table 5 it can be seen that the average behavior in protecting the environment is between 36 and d. 45.75 with a frequency of 108 (69.13%) and is included in the Good category.

4.4 Transportation Use

The distribution of environmental care behavior tendencies of Interstudy College of Design students towards the use of transportation can be seen in Table 6.

The average increase in students using transportation was 7.4. From Table 6 it can be seen that the average student’s environmentally conscious behavior when using transportation ranges from 5.25 days to 15 days. The frequency is 7.5 for 107 (46.6%) and is in the “enough” category.

Table 5. Concerns about environmental indicator values

| Category | Interval | F | (%) |
|-----------------|---------------------|------------|---------------|
| Very Good | $X \geq 45,75$ | 8 | 14,34% |
| Good | $36 \leq X < 45,75$ | 108 | 69,13% |
| Good Enough | $25,25 \leq X < 36$ | 34 | 16,53% |
| Not Enough Good | $25,25 > X$ | 0 | 0 |
| Total | | 150 | 100,0% |

Table 6. Traffic usage indicator values

| Category | Interval | F | 3. (%) |
|-----------------|---------------------|------------|---------------|
| Very Good | $X \geq 9,75$ | 15 | 27,4% |
| Good | $7,5 \leq X < 9,75$ | 27 | 19,6% |
| Good Enough | $5,25 \leq X < 7,5$ | 107 | 46,6% |
| Not Enough Good | $5,25 > X$ | 5 | 6,5% |
| Total | | 230 | 100,0% |

The results of this study also showed that 70.4% ('good' category) rated students' environmental behavior the highest, particularly in water management. The behavior of students who are environmentally conscious in water management can be seen from students who always use water as needed, such as washing their hands, washing their faces, and watering plants. Most students turn on the faucet whenever they are no longer using it. Students never leave the faucet running. In addition, if students find a broken faucet or leaking water line, be sure to report it to the teacher or helper so that repairs can be made immediately and water is not wasted.

The lowest ranked environmental act was waste management, with 64.3% (in the 'adequate' category) and 19.6% (in the 'poor' category). According to data, 19.6% of respondents, Interaction University of Design students, are still not good at environmental action for natural disaster mitigation. This is because there are still many Interstudy Design students who have never participated in social activities or training related to natural disaster protection, and not all students take part in these activities, not because only a few student representatives from each class take part.

The environmental management behavior of Interstudi Design High School students is in the Good category, and the environmental management behavior of Interstudi Design High School students is overall good. However, there is still room for improvement,

because behavior towards the environment sufficiently determines the quality of the environment. The friendlier the student environment is towards the campus environment, the better the quality of the campus environment and vice versa. This is in accordance with Hamza's [7] opinion that human behavior determines whether environmental conditions are good or bad, unlike how humans deal with the environment affects human life.

5 Conclusions, Implications and Suggestions

Based on these results, it can be concluded that for students to be more positively responsible towards the environment, factors such as environmental knowledge must also be improved. Some of the implications of the results of this study are:

5.1 Political Implications

In various environmental activities of the academic community at the university level, as well as in policies implemented at the initiative of students, lecturers, deans and principals related to socialization of environmental issues, environmental policies at the university level can be used. Knowledge and personality come naturally. One of these efforts can be carried out through the widest dissemination of information, both through the media and through the process of communication and social interaction between students and in collaboration with government and non-government agencies involved in environmental development. at local, national and international levels. The impact of these policies will not only affect behavior, attitudes and personality, but also make the behavior of the entire university community towards the environment, and it is hoped that these various policies will indirectly influence the formation of environmentally responsible behavior. Including students, lecturers and administrative staff under the increasingly positive leadership of the principal.

5.2 Theoretical Implications

In measuring responsible behavior towards the environment, it is theoretically possible to integrate several theoretical models, such as the Hungerford and Volk, and Hines [6] models with other models to complement existing theories. In this study, the knowledge factor becomes the basis for forming behavior, especially for environmentally conscious behavior. Understanding of environmental information for students is one of the factors in developing a theory of environmental behavior in all forms and conditions. Personality can be used as a basis for developing metrics to measure students' responsible behavior towards the environment. Indicators of appreciation for the environment can be in the form of student personality traits such as openness to experience and extraversion. These qualities characterize a person who is more open to people and nature. At the same time, it also influences Hines' model, which is reinforced by supporting observations that confirm the model, although the attitude factor at play is still questionable [6].

5.3 Research Implications

A further theoretical implication is to retest Hines' model using scientific re-search on a larger sample. Therefore, as a follow-up to the theoretical conclusions above, it is necessary to carry out relevant research with more diverse samples, namely.

For some of the points above, suggestions that can be made are as follows:

1. Future researchers should focus their research on other units of analysis so that the results can be used as reference material. In this case, responsible behavior towards the environment is the main view that must be considered by every campus in implementing environmental programs
2. The campus must always and continuously pay attention to the environmentally conscious behavior of its students, so that the purpose of evaluating the campus in dealing with the environment around the campus is green or gold, achieved. It is important to consider environmentally responsible behavior when formulating strategic steps for the next environmental policy or program. The results of this study are intended as a reference for revitalizing campus tasks and activities so that they are more optimal.
3. The campus is expected to improve cleanliness by strengthening main tasks and activities to strengthen student intentions. In addition, a conducive environment is created for stu-dents so that activities can take place comfortably and safely.

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