



Students' Learning Difficulties And Their Relationship With Biology Learning Outcomes Of Class XI Students at SMA N 8 Padang During Online Learning

Chairunnisa Sinaga^{1*}, Gusmaweti², Azrita³, Lisa deswati⁴

^{1,2,3,4}Faculty of Teacher Training and Education, Universitas Bung Hatta, Sumatra Barat, Indonesia

Article History:

Received: September 20, 2022

Revised: September 29, 2022

Accepted: October 05, 2022

Published: October 08, 2022

Keywords:

Learn, Online, Results, Difficulty

*Correspondence Author:

Chairunnisasinaga5@gmail.com

Abstract: This research is motivated by students who have difficulty in the online learning process is the low learning outcomes obtained by students. This study aims to analyze what factors influence the biology learning difficulties of students in class XI IPA at SMA Negeri 8 Padang during online learning and to determine the relationship between students' learning difficulties in biology through online learning and student biology learning outcomes. This research is a descriptive research. The population of this research is class XI IPA which consists of 3 classes totaling 110 students. The research sample amounted to 33 students. The sampling technique is a random sampling technique with a sample proportion of 30%. The research data were analyzed using descriptive analysis and then t test to determine the correlation. The results showed that the highest score of the student learning difficulty factor was 2.81, namely the motivation and interest in student learning factors and the lowest difficulty factor was obtained a score of 2.44, namely social interaction. There is a relationship between students' learning difficulties in biology through online learning with biology learning outcomes with a value of $r = 0.520$; the coefficient of t count value of 4.642 is greater than table of 2.040, so it can be concluded that there is a positive and significant relationship between learning difficulties in biology through online learning and student learning outcomes and there are suggestions for schools to be positive inputs in efforts to build and improve models. online/online learning and is also able to improve student learning and it is hoped that teachers and parents can recognize and observe online learning difficulties experienced by these students.

INTRODUCTION

Technological disruption, such as a shift in activity using technology, has colored the industrial revolution 4.0, thus encouraging the formation of newness and community development, including in the field of education. The implementation of the Revised 2013 Curriculum is to respond to the Industrial Revolution 4.0. Readiness to learn is required to follow the development of a new curriculum that emphasizes mastery of 21st century skills to meet the era of the industrial revolution 4.0, because the goal of Indonesian national education must be directed at efforts to shape 21st century individual skills and attitudes. Readiness is the willingness to respond or react (Gusmaweti, 2021).

Formal education in Indonesia is currently disrupted by the Coronavirus Disease (COVID-19) outbreak. This epidemic has had an impact on educational institutions,

especially in schools. The Minister of Education and Culture of the Republic of Indonesia issued Circular Letter Number 4 of 2020 concerning the Implementation of Educational Policies in the Emergency Period for the Spread of Corona Virus Disease. In this second point it is said that the learning process is carried out remotely, namely to provide meaningful learning experiences to students through online learning (Gultom, 2021). One of the subjects taught in online learning is biology (Suryani and Lufri, 2021). Education is a learning process in the form of teaching and learning activities, where there is interaction between students and teachers. In the field of education, teachers act as educators who guide students to be able to develop knowledge and can change the condition of students from not knowing to knowing (Sari, 2018).

The basic principle of learning is to develop the potential of students (cognitive, affective, psychomotor or in the new paradigm known as intellectual, emotional, spiritual and skill intelligence) optimally. Biology learning means to develop the potential of students in the class both their cognitive, affective and psychomotor potential optimally in biology learning (Deswati, 2015).

Rumini, (2013) stated that learning difficulties are an obstacle experienced by students in participating in learning and achieving optimal learning outcomes. So, it can be concluded that learning difficulties are obstacles that can have an impact on the learning process and less than optimal achievement results. There are several indicators of learning difficulties in students, namely (1) Students are not able to master the subject matter in the allotted time; (2) Students do not achieve learning achievements according to their abilities; (3) students get a low level of achievement in learning outcomes compared to other students; (4) Students do not show good personalities, for example stubborn, impolite, and do not adapt to the environment (Anggari, 2020).

Based on the above background, the writer conducted a research to determine the students' learning difficulties in biology and its relationship with the students' biology learning outcomes during online learning. In general, online learning at home (study at home) is a good application so that it can refer to the ability of teachers and student participation to be more conducive. However, when online learning is too complicated, students may not be able to learn biology optimally, as well as when there is a lot of data that must be conveyed but internet or network access and also students' motivation and interest in learning are slow, of course this will interfere with student activities.

THEORETICAL SUPPORT

The existence of government policies to conduct online learning processes requires educators and students to master the use of technology. Educators have an important role in the online learning process to make students understand all the material being taught. This requires students and also educators to study and conduct online or online or distance learning but with the achievement and goals of education that are still of high quality and quality (Gusmaweti, 2021).

Learning is essentially a process, namely the process of regulating, organizing the environment around students so that it can grow and encourage students to carry out the

learning process. Learning is also said to be a process of providing guidance or assistance to students in the learning process. The role of the teacher as a mentor starts from the number of students who have problems. In learning, of course, there are many differences, such as there are students who are able to digest the subject matter, there are also students who are weak in capturing the subject matter (Pane, 2017). Science learning is an activity that contains meaning in the form of asking questions and investigating the universe both about natural phenomena and natural characteristics systematically. The scope of science study materials is living things and life processes, objects/matter, energy and its changes, as well as the earth and the universe (Yuliantri, 2013).

Biology is part of the Natural Sciences (IPA) which studies living things and their environment where there is a reciprocal relationship between living things and their environment. In line with that, Nurlatifah (2015) states that biology is a part of natural science that examines life, the surrounding environment, the interaction between life and the surrounding environment and phenomena related to it. In biology learning so far, the material tends to be presented in the form of Latin terms, classifications, anatomy, and morphology that students must memorize (Sari, 2017).

Factors that affect learning difficulties can be grouped into two categories, namely internal factors and external factors. internal factors of learning difficulties, namely learning motivation and interest in learning, social interaction factors. External factors of learning difficulties are the cost factor and internet access, the technical skill factor in learning, and the environmental and parental difficulties. Based on the description above, the researchers analyzed what factors could affect student learning so that they could be taken into consideration for Biology teachers to design learning strategies in the classroom, and as material for attention for parents to always give attention and support to children's learning needs (Zikra , 2016).

According to Sudjana, (2014) said that learning outcomes are abilities possessed by students after students experience the learning process. In the teaching and learning process, a teacher and students carry out their duties not only in delivering and absorbing material but evaluating learning outcomes by one way of doing an exam called the midterm exam. Learning outcomes are the success achieved by students after following several processes, one of which is studying and testing efforts to achieve the learning objectives that have been set. Learning outcomes show learning achievement with indicators of behavioral changes in humans, namely from not knowing to knowing, the emergence of changes in habits, the ability to appreciate, the development of social and emotionalattitudes.

METHOD

The research method used is descriptive quantitative research method. The descriptive research method looks for the relationship between that variable and other variables (Sugiyono, 2016). The purpose of descriptive research is to explain, summarize various conditions. Researchers conducted a study to see (1) How are students' learning difficulties and their relationship with students' biology learning outcomes during online

learning?; (2) How are students' learning difficulties in biology lessons during online learning?.

The study involved high school/MA students with data and information collection techniques through a student response questionnaire instrument using Google forms and the research subjects amounted to 33 students. where this application is useful for distributing questionnaires quickly and widely through links distributed to research subjects, as well as researchers looking for relevant theoretical references according to the problems found by researchers. The student's response contains 30 statement items which are the elaboration of the indicators. Indicators to measure student responses regarding student learning difficulties in biology lessons during online learning. So that the data analysis was carried out descriptively and this study tried to describe students' learning difficulties in learning biology during online learning.

RESULT AND DISCUSSION

Based on research conducted on class XI students at SMAN 8 Padang, two data were obtained, namely primary data and secondary data. Primary data in the form of the results of filling out a questionnaire on learning difficulties in biology through online learning given to 33 participants and secondary data in the form of student learning outcomes in the Odd Semester Final Examinations for the 2020/2021 Academic Year.

At the trial stage of the research instrument, information was obtained that the instrument used was reliable. This is evidenced by the obtaining of Cronbach's Alpha value of 0.93. If the value of Cronbach's Alpha > 0.6 then the research instrument is said to be reliable. Data from the research results of learning difficulties in biology through online learning of students are described in the form of tables and calculating the percentage value of each indicator of difficulties in learning biology through online learning can be seen in Table 1.

Table 1. Analysis of Learning Difficulties

No	Indicators	Average score
1	Motivation and Interest	2,81
2	Social Interactions	2,44
3	Cost and Access	2,53
4	Skills	2,57
5	Environment	2,57

Based on the results of the descriptive analysis of the questionnaire on learning difficulties in biology through online learning, the students showed the highest score was 2.81 and the lowest score was 2.44, from a total sample of 33 students. Overall, the difficulty of learning biology through online learning is high.

Normality test was performed using the Kolmogrov-Simirnov test. Based on the normality test, the results showed that the data were normally distributed. it is known that the variable data on learning difficulties while online (X) is normally distributed where Lcount significant level 0.05 ($0.806 > 0.05$) and its relationship with learning outcomes (Y) is normally distributed where Lcount significant level 0.05 ($0.962 > 0, 05$).

Table 2. Normality Test Results

No	Difficulty learning (X)	Learning outcomes (Y)
1	0.806	0,962

Correlation results are obtained from the relationship between learning difficulties in biology through online learning and student learning outcomes as shown in Table 3. The r value is 0.520; it means that there is a positive relationship between difficulties in learning biology through online learning and student learning outcomes. To find out whether there is a significant relationship or not, the t-test was used, the results obtained that the t count value of 4.642 was greater than the t table value of 6.040, meaning that there was a significant relationship between learning difficulties in biology through online learning and the learning outcomes of class XI students at SMAN 8 Padang.

Table 3. Hypothesis Test Results

No	r Value	Hypothesis Testing	Conclusion
1	0,520	4,642	There Is a Significant Relationship

Test the coefficient of determination. With the aim of knowing how big the contribution of the independent variable (X) to the dependent variable (Y) and knowing the percentage level of the relationship and contribution of each variable, the coefficient of determination formula is used. Based on the results of data calculations, the percentage of variable X against variable Y is 27%, and 73% is influenced by other factors not examined.

CONCLUSION

The conclusion of this study is the student learning difficulties factor with the highest average score of 2.81 on the indicators of student motivation and interest in learning, while the student learning difficulties factor with the lowest average score is 2.44 on the indicators of student learning social interaction. So that the dominant learning difficulties that are owned by class XI IPA students at SMA Negeri 8 Padang are internal learning difficulties, indicators of motivation factors and student interest in learning. There is a significant relationship between learning difficulties and biology learning outcomes for students of class XI IPA SMA Negeri 8 Padang with a correlation coefficient of learning difficulties (X) 0.520. The results of the t-test obtained the results of t count 4.642 > t table 2.040 with a level of influence or contribution of 27%.

ACKNOWLEDGMENT

1. Mrs. Dra. Gusmaweti, M.Sias my supervisor who has provided time, energy, thoughts and patience to guide the author in completing this thesis.
2. Mrs. Dr. Azrita, S.Pi., M.Si. and Mrs. Dra. Lisa Deswati, M.Si as the lecturer who has provided time, energy, thought and patience for perfection in completing this thesis.
3. Mrs. Rona Taula Sari, S.Si, M.Pd as Chair of the Biology Education Study Program.
4. Mr. Drs. Khairul, M.Sc as Dean of the Faculty of Teacher Training and Education.
5. The head of SMA Negeri 8 Padang who has provided facilities and convenience to the

- author
6. Biology subject teacher who has provided direction and input to the author while conducting research at SMA Negeri 8 Padang
 7. To my beloved parents, a special person Muhammad Ilham and my younger siblings who have contributed greatly in the form of prayers and assistance and support both morally and materially in the completion of this thesis.
 8. Biology Education Colleagues at Bung Hatta University Class of 2018 who always accompany and provide encouragement and encouragement to the author in any form so that the author is enthusiastic and always optimistic to complete this thesis.

REFERENCE

- Arikunto, Suharsimi. (2012). *Research Procedure A Practical Approach*.
- Deswati, L., & Har, E. (2015). The Relationship between Laboratory Utilization and Biology Learning Outcomes of Class Xi Ipa Students of SMA Negeri 1 Sijunjung 2014/2015 Academic Year. *Journal of the Faculty of Teacher Training and Education*, 4(5).
- Gultom, W. (2021). Analysis of Learning Difficulties for Class Xi Students in Biology Subjects During Online Learning at Sma Negeri 1 Pangaribuan for the 2020/2021 Academic Year (UNIMED).
- Gusmaweti, G., & Hendri, W. (2021). Identification of Biology Education Student Learning Styles in the New Normal Period. *BIOEDUSAIN: Journal of Biology and Science Education*, 4(1), 31-39.
- Gusmaweti, G., & May, O. Z. (2021). Learning Readiness of Students towards Understanding Science in the Era of the Industrial Revolution 4.0. *BIOEDUSAINS: Journal of Biology and Science Education*, 4(2), 298-306. Jakarta: Rineka Cipta.
- Pane, A., & Dasopang, M. D. (2017). Study and learning. *Fitrah: Journal of the Study of Islamic Sciences*, 3(2), 333-352.
- Sari, R. T. (2017). Test the validity of the biology learning module on the material of the human reproductive system through a constructivism approach for class IX SMP. *Scientiae Educatia: Journal of Science Education*, 6(1), 22-26.
- Sari, R. T., & Angreni, S. (2018). The application of the project based learning (PjBL) learning model is an effort to increase student creativity. *Journal of Varidika*, 30(1), 79-83.
- Sugiyono. 2016. *Methods of Educational Research Approaches Quantitative, Qualitative, and R & D*. Bandung: Alfabeta.
- Suryani, S., & Lufri, L. (2021). Analysis of Biology Learning Difficulties through Online Learning and Its Relationship with Learning Outcomes of Class X Students. *Journal for Lesson and Learning Studies*, 4(3).
- Syafira Anggari, R. (2020). *Analysis of Students' Difficulties in Solving Problems with Story Problems in Flat Shapes in terms of Interest in Learning* (Doctoral dissertation, University of Muhammadiyah Ponorogo).

- Yuliantri, C., Har, E., & Angreni, S. (2013). Increasing Students' Motivation and Learning Outcomes in Science Learning with Guided Note Taking Model in Class Iv Sdn 17Kawai Tanah Datar Regency. *Journal of the Faculty of Teacher Training and Education*, 2(2).
- Zikra. (2016). Analysis of Factors Causing Difficulty in Learning Biology for Class VII Students of MTsS Pgai Padang (Doctoral dissertation. STKIP PGRI West Sumatra).