

Analysis of Concept Comprehension and Environmental Literacy Students of Package C on Biodiversity Material in PKBM Kencana Ungu, Leuwidamar District

Rosianna Gusniasari¹, Suhartini²

^{1,2}Department of Biology Education, Universitas Negeri Yogyakarta Indonesia

ABSTRACT: Biodiversity material has an important role to embed deeper ecological values that not only form scientific comprehension. This study aims to determine the ability of students in concept comprehension and environmental literacy in biodiversity material. The method used in this research is descriptive quantitative. The subjects of this study were package C PKBM Kencana Ungu students with a sample of 15 students. Data collection techniques were carried out through concept comprehension test instruments and environmental literacy test instruments and questionnaires. Data analysis techniques using descriptive statistical analysis. The results of this study indicate that students have a concept comprehension in the high category 13%, medium category 27% and low category 60% then in the environmental literacy of students obtained results in the good category 20%, sufficient category 27% and poor category 53%. It can be concluded that students' concept comprehension and environmental literacy have more scores in the low category.

KEYWORDS: Concept Comprehension; Environmental Literacy; Biodiversity.

I. INTRODUCTION

Knowledge gained by learners from the learning process results in an understanding of the material that has been taught. Each learner has the ability and insight to explore the knowledge they learn. Learners can form perceptions or ideas from preexisting knowledge and then connect them to the new discoveries or knowledge they receive (Suryana et al., 2022). Students' concept comprehension is still low because students are easily distracted by things that happen in the classroom and outside the classroom which ultimately affects the concentration of students who are less focused when learning takes place. Concept comprehension has a very crucial role in the teaching and learning process and is the basis for achieving optimal learning outcomes (Jarmita et al., 2024).

The low concept comprehension of students can have an impact on the occurrence of misconceptions or even incomprehension of the concept of the material as a whole, so that ultimately less able to understand further learning material that is more complex. According to Ndruru et al. (2024), misconceptions are misunderstandings in concept comprehension in learning materials that can lead to a mismatch between the concepts comprehended by students and scientific concepts. To instill a concept, teachers need to provide teaching for students in a real context by linking the material to the surrounding environment or students' daily lives (Muis et al., 2023). This approach can develop learners' thinking skills and improve their understanding of the material taught. The concept comprehension possessed by learners can be applied to solve problems related to the concept. In a concept comprehension, students are required to be able to find the concept of the material being studied so that students can better understand and not forget the concept of the previous material (Murniati et al., 2020).

In addition to students' low concept comprehension, students' environmental literacy is also low due to the lack of skills in making observations and analyzing problems that occur in the environment. If attitudes and actions to care for the environment are instilled with a good basic understanding of the environment, then someone will have the awareness to preserve the environment (Aisyah et al., 2024). Environmental conditions are currently facing various problems. Environmental problems occur due to low public awareness of environmental sustainability, therefore when someone has this awareness he will be encouraged to maintain, preserve, and utilize the environment wisely (Margiyanti & Triadi, 2024). One solution to increase awareness of the importance of the environment is to integrate environmental issues into learning (Handiyati et al., 2023). Integrating environmental education is very important to create human resources who have good environmental insight, skills in dealing with environmental issues, protecting and preserving the environment (Andiani, 2023).

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Concept comprehension of biology and environmental literacy are very important in the learning process, especially in biodiversity material. Biodiversity material has distinctive characteristics because it illustrates the interconnection between species and covers global and local issues, ranging from climate change and deforestation to efforts to preserve endemic species in certain regions (Mokodompit et al., 2022). This can help learners understand environmental issues from various perspectives. Therefore, this research needs to be carried out with the aim of knowing the ability of students in concept comprehension and environmental literacy on biodiversity material.

II. METHOD

The research used a quantitative descriptive method. Quantitative descriptive research is research that only describes the content of a variable in research, not intended to test certain hypotheses (Nurhabiba et al., 2023). In line with Wulandari et al. (2023), quantitative descriptive research is research that aims to describe on something that is studied based on real things by drawing conclusions from observed phenomena using numerical statistics.

This research was conducted at PKBM Kencana Ungu, with the research subjects being package C students with a total of 15 students. The instruments used were concept comprehension tests and environmental literacy tests and questionnaires. Based on NAAEE, environmental literacy consists of knowledge, competencies, disposition, behavior and context domains (Hollweg et al., 2011). In this study, the main focus of environmental literacy used is the knowledge domain, competencies domain, disposition domain, and behavior domain. Before the distribution of concept comprehension instruments and environmental literacy instruments, validation was carried out first with expert lecturers. The data analysis technique in this study used descriptive statistical analysis.

III. RESULT AND DISCUSSION

A. Concept Comprehension

Based on the results of data analysis of students' concept comprehension, it can be seen that the percentage obtained varies greatly. The following are the results of the percentage of students that can be seen in Table 1.

Table 1: Category Results of Students' Concept Comprehension

Categories	Interval	Frequencies	Percentages
High	Value > 70%	2	13%
Moderate	55% < Value ≤ 70%	4	27%
Less	Value ≤ 55%	9	60%

Table 1 shows that the category of concept comprehension of students with a total of 15 students, the highest percentage is 60% in the low category. Based on the concept comprehension scores obtained, it can be seen that students have more concept comprehension scores in the low category. Comparison of the percentage of concept comprehension scores can be seen in the following figure.

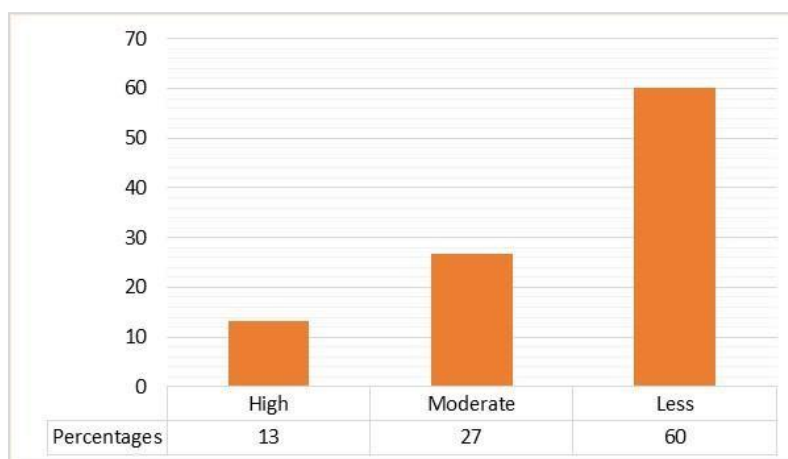


Figure 1: Comparison of the Percentage Concept Comprehension

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The low concept comprehension can be caused by various factors. According to Diana et al. (2020), low concept comprehension ability can be caused by external and internal factors of students. External factors come from outside students, for example, such as learning methods or learning strategies used by teachers. While internal factors come from within students, such as emotions and attitudes towards learning biology. In learning activities, students are not much involved in constructing their own knowledge, only receiving information conveyed by the teacher. Students are also sometimes unable to provide different answers to the same questions (Radiusman, 2020). The existence of multi-concept items and the ability to remember learning material can be a contributing factor to students' low concept comprehension (Amanda et al., 2022).

Concept comprehension has an important role in learning biology, because it is the foundation for students to master the material in more depth. If concepts are not well comprehended, it can reduce learning motivation and cause many students to think that biology is a difficult subject (Sari & Suherman, 2018). In addition, if the ability to comprehend concepts is not well understood, it will have an impact on the learning objectives of biology, so that it will affect the learning outcomes of students. This is because the concepts in biology learning are interrelated with one another. If students are good at the concept comprehension, it will be easy to learn more complex material (Ditasari et al., 2022).

B. Environmental Literacy

In environmental literacy, the results of the average value obtained from the knowledge domain, competencies domain, disposition domain and behavior domain can be seen in table 2.

Table 2: Results of Environmental Literacy Outcomes in Students Categories

Categories	Range Of Values	Frequencies	Percentages
Very Good	81-100	0	0
Good	61-80	3	20%
Sufficient	41-60	4	27%
Poor	21-40	8	53%
Very Poor	≤ 20	0	0

Table 2 shows that the environmental literacy achievement of students with a total of 15 students, the highest percentage is 53% in the low category. Based on the average value of environmental literacy obtained, it can be seen that students have more environmental literacy scores in the low category. The following is a comparison of the percentage of the average value of environmental literacy.

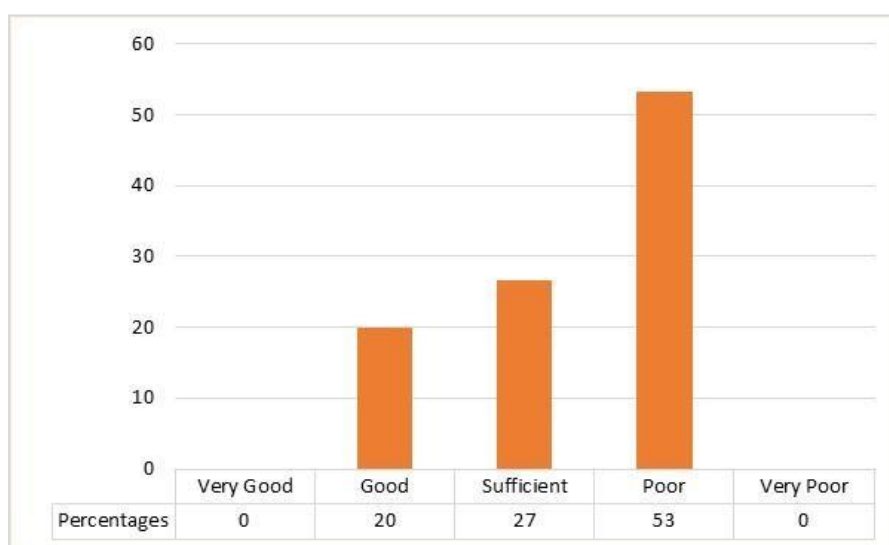


Figure 2: Comparison of Percentage of Average Environmental Literacy Score

The concept of environmental literacy is emphasized by the Environment Education and Training Partnership (EETAP) which states straightforwardly that an environmentally literate person knows what he will do for the environment and he knows how to do it (Maesaroh et al., 2021). The learning process at school can affect the level of environmental literacy possessed by students,

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where a person's environment is deliberately arranged to enable him to engage in certain behaviors under certain conditions, or respond to the current situation (Han et al., 2022).

Based on the results of students' environmental literacy achievements that have been obtained, it shows that students' environmental literacy is in the low category. This can be caused by the absence of an environment at school that can provide direct learning experiences for students in interacting with the environment (Santoso et al., 2021). Direct learning experiences obtained by students from the surrounding environment can contribute to forming behaviors that are more concerned about protecting and preserving the environment. However, the lack of a school environment that supports direct learning experiences and interaction with nature can result in low environmental literacy skills of students (Anggraini & Nazip, 2022). Cultivating environmental literacy skills can be done in various ways, one of which is by teaching and developing habits of caring for the environment through environmental education such as being accustomed to taking good care of plants, not destroying school areas, and disposing of garbage in its place (Rahmawati & Fadlillah, 2024). In line with Nasution (2021), who states that awareness that develops through education, both from the learning process and through the academic behavior of students in the school environment, can encourage the formation of environmental literacy in students..

IV. CONCLUSIONS

Based on the results of research and discussion, it shows that the ability to concept comprehension and environmental literacy of package C students have more scores in the low category. This can be seen from the percentage results of concept comprehension scores and environmental literacy scores. In concept comprehension of students, the results obtained in the high category 13%, moderate category 27% and low category 60%. Then in the environmental literacy of students, the results were obtained in the good category 20%, sufficient category 27% and poor category 53%. From the results of the research that has been conducted, researchers found that the learning process is still conventional and has not integrated with the real environment.

ACKNOWLEDGMENT

Thanks to Dr. Ir. Suhartini, M.S. for the guidance and motivation given to the author to complete this article.

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