

PROSPECTIVE TEACHER STUDENTS' PERCEPTIONS OF ENVIRONMENTAL LITERACY UNDERSTANDING

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Abstract: Future generations need to be provided with provisions and insights into the environment so that an environmentally literate generation is formed. Likewise, prospective teacher students at the Faculty of Teacher Training and Education, Universitas Ahmad Dahlan need to gain insight related to environmental literacy. The purpose of this study is to determine the perception of FKIP UAD students towards understanding environmental literacy and for the level of understanding of student environmental literacy. This research is a survey research with questionnaire techniques and instruments used to collect data using questionnaires. Data analysis techniques use quantitative descriptive analysis. The population in this study was all FKIP UAD students class of 2018, the sample used was 219 students with random sampling techniques. The results showed that the perception of FKIP UAD students towards understanding environmental literacy was included in the sufficient category, student perception of understanding environmental literacy included 4 aspects, namely competence towards the environment, knowledge of the environment, attitude towards the environment, and behavior and responsibility towards the environment

Key words: perception, future teacher, literacy, environment

PERCEPTION OF PROSPECTIVE TEACHERS TO UNDERSTANDING ENVIRONMENTAL LITERACY

Future generations need to be provided with provisions and insight into the environment so that a generation with environmental literacy is formed. Likewise with prospective teacher students who are in the Ahma Dahlan University Teacher Training and Education Faculty. The purpose of this study was to determine students' perceptions of understanding environmental literacy and to determine the level of understanding of environmental literacy among FKIP UAD students. This research is a survey research with questionnaire techniques and instruments used to collect data using a questionnaire. The data analysis technique used quantitative descriptive analysis. The population in this study were all FKIP UAD students, the sample used was 219 students. The results showed that the perceptions of UAD FKIP students on understanding environmental literacy were in the sufficient category. Students' perceptions of understanding environmental literacy include 4 aspects, namely perceptions of environmental competence, perceptions of knowledge about environmental, attitude to environmen, and perceptions of environmental attitudes and behavior.

Keyword: perception, prospective teachers, literacy, environmental

INTRODUCTION

Suzuki (1993), in (Cutter & Smith, 2001), argues that human activities can cause natural damage and natural resource crises. If left untreated, many human activities pose a high risk to the future life of living organisms and could change the world in which they live. Otto Soemarwoto (1985) suggested that the cause of the problem of environmental damage due to environmental overcapacity is population pressure on excess land. Orr (1992) predicts the future and states that three crises will occur. The first is the food crisis, the

second is the energy crisis, and the third is the earth's largest capacity crisis from an ecological and natural perspective. Various environmental problems require environmentally friendly solutions and the active role of the community.

Future generations need to provide environmental awareness and insight in order to form an environmentally friendly generation. On the other hand, learning that effectively contributes significantly to children's environmental literacy is still lacking

(Feasey, 2004; Fien, 2004). This is exacerbated by the lack of awareness of educators in teaching students about environmental literacy. Jickling & Spork (1998) emphasize that environmental education through learning is an important context for research and application. Educators can play an important role in improving environmental literacy. One of the things that teachers can do to instill environmental literacy in their students is learning that focuses on developing concepts for students and applying them to overcome environmental problems by teaching environmental literacy.

Maintaining the balance of the environment is everyone's responsibility. The balance of the environment can be disturbed due to natural events and/or human activities. Disturbances due to natural events cannot be avoided, but disturbances due to human activities are still possible to control. Therefore, it is natural for everyone to have a good insight into the environment. Moreover, for FKIP UAD students who are prospective teachers who are expected to be able to provide these insights to their students. Thus, it is very important to know the picture of environmental insights of prospective teacher students in the FKIP UAD environment. This picture can be an input in

the development of lecture designs that support the realization of environmental literacy. An overview of student environmental literacy can be obtained using various assessment instruments. The instrument can be a test question (Down, 2006) questionnaire (Joseph et al., 2013) interviews (Cheng and So, 2015), as well as observation sheets and performance assessments (Zuriyani, t.t.). The type of instrument is chosen in accordance with the concept of environmental literacy carried and the characteristics of the research subject.

Students in FKIP UAD as prospective teachers should understand environmental literacy, but so far they have never been studied about how their perceptions are related to environmental literacy. Perception is a direct response to something and the process of how a person knows some things through his five senses (KBBI, 2020). To map perceptions related to environmental literacy of FKIP UAD students who are prospective teachers, it can be done by means of a survey (Joseph et al., 2013) The results of the research conducted are expected to be a reference for subsequent research and / or become a consideration for FKIP UAD lecturers in developing environmental care program plans, especially on environment-based insights.

RESEARCH METHODS

This research is a survey research. The population in this study is all FKIP UAD students class of 2018 which amounted to 1239 students. The study sample was determined using Krejcie and Morgan (1970) table, if the population (N) is 1239 then the sample (n) is 291 taken by *random sampling technique*. Data

collection using questionnaire techniques, the instrument used is in the form of questionnaire sheets. The research questionnaire contains questions about students' understanding related to environmental literacy. The data obtained were analyzed in a quantitative descriptive manner.

RESULTS AND DISCUSSION

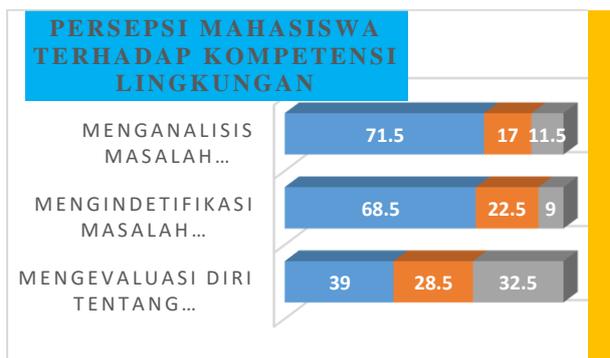
Result

The purpose of this study is to obtain information related to the perception of FKIP UAD students on understanding environmental literacy. Student perceptions of the environment are captured from four aspects, namely *first*, student perceptions on competence in the environment, which consists of 3 indicators, namely identifying environmental problems, analyzing environmental problems and evaluating themselves about environmental problems. *Second*, the perception of environmental knowledge, consisting of 2 indicators, namely

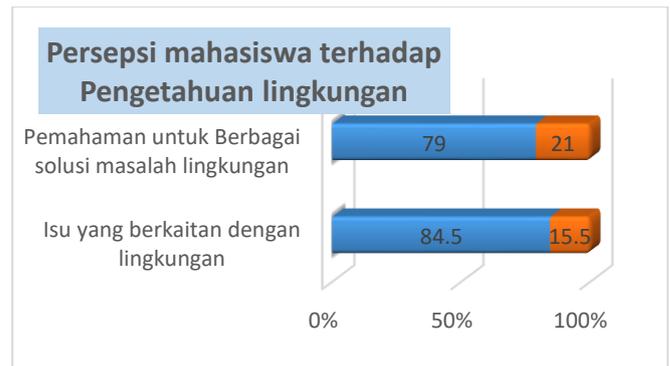
understanding for various solutions to environmental problems, and issues related to the environment. *Third*, the perception of attitude. *Fourth*, behavior and responsibility towards the environment.

Based on data analysis, information was obtained that in the first aspect, related to student perceptions of environmental competence, information was obtained on indicators 1) understanding of analyzing environmental problems obtained a percentage of 71.5% of students had an understanding in analyzing environmental problems faced, 17% stated that they did not know in analyzing the

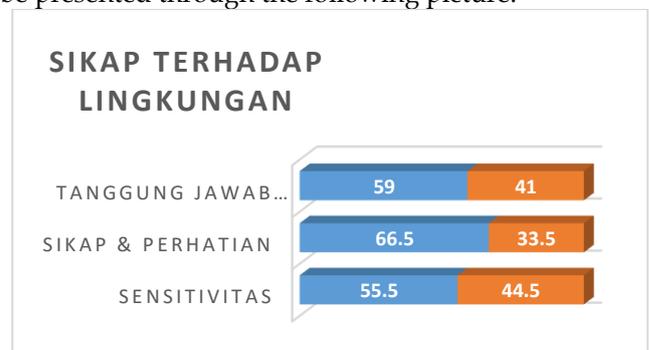
environmental problems faced and 11.5% said they were hesitant in analyzing problems the environment at hand. 2) Understanding of identifying environment-related problems was obtained 68.5% of students understand in identifying environment-related problems, 22.5% do not understand in identifying environment-related problems, and 9% said they are hesitant in identifying environment-related problems. While 3) self-evaluating understanding of environmental problems was obtained 39% of students understood in evaluating themselves about environmental problems, 28.5% did not understand in evaluating themselves about environmental problems and 32.5% of students answered hesitant in evaluating themselves about environmental problems. In the first aspect, related to students' perceptions of environmental competence, when viewed as a whole from the three indicators, an average percentage of 59.67% was included in the category of quite good category. For more details presented in figure 1 below.



In the second aspect, related to students' perception of environmental knowledge, the overall average information obtained was 81.75%, including good categories. This can be seen in the percentage of indicators obtained by 79% of students have an understanding of various solutions to existing environmental problems and 21% say they do not know or understand. Related to understanding issues related to the environment, information was obtained, 84% of students understood and 15.5% did not. The following is figure 2 of the results of the analysis of student perceptions related to knowledge of the environment.



The third aspect, students' perceptions related to attitudes towards the environment, obtained information that overall 60% have attitudes / concerns, sensitivity to the environment and are individually responsible related to the environment. For more details can be presented through the following picture.



The fourth aspect, students' perceptions of behavior and responsibility towards the environment obtained information 51% responsible and 49% ignorant or indifferent to the environment



Discussion

Perception is an immediate response or acceptance to something. The research conducted aims to determine the loneliness or response of FKIP UAD students to the understanding of environmental literacy. Based on the data analysis that has been carried out,

information was obtained that student perceptions of the understanding of environmental literacy as a whole there are four aspects, namely: *First*, student perceptions of competence in the environment with a percentage of 59.67% included in the good category, *Second*, perceptions of environmental knowledge with a percentage of 81.75% included in the good category, *Third*, the perception of attitudes towards the environment with a percentage of 60% is included in the category of quite good. *Fourth*, behavior and responsibility towards the environment with a percentage of 50% is included in the category of quite good. For more details, the data are presented in the following figure.



Student perceptions of understanding environmental literacy consisting of four aspects can be explained that perceptions of competence in the environment are included in the category of quite good, in the perception of student competence in identifying environmental issues, analyzing environmental issues, investigating environmental issues, making evaluations and providing solutions related to environmental issues is considered sufficient. While the perception of environmental knowledge includes knowledge about physical and ecological systems, cultural and social systems, environmental issues, solutions to environmental issues including the good category. While the perception of attitudes and behaviors related to the environment, falls into the category of sufficient.

In the aspect of perception of knowledge towards the environment, FKIP UAD students have a good category, while the perception of competence towards the environment, as well as behavior and being responsible for the environment is included in the sufficient

category. This proves that FKIP UAD students have good knowledge related to environmental literacy but this knowledge has not been used as a basis for the development and application of competencies, attitudes, behaviors and responsibilities towards the environment.

The findings of this study are different from the results of the study Farwati et al., (2017) From the survey results, it was found that science teacher candidate students have environmental literacy in the medium category for aspects of environmental competence and environmental knowledge, while for aspects of attitudes towards the environment are in the high category. In line with reports from Ozgurler & Cansaran (2014) the same trend as about the environmental literacy of prospective teacher students in Turkey. The two found that college students have a very positive attitude towards the environment, but the students' environmental knowledge is not so high. The similarity of these findings may occur because there is a positive relationship between students' knowledge about the environment and students' attitudes towards the environment (Pe'er et al., 2007). So, if students' environmental knowledge is in the good category, then students' attitudes towards the environment should also be in the good category.

If you compare the results of research conducted with previous research which states that there is a relationship between knowledge and students' attitudes towards the environment, where if knowledge is good it will contribute to attitudes towards the environment. The perception of knowledge towards the environment of FKIP students has a good category, but it does not have an impact on the perception of attitudes towards the environment, student behavior and responsibility towards the environment. This is due to many factors that influence it. Based on further information obtained from the explanation in the fields in the google form that students if faced with an abnormal natural phenomenon, or activities that are not good and have an impact on the environment, students have an understanding that the condition occurs because there is something that

should not mean there is a problem or if doing so has an adverse impact on the environment, But if asked, the attitude that must be given by students looks grumpy or seems hesitant or indecisive in their attitude regarding the environmental problems faced. Here's one example of the context of the question in the google form: Knowledge Perception of the Environment ("What kind of waste do you think is the main problem of environmental pollution that occurs today?"), students answered "plastic" (60% of students gave the same answer), but if correlated with the context of the question to attitude perception ("Do you still use plastic items that are used for single use"? Students answered "sometimes" (60% of students gave answers). Likewise, research findings related to the perception of competence with knowledge with the context of the same questions for the perception of knowledge, students know the main problems related to the environment, but if given questions with the context of perception of competence towards the environment (Are there any problems that occur in the environment around your residence?), more than 50% of students answer "no" and "maybe". This finding indicates the need for innovation in lectures so that students' environmental competence and environmental knowledge can be even better. Based on the concept of environmental literacy, especially in environmental competence and environmental knowledge, it is strongly suspected that the Environmental and Environmental Education courses are potential media to provide these skills to students.

Based on a literature review, it is known that environmental literacy has

four components based on environmental insight. The four components are environmental competence, environmental knowledge, attitudes, behavior and responsibility towards the environment (Hollweg et al., 2011). These four aspects are closely related to each other (Pe'er et al., 2007). Perception of understanding environmental literacy based on these four aspects can describe the perception of a person's environmental literacy ability as a whole. So that with this, it will be illustrated in more detail about the environmental insights of a prospective teacher and his ability to use his knowledge and attitude towards environmental problems.

Environmental literacy is an important part of developing literacy skills (Bybee, 2008). So that environmental literacy is a major part of 21st century education (ELTF, 2015). Based on the findings of the study, it provides input on several activities, both academic and non-academic, that can integrate the application of environmental literacy to students, considering that students already have a good perception related to environmental literacy knowledge. Carrying out learning with a multidisciplinary approach has the potential to encourage students to use knowledge from theory to practice to produce solutions to environmental problems (Scholz et al., 2011). One multidisciplinary approach that has the potential to develop student environmental literacy is an integrated learning approach *science, technology, engineering, and mathematics* (STEM) includes a multidisciplinary approach (Doerschuk et al., 2016).

COVER

The results showed that the perception of FKIP UAD students towards understanding environmental literacy was included in the sufficient category. Student perceptions of understanding environmental literacy include 4 aspects, namely competence towards the environment, knowledge of the environment, attitudes towards the environment, and behavior and responsibility towards the environment.

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