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Analysis of Practicum-Based Cooperative Learning Outcomes on Students' Cognitive Learning Outcomes

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ABSTRACT
This research aims to analyze the results of practicum-based cooperative learning on students' cognitive learning outcomes. The background of this research is that creating quality education does not only focus on mastering subject matter, but also on developing skills such as critical thinking, creative, communicative and collaborative. One strategy that has been proven effective is practicum-based cooperative learning. This approach emphasizes the active involvement of students. This research uses a qualitative approach with a descriptive type. The research location is at the Superior MA K.H. ABD. Wahab Hasbulloh. Data sources are divided into two, namely primary and secondary. The primary data source is class XI MIPA students with a total of 50 students and the secondary data source is the results of observation and documentation. Data collection techniques through interviews, observation and documentation through practical activities in making excretory system props. Data analysis techniques use data presentation and drawing conclusions. The research results show 1) Practicum-based cooperative learning is effective in improving students' cognitive learning outcomes, 2) Group collaboration in practicum helps students understand concepts more deeply and increases learning motivation, 3) This approach develops 21st century skills such as thinking critical, creative, communicative and collaborative.

***Keywords**: Cognitive, Cooperative, Practical.*

INTRODUCTION
Traditional learning which is dominated by lectures and note taking often makes students feel bored and unmotivated. This can cause a lack of focus and student participation in learning. To overcome this, a more interesting and interactive learning approach is needed. Fun interactive learning can be realized through practicum activities, which is one approach that has been proven effective in increasing student involvement. This approach uses various methods and strategies that allow students to be actively involved in the teaching and learning process (Asari et al., 2021).

Students are more motivated to learn when they feel happy and involved in the teaching and learning process. This is in line with the opinion of Rubiantica (2021) who stated that the use of practicum activities in teaching and learning activities makes the learning process varied and innovative so that students become interested, can reduce boredom, and a sense of curiosity will arise. A monotonous and rigid teaching and learning process can make students feel bored and unmotivated. This can result in a lack of focus and student participation in learning, as well as suboptimal learning outcomes. To overcome this, educators need to implement varied and innovative teaching and learning activities. Varied and innovative teaching and learning activities are teaching and learning activities that use various interesting and creative methods, strategies and learning media.

In the context of fun interactive learning, it often involves collaborative activities such as practicums, where students work together in groups to complete assignments or projects. This can help students to develop their cooperation and communication skills, which can benefit them in life outside of school. Student involvement in the learning process is an important factor that contributes to learning effectiveness and learning outcomes (Depari et al., 2022). When students are actively involved in the

teaching and learning process, they are more motivated, focused, and understand the subject matter better. Educators can use learning methods such as cooperative learning to make learning more interesting and interactive. Based on the research above, it can be seen that education in Indonesia does not focus on the ability to solve problems, think critically and be innovative because students are only required to memorize information. The results of interviews with educators strengthen this statement. The results of initial interviews with resource persons obtained information that classroom learning was attempted to use learning methods that were not monotonous with the aim of students being actively involved in the learning process.

One effort is through practicum-based cooperative learning, an active learning strategy that involves students working together in groups to complete practicum assignments. This approach combines cooperative learning methods with direct learning experiences through practicums. The main aim of practicum-based cooperative learning is to improve students' cognitive, affective and psychomotor learning outcomes. Apart from that, this approach also aims to develop 21st century skills such as critical, creative, communicative and collaborative thinking. Direct practicum allows students to understand concepts more deeply and concretely, then group collaboration in practicum helps students develop critical, creative, communicative and collaborative thinking skills (Nyihana, 2021).

In groups, students share their knowledge and experiences, thus broadening their horizons and understanding of the subject matter, in groups encouraging students to think critically and analyze information in depth (Samiha et al., 2023). Students help each other and learn from each other, thereby increasing learning motivation and the quality of understanding. Direct practicum allows students to understand concepts more deeply and concretely. They can try it themselves and see first hand what they learn, so it is easier to understand and remember. The aim of this research is to analyze the results of practicum-based cooperative learning on students' cognitive learning outcomes.

METHOD

This research uses a descriptive research approach with a qualitative research type. The research location is at the Superior MA K.H. ABD. Wahab Hasbulloh. Data sources in this research are divided into two, namely primary data sources and secondary data sources. The primary data source is class XI MIPA students with a total of 50 students and the secondary data source is the results of observations and documentation carried out at the research location. Data collection techniques through interviews, observation and documentation. The data analysis stage uses data presentation and drawing conclusions. The research stages are fieldwork and data analysis.

RESULT AND DISCUSSION

- Result
- Primary data

From the results of interviews conducted with biology teaching educators at MA Unggulan K.H. Abd. Wahab Hasbulloh, the results obtained in a study are as in table 1 below.

Table. 1 Interview Results

Question	Conclusion of Educator's Answer
What efforts did you make to do so? Do students enjoy studying biology?	So far, what I have been doing is using learning media with interactive animated videos, using interactive games, and practicums.
When teaching biology, do you sir/madam? Have you ever carried out practical activities?	Once
Are the students enthusiastic and really like it? do practical activities?	Students really like practical activities rather than monotonous learning in class.
Are the grades obtained by students good? when the test is taking place?	As for the value itself, there is something that is complete which is incomplete.

- Secondary Data

Student learning outcomes by carrying out practicums on the excretion system material through making a visual aid for the urine formation system.

Figure 1. Practical Activities

The learning outcomes of students through daily tests after carrying out practical activities can be seen in Figure 2.

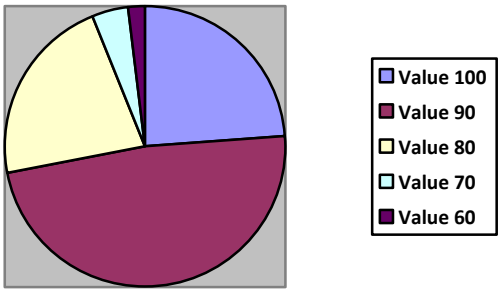

Figure 2. Students' daily test scores

Discussion

Based on the results of interviews that have been conducted, it is known that for practicum activities, students really like practicum activities. This is in line with the opinion of Muhiddin (2020) who states that the advantages of the Cooperative Model are increasing student participation, suitable for simple tasks, more opportunities for each group member to contribute, and easier interaction. Cooperative learning improves student learning outcomes, but its success can be influenced by several factors. Educators who have a good understanding of cooperative learning and how to implement it effectively will be better able to create a cooperative and productive learning environment (Febiyanti et al., 2020). Students need to have good study skills to be able to learn effectively from each other. This includes reading, writing and critical thinking skills.

The benefits of cooperative learning allow students to exchange their ideas and thoughts about the subject matter. This can help students to better understand difficult concepts and retain information in their memory longer. Cooperative learning encourages students to work together to solve problems and make decisions. This can help students to develop critical thinking and problem solving skills that are important for success in life. Cooperative learning creates an active and collaborative learning environment, where students help and learn from each other. This can increase students' motivation and involvement in the learning process. This opinion is supported by Fathurrahman et al. (2021) who stated that in the cooperative learning process motivation is a very important part in creating a conducive and effective learning atmosphere. Student learning outcomes by carrying out practicums on the excretion system material through making a visual aid for the urine formation system. The practical activity of making visual aids for the urine formation system encourages students to think critically and analytically in observing and analyzing the structure and function of the organs that make up the urine formation system. Practical activities can be seen in Figure 1.

Figure 1 shows the practical process of making a urine formation system demonstration tool. Students join to form their own groups based on the groups agreed upon at the beginning of the semester.

Students bring the tools and materials needed for practicum. Students and their groups conduct group discussions referring to the practical guide to design the stages of the urine formation process. Group discussions and group collaboration in practicum are effective learning strategies to increase students' understanding of concepts and learning motivation. This is in line with the opinion of Dalimunthe (2023) who states that when a group successfully completes a practicum assignment together, students feel proud and happy, this increases their learning motivation to continue learning.

Students are faced with the challenge of designing and making teaching aids that can explain the urine formation system well. This trains them to solve problems creatively and systematically. Students explain the concept of the excretory system to their classmates in a way that is easy to understand. This trains them to convey information effectively and answer questions clearly. Implementation of excretory system practicum through making urine formation system teaching aids is an effective learning strategy for developing 21st century skills such as critical, creative, communicative and collaborative thinking (Rita, 2022). This practicum not only helps students to understand the concept of the excretory system better, but also equips them with the skills needed in the 21st century. The learning outcomes of students through daily tests after carrying out practicum activities can be seen in Figure 2.

The cognitive learning outcomes of 93% of students meet the minimum completeness criteria. Practicum-based cooperative learning has proven to be effective in improving students' cognitive learning outcomes. This approach actively engages students, increases understanding of concepts, develops 21st century skills (Rahmah et al., 2023). increases motivation and self-confidence, and has a positive impact on daily test results. As one effort, educators need to implement practicum-based cooperative learning in learning to improve students' cognitive learning outcomes.

CONCLUSIONS

Based on the data obtained and analyzed by researchers regarding the analysis of practicum-based cooperative learning results on students' cognitive learning outcomes, it can be seen that 1) Practicum-based cooperative learning is effective in improving students' cognitive learning outcomes, 2) Group collaboration in practicum helps students understand concepts in more depth and increase learning motivation, 3) This approach develops 21st century skills such as critical, creative, communicative and collaborative thinking.

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