

Analysis of Learning Difficulties of Students in Biology Subjects in Junior High School

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Abstract: Students' learning difficulties are generally influenced by two aspects, namely internal factors and external factors. Internal factors involve a lack of interest in learning, a lack of natural talent in a particular field, and health problems that can hinder the learning process. This study aims to analyze the learning difficulties of eighth-grade students in biology at Satap Penmina Junior High School. Data analysis was conducted using descriptive qualitative methods, with data obtained from student learning outcomes and questionnaire responses. The analysis identified factors contributing to learning difficulties among students at SMP Satap Penmina, including both internal and external factors. Internal factors included health issues, self-readiness, and difficulties, while external factors included school facilities and family support. Based on the research findings, it was concluded that the factors causing students' difficulties in learning biology are internal factors such as health (32%), self-readiness (30%), and difficulties (32%) (low category). External factors include family (32%) in the low category and school (35%) in the moderate category.

Keywords: Biology Subject; Learning difficulties; Junior High School Students.

Introduction

Education aims to develop human qualities that are inseparable from personal, family, national, and state life. The educational process in schools is not carried out arbitrarily, but with clear objectives, so that the activities carried out by teachers and students are guided to achieve specific targets [1].

Students' learning difficulties are generally influenced by two aspects: internal factors and external factors. Internal factors include a lack of interest in learning, a lack of natural talent in a particular field, and health issues that can hinder the learning process. On the other hand, external factors are primarily related to the school environment, such as a lack of facilities and infrastructure, inappropriate teaching methods, and learning models that do not align with the material being taught, all of which can hinder students' understanding of the material. Family factors also play an important role, including lack of motivation from parents and lack of support, as well as a home environment that is not conducive to reviewing material learned at school [2].

Learning at Satap Penmina Public Junior High School, particularly in Grade VIII, researchers found several problems, namely that students were not very active in the biology learning process. For example, during class, students were often busy talking with their classmates, students are busy doing assignments from other subjects, students frequently ask to use the restroom, students do not take notes on the material presented by the teacher, students do not complete assignments given by the teacher for various reasons, students do not ask questions if they do not understand the material, students do not bring writing utensils, students sleep in class with the excuse of being sick, and so on, and the learning model presented by the teacher is difficult for students to understand. These factors

can affect students' learning difficulties, as evidenced by the mid-semester exam results in Biology for Grade VIII, which showed that 60% or 15 out of 25 students had not met the minimum competency criteria (KKM) of 70, while only 40% or 10 out of 25 students had met the KKM. Thus, it can be concluded that students are experiencing difficulties in understanding Biology material. The researcher found several factors contributing to students' learning difficulties, including factors related to the students themselves, such as lack of interest, insufficient self-preparedness, health issues, or feeling dizzy and tired. Additionally, students often distract themselves by joking around with their classmates.

Students' learning difficulties are caused by internal factors originating from within the students themselves and external factors originating from outside the students [3]. Learning difficulties can be measured through investigations that can be conducted by conducting interviews, analyses, questionnaires, and documentation [4]. The current situation shows that students' mastery of biology subjects in junior high school (SMP) is still problematic, and the problems faced vary. For this reason, the researcher felt it was important to conduct research with the aim of identifying the factors of learning difficulties in eighth-grade students at Satap Penmina Junior High School (SMP).

Research Methods

This study uses a descriptive qualitative method because the issues examined by the researcher are social and dynamic in nature. Therefore, the researcher chose to use a descriptive qualitative research method to determine how to search for, collect, process, and analyze the

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research data [5] explains that descriptive qualitative research is a naturalistic research method that aims to understand phenomena experienced by research subjects holistically (as a whole) through description in the form of words and language in a natural setting. This qualitative approach was used to analyze learning difficulties in biology education at SMP Satap Penmina for eighth-grade students. According to [6], a questionnaire is a data collection technique that involves providing respondents with a set of written questions to answer. The purpose of distributing questionnaires is to obtain comprehensive information about a particular issue. The measurement scale used in this study to determine the respondents' scores is the Guttman scale. According to [7], the Guttman scale is a scale used to obtain definitive answers from respondents, with only two intervals, such as agree-disagree, yes-no, right-wrong, positive-negative, ever-never, and others. This measurement scale can generate questions in the form of multiple-choice or checklists, with the highest score (agree) being one and the lowest (disagree) being zero. Respondents will be asked to select the option that best aligns with their feelings toward the statement or question presented by the researcher.

$$P = \frac{\text{Total Score Acquisition}}{\text{Total Score}} \times 100$$

Table 1. Percentage of students with learning difficulties

No	Percentage	Criteria
1	68% - 100%	High
2	34% - 67%	Medium
3	0% - 33%	Low

Source: Sugiyono, 2013

The data collection techniques used in this study employed a triangulation approach, consisting of questionnaires, structured interviews, and interview recordings. Participant observation questionnaires were conducted to determine students' understanding of biology learning at SMP Satap Penmina, structured interviews were used to assess the readiness of biology teachers at SMP Satap Penmina in conducting student understanding analysis in biology learning, while interview recordings were used to record all conversations or discussions.

The data analysis technique used in this study was qualitative descriptive analysis, as described by Miles and Huhherman [5], which consists of data collection, data presentation, and finally, conclusion drawing.

Results and Discussion

Based on the results of research conducted at Satap Penmina Junior High School to determine the causes of learning difficulties among students, the data obtained in this study consisted of questionnaire results and interview results. The results of the analysis showed that the factors causing learning difficulties among students included internal factors such as health, personal readiness, and difficulties, while external factors included family and school aspects.

Table 2. Percentage Results of Questionnaire Analysis on Internal Factors.

Indicator	PPercentage	Criteria
Health	32%	Low
Self-preparedness	30%	Low
Difficulties	32%	Low

Health

Health aspects related to physical fatigue and poor health. Research by [8] states that a person's health greatly affects their learning outcomes. Poor physical health can cause children to tire quickly and lose concentration during lessons.

Based on the analysis of data from the questionnaire and interviews in Table 2 above, it shows that difficulties in understanding biology material in the health indicator with an average percentage of 32% fall into the low category, or 4 out of 25 students stated that if they are in poor health, they experience difficulties in understanding the material presented by the teacher. These difficulties in understanding the material are caused by health issues such as illness, fatigue, and dizziness. This is also supported by the results of interviews with subject teachers, who stated that during the learning process, students who are unwell usually find it very difficult to interact during the learning process.

Self-readiness

Readiness is the overall condition of a person that makes them ready to respond/answer in a certain way to a situation [9]. An important aspect of learning is the self-readiness of students, because students are the subjects of learning who must be considered and guided in achieving learning objectives [10].

Based on the analysis of data from questionnaires and interviews in Table 2, difficulties in understanding biology material in the self-readiness indicator, with an average percentage of 30%, fall into the Low category, as 6 out of 25 students stated that self-readiness is the cause of students' learning difficulties. This is because students did not prepare, such as studying before biology lessons began and not preparing writing tools. Students only prepare themselves well for daily tests, mid-term, and final exams.

Difficulties

Based on the results of data analysis from questionnaires and interviews in Table 4, it shows that difficulties in understanding biology material in the difficulty indicator with an average percentage of 32% fall into the moderate category, or 5 out of 25 students stated that biology is difficult to understand because mentioning or pronouncing Latin is the cause of learning difficulties.

Table 3. Percentage Results of Questionnaire Analysis on External Factors.

Indicator	Percentage	Criteria
Family	32%	Low
School	35%	Moderate

Family

Parental responsibility is very important in the education process of their children. Regardless of where the child learns, whether in formal, informal, or non-formal institutions, the role of parents in determining the future of their children's education is very important. [11] The active role of parents in learning at home will have an influence on the child's learning outcomes.

Based on the analysis of data from questionnaires and interviews in Table 3, it shows that difficulties in understanding biology material in the family indicator, with an average percentage of 32%, fall into the low category. Four out of 25 students stated that their parents and siblings gave them homework to do (washing dishes and cooking), and often chose to watch TV and play games instead of studying. This is also supported by the results of interviews with subject teachers, who noted that during the learning process, some students lacked enthusiasm for learning. This was because their families did not allow them to study at home and instead let them watch TV more than study.

Furthermore, harmonious relationships between family members, parents, children, older siblings, or younger siblings will help students perform well in their learning activities [12]. Research results stated that interest in learning and parental support influence learning motivation [13].

School

Research findings state that there are two factors that influence learning difficulties, namely internal factors and external factors [14]. Learning difficulties are closely related to learning activities, and these learning activities are greatly influenced by several interrelated factors, namely internal factors and external factors [15]. Based on the analysis of questionnaire data, internal factors such as health, motivation, and self-readiness are the most influential aspects, while external factors such as family and school aspects are also influential but fall into the high category.

Interviews with biology teachers revealed that there are obstacles in the learning process because students experience factors causing learning difficulties, namely internal and external factors. Internal factors include motivation, health issues, low concentration, lack of interest in learning, loss of self-confidence, and many students often distract themselves by joking with friends, and some even ask permission to leave and do not return to class. External factors include family and school factors. Family factors include some parents supporting their children to study at home, while others allow their children to play with friends.

School factors greatly determine success in the learning process, such as the facilities and infrastructure available at the school. Data shows that the facilities and infrastructure provided at the school are quite good, supporting student learning activities. However, some biology teachers do not use teaching aids in the learning process, resulting in a less enjoyable learning process and distracting students from focusing on the learning process. The condition of school buildings, classroom layout, and learning tools influences learning activities [16-18]. In

addition to these physical conditions, teachers play an important role in creating an engaging learning environment for students. Poor teaching methods and media used by teachers can negatively impact student learning. For example, teachers who only use lecture-based methods may cause students to become bored, sleepy, passive, and merely take notes on the material explained by the teacher. Progressive teachers are willing to try new methods that can enhance teaching and learning activities and increase students' motivation to learn [19-22].

Based on the results of data analysis from questionnaires and interviews in Table 3, difficulties in understanding biology material in school indicators with an average percentage of 35% fall into the moderate category, indicating that there are many textbooks that can be used for learning in schools. teachers also use learning media (modules) during biology lessons, teachers involve students in participating in biology lessons, and teachers use language that is easy for students to understand when explaining the material. However, teachers never give assignments to students when they are absent and have not yet used teaching aids in the learning process.

Conclusion

Based on the results of the study, it was concluded that the factors causing students' difficulties in learning biology were internal factors such as health (32%), self-preparedness (30%), and difficulties (32%) (low category). Meanwhile, external factors included family (32%) in the low category and school (35%) in the moderate category. analysis can be used as a basis for developing learning innovations for teachers in schools and supporting student-centered learning.

Author's Contribution

Author Marince I. Leo: Penulis 1: Conceptualization, Data curation, Formal analysis, Writing - original draft, Investigation, Methodology, Software, Validation, Supervision, Writing - review & editing

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