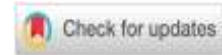




## Analysis of Students' environmental literacy at senior high school 10 Palembang on Environmental pollution material



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### ABSTRACT

The global concern for environmental issues is widely discussed worldwide. Environmental literacy, encompassing concerns for the environment, is crucial to prevent human-induced environmental damage. Education plays a pivotal role in enhancing this literacy. This research aims to describe the environmental literacy abilities of students at Senior High School 10 Palembang, namely a school that is environmentally conscious regarding environmental pollution material. The research method is descriptive research and survey techniques. The research sample was 36 students of class XI Science. The sample used a purposive sampling technique. The research instrument includes 31 multiple-choice questions for knowledge and cognitive skills and 37 questionnaire statements for behavioral and affective indicators. Data analysis was carried out by calculating the average achievement of indicator students' environmental literacy scores in the form of percentages. Analysis revealed an overall environmental literacy percentage of 49.06% in the quite good category. However, specific indicators, notably knowledge (39.44%) and cognitive skills (29.52%) poor category. Behavioral indicators (60.94%) were quite a good category, and affective indicators stood (66.33%) good category, indicating room for improvement, especially in knowledge and cognitive skills. Teachers could enhance environmental literacy by employing innovative strategies, particularly in biology classes discussing environmental pollution.

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### INTRODUCTION

The learning process through practicum also requires teaching materials. The teaching materials used in practical activities are called student worksheets. Students' worksheet is one of the teaching materials containing material, summaries, and implementation procedures that refer to basic competencies and indicators that students must achieve (Ernawati, et al., 2018). Many



students' worksheets which are usually in the form of printed teaching materials have changed to digital form or are also known as students' worksheets which can be used using mobile phones smartphones and even computers (Mispa, et al., 2022). Based on research conducted by (Isfahani, 2020), namely using the students' worksheet model in the form of 3D Pageflip in guided inquiry learning which has the advantage of improving analytical skills such as problem-solving processes in everyday life.

Researchers can apply this in the form of multimedia-based electronic practicum worksheets using the Google Site. The reason Google Site was chosen as an innovative form of teaching material was because its use was quite easy compared to using other applications. Google Site is used by researchers to insert electronic practicum worksheets with additional images, videos, digital site links, and others (Islamiah, 2021). The use of digital-based practicum worksheets is very important to improve the quality of education, especially in students' digital literacy. Students are not only required to be able to use electronic practicum worksheets using Google Sites well, students must also understand all important aspects related to digital literacy, especially digital literacy competencies according to Hague & Payton (2010) on digital literacy components which explain that there are eight components of digital literacy, including Functional Skills and Beyond, Creativity, Collaboration, Communication, The Ability to find and select information, Critical Thinking and Evaluation, Cultural and Social Understanding, and E-safety.

The material that will be studied in this practicum is Virus Material. Students will carry out practical activities, namely analyzing the characteristics of viruses and their role in phenomena that occur in the environment around where they live. This material will be easier if studied by utilizing information via the internet using Google Site which is used as teaching material in the form of electronic practical worksheets that can be used to upload various viral learning videos, several digital site links such as online games, and interesting learning applications. to support an interesting and non-monotonous learning process (Novelia & Dheni, 2022). The e-LKP can better describe the analysis of students' digital literacy abilities by using various features that highlight digital literacy activities in the learning process.

Based on the description above, researchers need to research "The Effect of Implementing Electronic Practicum Worksheets on the Digital Literacy Abilities of Class X High School Students in Palembang City." It is hoped that this can see the effect of implementing electronic practicum worksheets using Google Sites on students' digital literacy.

## RESEARCH METHODS

### Research Design

The research method applied in this research is descriptive research. This research aims to describe the environmental literacy abilities of students at Senior High School 10 of Palembang, namely a school that is environmentally conscious regarding environmental pollution material. According to Frankel, et al. (2012), The descriptive method is research that describes and interprets objects as they are and does not involve treatment, manipulation, or changes to the sample being investigated so that there is no need to organize a control group or experimental group. In descriptive research, researchers try to describe events situations, or phenomena that are the focus of the research as accurately as possible without carrying out systematic manipulation (Sukardi, 2008). The results of this research are only valid at that time and may not be relevant if used for future events so they are not always according to the research hypothesis and do not involve treatment or manipulation of variables (Nasution, 2016). The method in this research uses survey techniques. The survey method is very suitable to use to determine the picture of environmental literacy in a research sample (Joseph, et al., 2013).

### Population and Samples

Researchers took the population in this study, namely all students in class XI Science at Senior High School 10 of Palembang for the 2023/2024 academic year. The sample used in this research was 36 students of class XI Science at Senior High School 10 of Palembang for the 2023/2024 academic year. Determining the research sample used a purposive sampling technique, namely sampling data sources with certain considerations. The researcher considered the purposive sampling technique because of the availability of samples to provide data, the characteristics of schools that are environmentally friendly, adjustments to the curriculum that applies at school, and the participants in this research were class XI high school students who had studied material regarding environmental pollution in biology subjects.

### Instruments

The instruments in this research include multiple choice test questions and a questionnaire about environmental literacy which are integrated into environmental pollution material. The environmental literacy instrument is based on the Middle Schools Environmental Literacy Survey/Instrument (MSELS/I) with modifications according to the McBeth & Volk (2010) framework concept. The environmental literacy test questions consist of 20 multiple-choice questions for knowledge indicators and 11 multiple-choice questions for cognitive skills indicators. Questionnaires were used for environmental affective indicators with 25 statements, and behavioral indicators with 12 statements answered using a Likert scale. All instruments are prepared based on environmental literacy indicators and adapt to the context of environmental pollution material which can be seen in Table I.

**Table I.** Environmental literacy indicators.

No	Component	Sub Component	Explanation
1.	Knowledge	-Knowledge of the environment	- Knowledge of environmental pollution materials
2.	Affective environment	-Verbal commitment -Sensitivity to the environment -Feelings towards the environment	- What do you think about the environment? - Your sensitivity to the environment - Your feelings towards the environment
3.	Cognitive skills	- Identification of problems - Problem analysis - Action planning	- Identify environmental issues/problems - Analyze environmental issues/problems - Ability to plan actions to resolve environmental issues/problems
4.	Behavior	Actual commitment	-What is done to the environment

McBeth & Volk (2010)

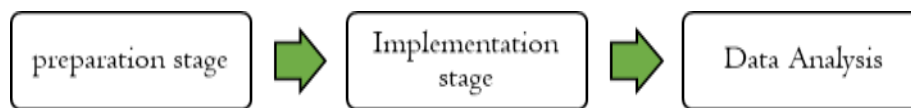
The instrument created has gone through the test stages of analyzing the validity of the question items using validity and reliability tests. This process consists of stages involving assessment by two expert lecturers and a biology teacher and has also been tested through empirical data validation so that the instrument is suitable for use. The results of the analysis of environmental literacy questions on all indicators were declared valid and suitable for use. The reliability of the questions on the knowledge indicator is 0.84 (very high) and the cognitive skills indicator is 0.80 (very high) which was carried out with the help of the Anates software program.



On indicators, The affective environmental result was 0.89 (very high) and the behavioral indicator was 0.81 (very high) carried out with the help of SPSS 26. As additional information, the researcher also made direct observations at Senior High School 10 of Palembang and interviewed one of the biology teachers who taught at Senior High School 10 of Palembang to add information on the application of environmental pollution material as well as information about environmentally conscious schools.

### Procedures

In this research, the analysis of students' environmental literacy was carried out through three stages which included the preparation stage, implementation stage, and data analysis stage which can be seen in Figure I. The following research flow diagram.



**Figure I.** Research Flow Diagram

The first stage is preparation, which involves the planning stage and determining research subjects through preliminary questionnaire interview techniques, problem identification, literature study, development and testing of the feasibility of environmental literacy question instruments, and sample data collection. The second stage is implementation, which includes the data collection process through student activities working on environmental literacy instrument test questions in the form of multiple-choice questions and questionnaires. The final stage is data analysis carried out by analyzing the results of the environmental literacy instrument test questions carried out by students, then the final stage is by concluding the research that has been carried out.

### Data Analysis

Research data analysis was carried out by calculating the average achievement of environmental literacy scores of indicator students in the form of percentages. Each multiple-choice question on environmental knowledge and cognitive skills is assessed with the number 1 if the answer is correct and 0 if the answer is incorrect, while the environmental affective and behavioral questionnaires are assessed using a Likert scale. Research respondents were invited to fill in alternative answers from strongly agree/always to disagree/never with a score of 4 to 1 according to the questionnaire statement. The average score achieved was then categorized based on the student literacy scoring criteria in Table 2. The research data was then analyzed descriptively based on the achievement score criteria for each environmental literacy indicator. The way to calculate the percentage value of the average achievement of students' environmental literacy scores is by using the following formula:

The results of students' environmental literacy multiple choice questions on knowledge and cognitive skills indicators were analyzed using the following formula:

$$\% \text{Multiple Choice Questions} = \frac{(\sum \text{acquisition score})}{(\sum \text{maximum score})} \times 100\% \text{ (Sugiyono, 2016)}$$

The results of students' environmental literacy questionnaires on environmental affective indicators and behavior towards the environment were analyzed using the following formula:

$$\% \text{Questionnaire} = \left( \frac{\sum \text{respondents answer score}}{\sum \text{maximum score} \times \sum \text{question} \times \sum \text{Respondent}} \right) \times 100\% \text{ (Sugiyono, 2016)}$$

Then the results are converted based on environmental literacy criteria as in Table 2.

**Table 2.** Environmental Literacy Criteria

Percentage (%)	Criteria
1-20	Very bad
21-40	Not good
41-60	Pretty good
61-80	Good
81-100	Very good

(Ridwan, 2014).

## RESULTS

Based on the results of this research obtained from environmental literacy test questions from 36 students of class not good. The questions given were 68 questions consisting of 20 multiple choice questions for knowledge indicators and 11 multiple choice questions for cognitive skills indicators. Questionnaires were used for environmental affective indicators with 25 statements, and behavioral indicators with 12 statements answered using a Likert scale. This environmental literacy question is integrated into environmental pollution material and is based on the Middle Schools Environmental Literacy Survey/Instrument (MSELS/I) with modifications according to the McBeth & Volk (2010) framework concept. according to NAAEE (2011) Environmental literacy indicators include knowledge, cognitive skills, environmental affectivity, and environmentally responsible behavior. The average results of the environmental literacy analysis scores of students at Senior High School 10 of Palembang, environmentally conscious schools can be seen in Table 3.

**Table 3.** Average Results of Student Environmental Literacy Indicators

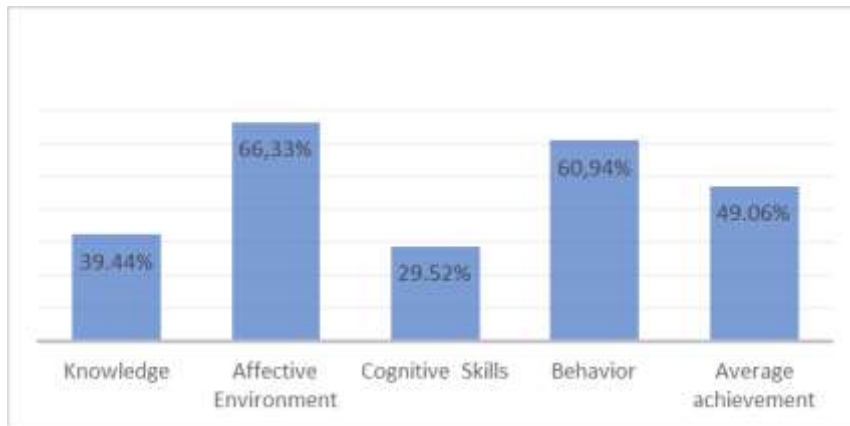
No.	Environmental Literacy Indicators	Achievements (%)	Category
1.	Knowledge	39.44%	Not good
2.	Affective Environment	66.33%	Good
3.	Cognitive Skills	29.52%	Not good
4.	Behavior	60.94%	Pretty good
Average achievement		49.06%	Pretty good

Based on Table 3, the environmental literacy of class XI Science students at Senior High School 10 of Palembang is still in the quite good category. This can be seen from the average percentage of environmental literacy scores obtained at 49.06%. The details of the research data on environmental literacy indicators show that there is a poor category, namely the knowledge indicator is 39.44% and the cognitive skills indicator is 29.52%. The quite good category includes behavioral indicators at 60.94% and the good category, namely environmental affective indicators at 66.33%. The data from the environmental literacy percentage results above can be explained in Figure 2.

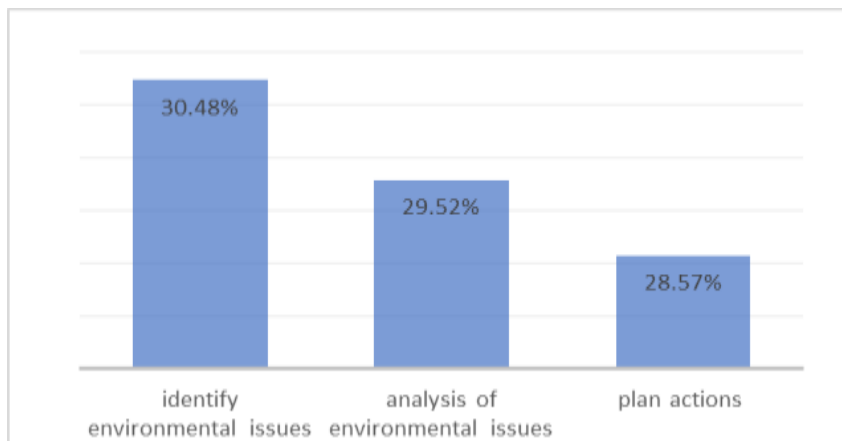
Based on Figure 2. The graph of the average value of indicators for students' environmental literacy results shows that the indicator of students' cognitive skills in environmental literacy has the lowest percentage, namely 29.52%, and is in the poor category. This is based on the results of the average percentage of ability to identify environmental issues, namely 30.48% in the poor



category, analysis of environmental issues, namely 29.52% in the poor category, and the ability to plan actions to resolve environmental problems, namely 28.57%. the poor category can be seen in Figure 3.

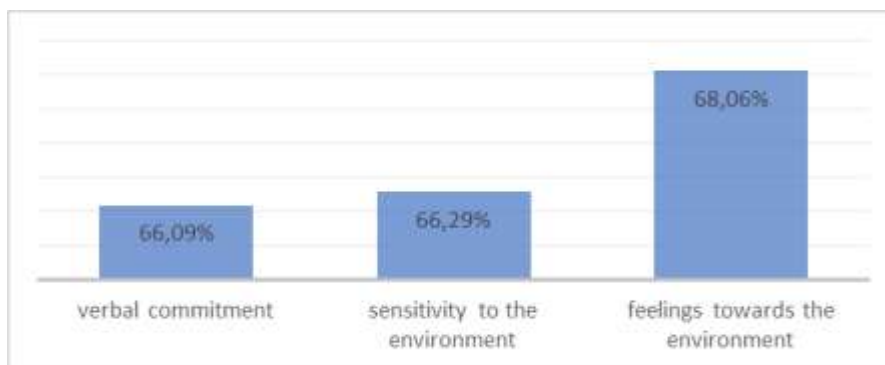


**Figure 2.** Graph of the Average Value of Student Environmental Literacy Results Indicators



**Figure 3.** Environmental Literacy Results on Cognitive Skills Indicators

Based on Figure 2. The graph of the average value of indicators for students' environmental literacy results shows that in terms of environmental affective indicators, students in environmental literacy have the highest percentage, namely 66.33% and are in the good category. This is based on the results of the average percentage of verbal commitment, namely 66.09% in the good category, sensitivity to the environment, namely 66.29% in the good category, and feelings towards the environment, namely 68.06% in the good category, as seen in Figure 4.



**Figure 4.** Environmental Literacy Results on Environmental Affective Indicators

## DISCUSSION

The overall research results obtained from 36 students show that the environmental literacy of students in class XI Science at Senior High School 10 of Palembang is in the quite good category. The calculation results of the average percentage of environmental literacy scores obtained were 49.06%. In line with the results of Wulandari & Roshayanti's (2022) research, it shows that the environmental literacy achievement of MAN Demak students is 60.48%, which is in the sufficient category. Several other studies include Aini (2020); Gustiyani (2021); Susanti & Nopus (2022); Santoso, et al (2021) which show that the analysis of students' environmental literacy skills is included in the sufficient category. Research from Handayanti (2020) revealed that the results of her research were that between adiwiyata and non-adiwiyata schools, there was no significant difference in the level of environmental literacy skills. In research from Rokhmah & Fauziah (2021), the environmental literacy ability of students in schools with an environmentally friendly curriculum was 60.38% in the quite good category. This shows that students' environmental literacy skills still need to be developed further.

The average score for each environmental literacy indicator for students at Senior High School 10 of Palembang shows varying average scores, some are in the categories, good, quite good to not so good. Indicators of environmental literacy include knowledge, cognitive skills, environmental effectiveness, and environmentally responsible behavior (McBeth & Volk, 2011). The details of the average values from the research data on environmental literacy indicators can be seen in Table 3 and Figure 2, which shows that the average values in sequence starting from the lowest average value to the highest average value are for the cognitive skills indicator of 29.52% and the knowledge indicator was 39.44% in the poor category. The behavioral indicator was 60.94% in the quite good category and the affective environmental indicator was 66.33% in the good category even though it was not in line with expectations.

The results of this study show the same thing as research conducted (Farwati, et al., 2017; Ozgurler & Cansaran, 2014) which concluded that students have high environmental affectivity and behavior towards the environment even though they have knowledge and cognitive skills that are not too high. Although this may be related to all indicators (Aminrad, et al., 2013; Zheng, et al., 2018), it is known that there is a relationship with a weak level of correlation between environmental knowledge and environmental care attitudes (Norley, et al., 2016; Simarmata, et al., 2018; Sali, et al., 2015). The correlation between knowledge and attitudes towards the environment is not significant, as is the correlation between knowledge and behavior towards the environment (Suryawati, et al., 2020). According to NAAEE (2011), the concept of environmental literacy is emphasized by the Environment Education and Training Partnership (EETAP) which states clearly that an environmentally literate person knows what he will do for the environment, and he knows how to do it. Learning in schools also influences the level of environmental literacy possessed by students as stated by Miller (2012) is a process where a person's environment is deliberately managed to enable him to participate in certain behaviors in special conditions or produce certain responses, learning. is something that is most special in the world of education.

Knowledge indicators in environmental literacy provide an overview of students' knowledge of the environment, and the state of the surrounding environment. According to Sali, et al (2015), environmental knowledge is knowledge that involves information held by individuals about aspects of nature and ecology. Environmental knowledge indicators are several environmental knowledge that individuals have about environmental topics and problems (Chen, 2013). Environmental knowledge has a function as a basis for a person's knowledge about something that can be done to help protect and preserve the environment (Lee, 2010). The indicator of student knowledge related to the environment in this research has an average percentage score of 39.44% in the poor category.

This can be interpreted as meaning that students do not fully understand aspects of environmental knowledge in environmental literacy. The instrument for measuring knowledge indicators provides questions that are integrated with environmental pollution material. Based on the results of interviews with biology teachers at SMAN 10 Palembang, it was found that during the transition from online to offline learning, the learning outcomes of class X students experienced a decline, especially on environmental pollution material. Supported by a preliminary study through a test on learning outcomes on environmental pollution material, students obtained an average score of 65.82, which is in the sufficient category. Many students underestimate this material because the last material is often considered unimportant material and is often skipped. In line Ozsoy, et al (2012) stated that students' low environmental literacy skills are not caused by the small number of books about the environment in schools but because no environment in schools can provide direct learning experiences for students to interact with the environment. According to Susanti & Nupus (2022), there are several factors that cause low student achievement, such as unfamiliar environmental problem contexts, students not being used to discussing environmental issues, and learning activities that tend to be textual so that students are less familiar with environmental problems.

Indicators of cognitive skills in environmental literacy provide an overview of the application of environmental knowledge after going through the reasoning process. According to Hollweg, et al (2011); Rokhmah & Fauziah (2021) cognitive skills are students' ability to respond to knowledge by reasoning. Rintayati (2011) also states that cognitive skills involve processing information, and applying knowledge, as well as mental activities such as reasoning, problem solving, and forming knowledge concepts. The indicator of students' cognitive skills in environmental literacy has the lowest percentage with an average score of 29.52% and is in the poor category. This is based on the results of the average percentage of sub-component indicators of cognitive skills, namely the ability to identify environmental issues, namely 30.48% in the poor category, analysis of environmental issues, namely 29.52% in the poor category, and the ability to plan to resolve actions. environmental problems, namely 28.57% in the unfavorable category. According to Hollweg, et al (2011) 1) identification of environmental problems is related to the ability to recognize environmental problems, and explain conditions, causes, and impacts, 2) analysis of environmental problems involves the interpretation and use of scientific knowledge and new information to link environmental issues with their consequences 3) action planning solutions relate to how to design responsible actions to resolve environmental problems.

In this research, the measurement instrument for identifying environmental problems uses reading about environmental problems, then students are asked to identify the causes and impacts of these problems. The environmental problem analysis instrument in its measurement asks students to dig deeper into the root causes of environmental problems, including cause-effect relationships and human behavior towards the environment. The instrument for measuring the ability to plan actions to solve environmental problems is that students are asked to choose the appropriate steps to overcome environmental problems described in the reading. Cognitive skills are in the poor category because the influence of indicators of students' environmental knowledge is still not good. After all, each environmental literacy indicator is related to and influences each other (Rokhmah & Fauziah, 2021). In line with Hollweg, et al (2011); and Safitri, et al (2020) cognitive skills are closely related to knowledge.

According to Santoso, et al (2021), Lack of knowledge and cognitive skills indicators can be influenced by various factors, including students, teacher teaching, and school facilities. The low indicators of knowledge and cognitive skills come from students' factors, including 1) differences in student characteristics in terms of intelligence or understanding of environmental pollution material that students have is still lacking (Utami, et al., 2022). Based on the results of teacher

interviews at Senior High School 10 of Palembang, teachers focus more on understanding the material first because there are still many students who have a poor understanding of the material. According to Hidayat & Sariningsih (2018), students with high intelligence are better able to overcome difficulties, while students with lower levels of intelligence tend to feel that difficulties are the end of their efforts and this can affect student learning achievement. 2) the student environment does not provide enough training to think and solve problems related to the environment in various aspects (Utami, et al., 2022). according to Rokhmah & Fauziah (2021) the lack of student learning experience is caused by the lack of opportunities for students to interact directly with environmental problems around them. In line with Orion & Assaraf (2005), developing students' environmental literacy is not only delivered by one subject, for example science or science. The environment, which consists of various complex and interacting components, also needs to be understood as a system. 3) Students do not have high concentration when learning environmental pollution material so what is taught passes them by. According to Utami, et al. (2022), The low achievement of results is because there are still many students who do not review the answers they have made. Another factor is 4) students think that the environmental literacy questionnaire is difficult to understand and difficult to answer. According to Santoso, et al (2021), students experience difficulties when filling out environmental literacy questionnaires because it is difficult to analyze environmental problems. They also find it difficult because there are many words they have never read or heard before.

Factors found in aspects of teacher implementation in learning based on direct observation and interviews show that teachers have tried to develop environmental literacy but have not maximized the learning process, such as in determining approaches, methods, models, and learning media. Based on the results of interviews with biology teachers for class According to Suryawati, et al (2020); Hanifah (2016) a scientific approach can influence students' cognitive abilities so that students can identify problems in their surrounding environment. But regarding the use of teaching materials and media, teachers tend to use printed books more often and only use a few types of learning media including Infocus, blackboard, internet, and PowerPoint and there is no further information regarding the use of models and methods used by teachers. Based on the results of interviews with teachers, the lack of development of environmental literacy skills in learning is caused by several obstacles, including teachers' difficulties in determining learning models and methods and creating media and teaching materials due to limited time. According to research Rokhmah & Fauziah (2021) currently learning is more often carried out in the classroom and is guided by textbooks as well as some additional information from teachers regarding environmental issues.

Based on this, teachers are expected to be able to innovate in selecting learning strategies such as the use of approaches, methods, models, and media that can improve environmental literacy skills. One way is through scientific-based and cooperative learning activities. Subandiyah (2015) several models that can be used by teachers in learning for literacy, namely cooperative learning models, include the TAI (Team Assisted Individualization), STAD (Student Teams Achievement Division), Two Stay, and STL (Student Team Learning) because this model prioritizes the use of collaborative skills between groups to solve problems. It has also been proven by several research results that cooperative learning can increase environmental literacy, namely in research (Mauludah, et al., 2018; Arisman, 2015). Teaching materials and media that enable students to interact directly with environmental problems that occur around them. Line with Susilastri (2015) stated that learning will be easier for students to understand directly in the field, but for learning material that cannot be done directly in the field, students are given information through learning videos. Media that stimulates students for reading activities such as infographics. In line with Luppi (2011) To optimize environmental literacy, media is needed that can stimulate students to be active in reading



activities. Problem-based learning is mainly about the environment. Suhirman (2020) stated that the use of problem-based learning has a positive and significant effect on environmental literacy. Based on the research results of Suryawati, et al (2020), the application of environmentally integrated problem-based worksheets is very effective in increasing students' environmental literacy,

Environmental affective indicators in environmental literacy describe a combination of consistent opinions and beliefs towards an object or situation, which also involves certain feelings. This attitude is the basis for determining responses or behavior related to the object or situation (Fauzi, 2012). In terms of environmental affective indicators, students in environmental literacy have the highest percentage, namely 66.33%, and are in a good category. This is based on the results of the average percentage of sub-component indicators of affective environment, namely verbal commitment, namely 66.09% in the good category, sensitivity to the environment, namely 66.29% in the good category, and feelings towards the environment, namely 68.08% with good category. Indicators of student behavior towards the environment have an average percentage score of 39.44% in the poor category. The indicator of student knowledge related to the environment in this research has an average percentage score of 60.94% in the quite good category. These two indicators are good but the results are still not in line with what was expected. Responsible behavior can be increased through activities carried out regularly and sustainably by cleaning the classroom and getting used to saving energy (Nugraha, et al., 2021). In teaching and learning activities teachers can also in still the character of caring for the environment in students through simple things to develop efforts to repair natural damage that has occurred (Wulandari & Roshayanti, 2022).

The behavioral aspect assessed is actual commitment, according to Nastoulas, et al (2017) actual commitment is related to what a person does for the environment. While verbal commitment indicates intent or willingness to act, actual commitment refers to actual action taken. The instrument for measuring actual commitment is in the form of a questionnaire which includes actions that students usually take for the environment. The research results of Nastoulas, et al (2017) show that there is a moderate positive correlation between actual and verbal commitment, indicating that the higher the students' verbal commitment, the higher their actual commitment. According to Febriyanto (2016), attitude is not yet an action or activity, but is still a predisposition to action. Fauzi (2012) emphasized that attitude is the basis for determining responses or behavior so that students' attitudes towards the environment influence how students behave towards the environment.

Another factor is that Senior High School 10 is Environmentally conscious. In line with research from Astuti (2023) SMAN 10 Palembang is a high school that applies the concept of a school that cares about the environment or is environmentally conscious. In 2015, Senior High School 10 of Palembang received the Adiwiyata Award as one of the cleanest schools in the city of Palembang (Sariani, 2017). In Liana's research (2022), the daily activities of Senior High School 10 of Palembang involve students in environmental care activities such as cleaning the classroom environment by working together, caring for the school garden with group pickets, as well as organizing democracy and deliberation through electing class leaders or OSIS chairmen to maintain the cleanliness of the school environment. This is the opinion of Safitri, et al (2020) who state that students' environmentally caring attitudes can grow with habituation. Behavior does not form by itself but is formed through a learning process. Knowledge of environmental problems and knowledge of various appropriate actions to overcome them is one of the prerequisites for responsible behavior. Having knowledge and ability alone is not enough, it needs to be accompanied by a passion or desire to realize the action in question. A person's desires or desires are greatly influenced by personality factors, namely attitude, locus of control, and sense of responsibility. Individuals who have knowledge and skills and have a positive attitude toward the



environment and pro-environmental behavior usually have the intention to carry out responsible behavioral actions (Wibowo, 2009). According to Munawar et al. (2019), knowledge can influence students' behavior towards the environment. Good knowledge can foster environmentally conscious behavior to preserve the environment. Behavior-based on knowledge can last a long time in protecting and managing the environment (Martini, 2019).

## CONCLUSION

Based on the results and discussion, it can be concluded that the environmental literacy of class XI Science students at Senior High School 10 of Palembang is still in the fairly good category. This can be seen from the average percentage of environmental literacy scores obtained at 49.06%. The details of the research data on environmental literacy indicators show that there is a poor category, namely the knowledge indicator is 39.44% and the cognitive skills indicator is 29.52%. The quite good category includes behavioral indicators at 60.94% and the good category, namely environmental affective indicators at 66.33%. This shows that students' environmental literacy skills still need to be further developed, especially in indicators of knowledge and cognitive skills. Environmental literacy can be improved by teachers innovating in choosing learning strategies that can improve environmental literacy skills, especially in biology learning about environmental pollution. One of them is through problem-based learning activities, through a scientific approach, cooperative learning, and the use of media and teaching materials which enables students to interact directly with environmental problems that occur around them as well as those that can stimulate students to be active in carrying out reading activities

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