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Perception of the Influence of Practicum Activities on the Learning Outcomes of Biology Education Students at Ahmad Dahlan University

Nova Nulziyati^{a,1}, Jessica Putri Ferdiansyah^{b,2}, Riffatul Mafimudah^{c,3}, Hanif Kamal Hidayah Nasrulloh^{d,4}, Nani Aprillia^{e,5*}

Biology Education, Faculty of Teacher Training and Education (FKIP), Ahmad Dahlan University

¹2200008021@webmail.uad.ac.id;

³2200008033@webmail.uad.ac.id;

²2200008018@webmail.uad.ac.id;

⁴22000080172@webmail.uad.ac.id

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ABSTRACT

This study aims to analyze students' perceptions of practicum activities in relation to their learning outcomes. The method applied is descriptive qualitative analysis, with data collection techniques using questionnaires given to students undergoing practicum at Ahmad Dahlan University. The data obtained was analyzed by thematic analysis methods to find the main themes related to students' experiences and views. The results of this study show that students generally believe that practicum activities have a positive impact on their understanding of theoretical concepts and practical skills they get in class. However, some students also said that there were difficulties related to limited time and inadequate facilities. In addition, support from practicum assistants and direct interaction with practicum tools or instruments are key factors in the success of PR activities.



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Introduction

Practicum is a learning method that involves students in observation, experimentation, or testing activities carried out in the laboratory. Through practicum, students have the opportunity to directly interact with the material being studied, observe real biological phenomena, and test the theories that have been taught in class. Practicum not only helps students to understand abstract concepts, but also

Learning outcomes are an important indicator in assessing the success of a learning process. Learning

stimulates their curiosity and interest in biological science. According to (Hamidah et al., 2014) practicum method is one of the effective strategies in learning because it involves students actively in the learning process. The existence of practicum activities, students not only gain theoretical understanding, but also the ability to apply the theory in real situations. This process is expected to improve student learning outcomes, both in cognitive, affective, and psychomotor aspects .

outcomes include positive changes that occur in students after participating in learning, such as understanding material,

mastering skills, and changing attitudes. This is in accordance with the opinion of Hamalik (2014), which states that learning outcomes are evidence that someone has learned, seen from changes in behavior from not knowing to knowing and from not understanding to understanding. Meanwhile, according to PURWANINGSIH, (2023) learning outcomes can be understood from the two words that make up it, namely "results" and "learning." The word "result" refers to the acquisition that occurs as a result of an activity or process that changes the input functionally. In relation to practicum implementation, student learning outcomes are influenced by various factors, such as the quality of practicum activities, availability of facilities, and active involvement of students during the learning process. Therefore, students' perception of practicum activities is also one of the important factors that can affect the achievement of their learning outcomes.

Perception in a narrow sense is vision, which is how someone sees something. Meanwhile, in a broader sense, perception means the way a person views or interprets something (Gultom & Fauziah, 2014). Perception is the process by which a person responds or responds to information related to an object, in this context, biology practicum activities in university laboratories. Through observation using the senses, students can give meaning and interpret the objects observed during practicum. So this research will look at how students perceive practicum activities that have been carried out at their university. Students' perceptions of practicum activities are often one of the aspects that determine the effectiveness of learning. Someone who has a positive perception of practicum tends to be more motivated and active, so that in the end it can improve their learning

outcomes. Conversely, negative perceptions can lead to a lack of student interest in participating in practicum activities, which in turn has an impact on achieving less than optimal learning outcomes.

Over time there is a development, especially the development of education. The changes that occur must have a basis as a finding with the addition of a component and system to education. Education is a conscious effort in realizing a legacy of nature, culture from one generation to another (Rahman et al., 2022). Education makes a generation that has a role model for the previous generation. Education can occur in various situations and places starting from a small environment to a large environment such as, home, school, university, job training and others. The educational process, which is a process of individual interaction with other individuals. The school environment can be used as a place of interaction between students and teachers in the learning process in accordance with the current curriculum guidelines to achieve certain goals.

Based on the above, this article aims to examine students' perceptions of practicum activities and their impact on learning outcomes. This research will not only explore students' views on the relevance of practicum, but also evaluate the extent to which these activities contribute to their concept understanding and academic achievement. By understanding students' perceptions, educators can design practicum activities that are more effective and relevant for learning needs.

Method



The type of method used in the research “Perception of Practicum Activities on Learning Outcomes of Biology Education Students 2023/2024 Ahmad Dahlan University” is descriptive quantitative which is research by describing variables as they are supported by data in the form of numbers generated from actual circumstances (Wulandari & Jaelani, 2019). The research was conducted at ahmad dahlan university, held on December 25, 2024 - January 11, 2025. The population of this study were all students of the biology education study program at ahmad dahlan university with a sample of 32 students.

Data collection techniques through distributing questionnaires with a time span of January 1-6, 2025. The questionnaire was distributed to representatives of the Ahmad Dahlan University Biology Education student generation. After data collection is complete, then analyze the data obtained. The analysis was carried out with a quantitative descriptive approach, where the collected data was processed and presented in the form of a diagram illustrating the percentage. The results of this analysis are then used to describe the

knowledge and skills (Candra & Hidayati, 2020). The results obtained in this study are as follows:

1. Practicum makes a positive contribution to learning outcomes

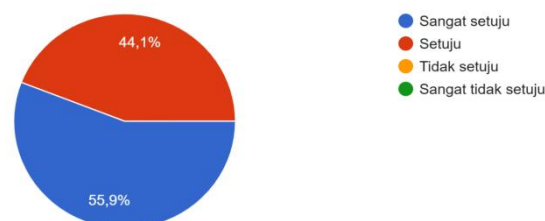


Figure 1. Diagram of Percentage of Practicum Results Contributing to Learning Outcomes

Based on the percentage diagram regarding practicum that makes a positive contribution to learning outcomes, it shows that 55.9% or 22 students strongly agree that practicum makes a positive contribution to learning outcomes. As many as 44.1% or 12 students who consider agree that practicum makes a positive contribution to learning outcomes. According to (Zakiyah et al., 2022), the higher the involvement of students in practicum, the greater the influence on their understanding of the material learned during practicum activities. Student involvement in practicum activities not only aims to fulfill learning obligations, but is also one of the effective ways to improve student learning outcomes. This confirms the importance of active participation in practicum as an important part of the learning process.

Results and Discussion

Practicum is an activity that aims to equip students to better understand theory and practice. Through practicum activities, students can gain many benefits, including practicing skills, and providing opportunities to apply and improve

2. Practicum can help relate theory to practice

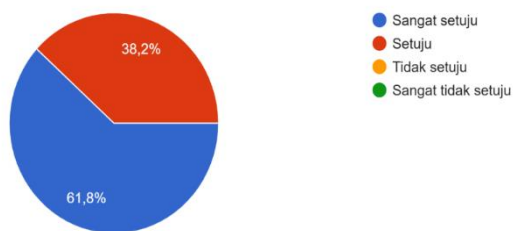


Figure 2. Diagram of the Percentage of Practicum Can Help Link Theory with Practice

Based on the percentage diagram above, it shows that the results of the practicum percentage are very helpful in linking theory with practice. Practicum is able to support the learning process, namely with the practicum there is a delivery of theoretical material that is directed and easy to understand. Based on this diagram, it is known that the percentage of students showing strongly agree (SS) with the perception that practicum can help link theory with practice is 61.8% and 38.2% show the results of the perception of agree (S). According to Suryaningsih, (2017) practicum can support a material. This makes practicum learning provides an opportunity for students to discover and prove a theory. That way, practicum learning can support students' understanding of the material by providing opportunities for students to prove theories, find theories or elucidate theories. It can be stated that the practicum makes students understand a learning theory.

3. Practicum motivates me to study hard

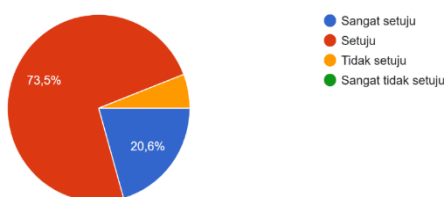


Figure 3. Diagram of the Percentage of Practicum Motivating Me to Study Diligently

Based on the percentage diagram above, it shows that the percentage of practicum results motivates students to study diligently, it can be seen that the most apperception is apperception agree (S) which is 73.5%, this indicates that students become diligent in learning because they are motivated by practicum during learning. Another percentage shows that students strongly agree (SS) with practicum motivating to study diligently, namely 20.6% and 5.9% stated that students disagree (TS) with practicum can motivate learning. Nisa, (2017) a learning process will be said to be successful, if in the process students are able to experience changes in knowledge, abilities, values, attitudes or other personal characteristics. Practicum is one of the learning activities that influences students, one of which is being diligent in learning. Through theory that has been practiced, and can be understood and applied properly by students so as to increase positive changes in learning. It can be said that the practicum makes a space for channeling knowledge, by producing changes in students to be diligent in learning.

4. Practicum increases effectiveness in learning outcomes

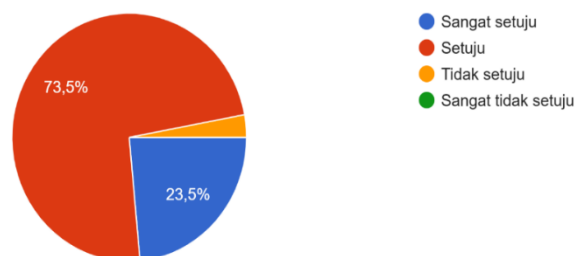


Figure 4. Diagram of the Percentage of Practicum Improving Effectiveness in Learning Outcomes

Based on the percentage diagram above, it shows that the percentage results of practicum increase the effectiveness of

student learning outcomes. The results can show that students agree (S) with the practicum can increase the effectiveness in learning outcomes, namely 73.5% and 23.5% of students strongly agree (SS). Other results show that there are students who disagree (TS) with the absence of the effect of practicum on effectiveness in learning outcomes by 3%. This result is in line with the findings in the journal which states that the practicum method provides direct experience to students, which allows them to understand concepts better. According to Andriono et al. (2024), the practicum method not only improves students' understanding, but also contributes to increasing their learning motivation. With active involvement in practicum activities, students can construct their knowledge more effectively, which is reflected in better learning outcomes.

Conclusion

The conclusion of this study shows that practicum makes a positive contribution to student learning outcomes. Practicum helps link theory with practice, motivates students to study hard, and increases effectiveness in learning. Active participation in practicum not only deepens understanding of the material, but also encourages positive changes in students' attitudes and motivation to learn. This is in line with findings showing that practicum is an effective method in improving overall learning outcomes.

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