

**ONLINE LEARNING DIFFICULTIES ANALYSIS FOR CLASS OF 2020 STUDENTS UNIVERSITAS
NEGERI MEDAN FOR LOWER ORGANISM TAXONOMY COURSE**

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ABSTRACT

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The purpose in this research was to find out the learning difficulties of Biology students Universitas Negeri Medan during online learning and factors that cause learning difficulties. The research method uses a descriptive qualitative approach. The research population is Biology students Universitas Negeri Medan, the sample used is PSBD D and PSBD E 2020 students. The instrument used is a questionnaire distributed using a google form. The results of the research based on the DPNA score, the level of learning difficulty experienced by Biology students Universitas Negeri Medan is relatively low. Even though student scores were in the good category, it turned out that PSBD D and PSBD E students in 2020 experienced several difficulties during online learning, including: difficulty understanding the topic in Lower Organism Taxonomy course with an average of 68%. Did not understand the explanation given by the lecturer with an average of 47%. Did not understand the instructions given by the lecturer during the learning process with an average of 57%. Difficulty understanding the features contained in the SIPDA system with an average of 26%. Experienced difficulties in accessing the internet network during the online learning process with an average of 60%. Experienced quota limitations during the online learning process with an average of 43%. The factors causing learning difficulties for biology students class of PSBD D and PSBD E 2020 include internal factors and external factors. Based on internal factors with an average of 58% classified as difficult enough. While external factors with an average of 59% are classified as difficult enough

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INTRODUCTION

Learning is a process that occurs directly or indirectly between individuals and their environment, resulting in changes in behavior towards these individuals. The achievements resulting from these learning outcomes are called learning, so that learning can be interpreted as a process carried out using certain ways to make someone learn. Learning occurs between students and educators using methods, strategies, and learning resources. Learning is defined as an activity of teaching and guiding towards the process of self-maturation. The concept of understanding learning basically focuses on the learning process as an activity that is planned, carried out and evaluated by the teacher (Syamsuddin, 2019). Indonesia has been carried out online learning for the last 2 years since the Covid-19 announcement outbreak which first appeared in Wuhan, China (Shi et al., 2020) and was declared as a pandemic by the world health organization (WHO) (Sohrabi et al., 2020). The government in anticipating the transmission of the virus has issued various policies, such as isolation, social and physical distancing to large social celebrations (PSBB) (Siregar et al., 2020). This condition requires people to stay at home, work, worship and study at home. Include the educational institutions must follow government regulations for the innovation of learning process when a global pandemic occurs through online learning to improve the learning quality (Syarifudin, 2020).

Online learning is learning that is done without face-to-face. Online learning is not only caused by the Covid-19 pandemic, but online learning has become a demand in the world of education since the last few years. This is important to find out the obstacles and solutions in online learning for students, considering that this learning system was used during the Covid-19 pandemic. Therefore, several steps are needed as a solution to improve the quality of online learning (He & Kruck, 2019). Online learning process certainly provides a new experience and atmosphere for students and educator. this online learning causes learning difficulties for students which will have an impact on student learning outcomes.

Universitas Negeri Medan has implemented the KKNi Curriculum since 2016. During the Covid-19 pandemic, the implementation of KKNi assignment at Universitas Negeri Medan was carried out online and The KKNi curriculum emphasizes optimal student involvement in learning process, that hoped the students' completely mastery the scientific concepts, and special skills. One of the strategies for the KKNi curriculum implementation at this university is to present 6 types of assignments, namely routine assignments (TR), critical book reports (CBR), critical journal reviews (CJR), mini research (MR), projects, and Idea Engineering (RI) (Pramuniati, 2019).

The implementation of KKNi assignment at Universitas Negeri Medan must be carried out by all students independently and require online access which finds many obstacles to fulfil the assignment. The impact of online learning activities can be seen from aspect of learning spirit, literacy of online learning technology, intrapersonal communication activities, collaborative activities, and independent learning (Hasanah et al., 2020).

Based on the results of interviews and observations that researchers have made, the obstacles experienced by students in carrying out online learning and completing KKNi assignments are such as limited internet access, frequent disturbances in unstable connections, making it difficult to find references to complete the KKNi assignments. The submitted assignment portal (SIPDA Unimed) often causes errors during the learning process because there are many server users at the same time, so lectures are transferred to other media such as Zoom meetings, Google Meet and Whatsapp. There are also some students who find it difficult during practicum, as a result of doing this online learning students are required to do practicum at home so that they have difficulty in meeting the tools and materials needed.

Lower Organisms is one of the subjects for students at the university level which will be examined how the obstacles and what factors cause students' learning difficulties in participating in the online learning process. The Taxonomy of Lower Organisms subject teaches students the principles of classification, nomenclature, identification, description of taxon, habitat, breeding methods, and role in life. This course is one of the courses carried out by students during the online learning process.

Based on Sudjana (2009), students learning difficulties are related to the achievement of academic results and students learning activities that do not always run smoothly. Learning outcomes are abilities that students have after receiving a learning experience. Learning outcomes can also be said as behavior in the form of knowledge, skills, attitudes, information on new cognitive strategies and obtained by students after interacting with the environment in an atmosphere or learning condition.

Based on Zikra (2016), some of the factors that cause learning difficulties in biology are external factors such as family factors 70% (with a high category) and community factors 63% (with a high category). Based on Sianturi (2016), it was found that the learning difficulties factors in biology are external factors, which include parent indicators 67.89%, home atmosphere indicators 67.46%, teacher indicators 64.33%, school environment indicator 68.87%, and subject indicators 75.55%. Based on Tobing (2015), the factors that influence student learning difficulties are internal factors including interest of 75.25% and motivation of 79.95. While external factors include the media by 65.66%. This shows that previous studies

reveal that students' learning difficulties in biology are still high and influenced by internal and external factors.

Based on the description above, it is necessary to understand how the level of student learning difficulties during the online learning process and what are the factors that cause learning difficulties. The importance of this research is to see how the level of learning difficulties of biology students PSBD D and PSBD E 2019 Medan State University and what are the difficulties they experienced during Covid-19 pandemic.

RESEARCH METHOD

This research was conducted at Universitas Negeri Medan in Biology Education Study Program, located at Jl. William Iskandar Pasar V Medan Estate, postal code 20221. The population in this study were all students of Biology Education at Universitas Negeri Medan class of 2020 as many as 6 classes with a total of 154 students. The sampling technique in this study is the Probability Sampling technique, which is Simple Random. Sampling has no population strata, the sample taken is 10% of the total population, this technique can be done because the population is homogeneous (Sukardi, 2013). So the number of respondents in this study were 53 students. And the questionnaires were distributed evenly to each respondent, the researchers determined the samples to be studied were PSBD D and PSBD E 2020 students.

The instrument used to determine of learning difficulties experienced by biology students PSBD D and PSBD E 2020 was an open questionnaire. The questionnaire contains 11 questions related to the difficulties experienced by students during the online learning process and then the questionnaire will be given via the Google form and The questionnaire used in this research was a closed questionnaire with a Likert scale model. Questionnaires will be given to respondents, namely class PSBD D and PSBD E 2020 Universitas Negeri Medan. The factors that student

difficulties. The grid was made in accordance with the RPS (Semester Learning Plan) for the even semester lower organism taxonomy course.

This research was conducted through a preparatory stage an analysis of the DPNA scores and provided 5 questions as initial data regarding what difficulties students experienced during the online learning process and what factors caused them to have difficulty learning in Lower Organism Taxonomy Course. Then prepare a proposal and make a research instrument grid and carry out instrument validation to the validator lecturer. In collecting data, the researcher selects the class to be sampled, then gives a questionnaire through the Google form successively. on the first day the researcher gave a questionnaire related to student learning difficulties during online learning process and on the second day the researcher gave a questionnaire related to the factors of student learning difficulties during the learning process. Finally, the questionnaire was collected and then the scores were analyzed to obtain the results of learning difficulties and what factors influenced student learning difficulties. The results of the questionnaire were then analyzed to determine student learning difficulties and the factors that cause student learning difficulties in the Lower Organism Taxonomy Course. Then make conclusions and research reports.

RESULTS AND DISCUSSION

RESULT

DPNA Score

Based on the results of the DPNA score that have been obtained class of PSBD D and PSBD E 2020 Universitas Negeri Medan received a relatively good score. Student learning outcomes in Lower Organism Taxonomy course can be seen in Table 4.1.

Based on Table 4.1 the average scores obtained by student class of PSBD D and PSBD E 2020 fall within the A and B ranges, so that the scores they obtained were mostly above the class average. Thus the level of learning difficulties they experience is low.

Tabel 4.1 PSBD D and PSBD E 2020 Average Scores

Value of learning outcomes	Amount	Percentage (%)	Category
90 – 100	28 Student	52.83	Very Good
80 – 89	25 Student	47.17	Good
70 – 79	-	-	Not Good
0 – 69	-	-	Very Not Good

The Difficulties Experienced by Students in Lower Organism Taxonomy Course During Online Learning

Even though student scores fall into the good category as we can see in Table 4.1, it turns out that PSBD D and PSBD E 2020 students experienced some difficulties during online learning, including: unstable internet network, quite a lot of material composition, the SIPDA system experienced errors, lack of lecturer explanation of assignments given and the absence of worksheets in the learning process. These difficulties can be seen in Diagram 1.

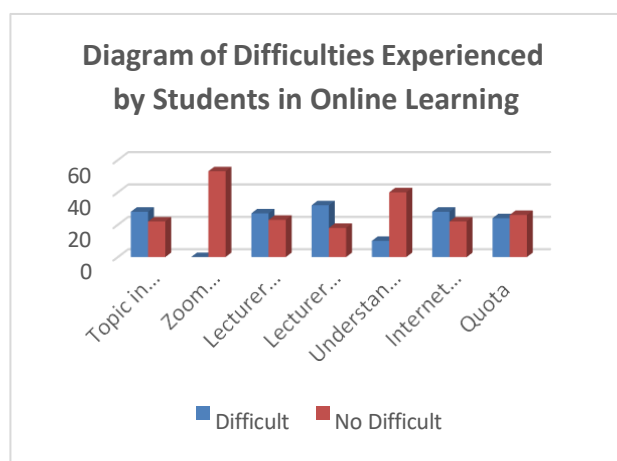


Diagram 1. Types of difficulties students experience during online learning in Lower Organism Taxonomy Course

Based on Diagram 1, students who experience difficulties in understanding topic in the Lower Organism Taxonomy course with an average of 68%. On the difficulties experienced by students in understanding the explanations given by the lecturer with an average of 47%. While the difficulty of students in understanding the instructions given by the lecturer during the learning process with an average of 57%. There are some students who have difficulty understanding the features contained in the SIPDA system with an average of 26%. Students who experience difficulties in accessing the internet network during the online learning process with an average of 60%. During the online learning process students experience difficulties due to quota limitations with an average of 43% and lectures conducted during the learning process are carried out with zoom meetings by all students.

Factors Causing Student Learning Difficulties During Online Learning

There are two factors causing learning

difficulties experienced by student class of PSBD D and PSBD E 2020 namely, internal and external factors. Internal factors that cause student learning difficulties include: comprehension that is less supportive in understanding topic in Lower Organism Taxonomy courses, not focusing on listening to explanations given by lecturers, too much composition so that they feel dizzy and carry out activities during the learning process. While the causal factors experienced by students on external factors include: parents who do not have the cost to finance learning facilities, unstable internet networks and environmental conditions that are very difficult to reach internet networks. The factors that cause learning difficulties experienced by PSBD D and PSBD E students can be seen in Table 4.2.

Tabel 4.2. Factors causing student learning difficulties during online learning

Internal Factors			
Descriptor	Amount	Percentage (%)	Category
1	29 Students	54.71	Enough Difficult
2	23 Students	43.39	Difficult
3	32 Students	60.37	Enough Difficult
4	21 Students	39.62	Enough Difficult
5	16 Students	30.18	Enough Difficult
6	28 Students	52.83	Enough Difficult
7	38 Students	71.69	Enough Difficult
8	22 Students	41.50	Difficult
External Factors			
9	24 Students	45.28	Enough Difficult
10	26 Students	49.05	Not Difficult
11	35 Students	66.03	Enough Difficult
12	18 Students	33.96	Enough Difficult
13	19 Students	35.84	Enough Difficult
14	27 Students	50.94	Enough Difficult

Discussion

DPNA

Based on the results of the DPNA scores that have been obtained class of PSBD D and PSBD E 2020 Universitas Negeri Medan received a relatively good score. This was also reinforced through an interview process with several students to clarify the results of the scores obtained from the DPNA. There is a match between the value and the answers submitted by students. Constraints experienced by students, namely the network is not good enough that it affects the process of accessing SIPDA. In addition, the cost of fulfilling the quota is still very limited, even though the government has received a quota subsidy. So based on the results of the interviews that have been conducted, the researcher finally concluded that there are two factors that influence learning difficulties when online learning, namely internal factors and external factors. However, from these two factors, it turns out that it is not so difficult for students in the process of understanding the learning material. So that the value they get is also mostly above the class average value. Therefore the level of learning difficulty for biology students class of PSBD D and PSBD E 2020 Universitas Negeri Medan based on DPNA and interviews is relatively low.

The Difficulties Experienced by Students in Lower Organism Taxonomy Course During Online Learning

Based on the results of the analysis carried out there were 60% of students experiencing difficulties in the internet network. This happens because the quota packages are expensive so that some of them can only buy quotas with weak network strength. There are also those who live in remote areas so it is very difficult to get a stable network. the usual obstacle is the disconnection of the internet network during the online learning process. The stability of internet access plays an important role so that the online learning process can run well, but not only the internet but internet quota that must be sufficient. (Asrul, 2020).

Based on the results of the analysis carried out by all students participating in the learning process with zoom meetings, this situation indicates that students are fully prepared to take part in the online learning process. Mudjiman (2011) states that independent spending which is carried out with zoom meetings is an active learning activity, which is driven by the motive to master a competency and is built with the knowledge or competencies that are already owned. In determining competence as a

learning goal and how to achieve it, both determining study time, learning resources and self-evaluation of learning.

Based on the results of the analysis carried out, the composition of the topic presented is so large that students find it difficult to understand each material. Yunitasari & Hanifah (2020) students who have an interest in a lesson will study it seriously because there is an attraction for him in participating in a lesson.

The SIPDA system is one of the difficulties that students often experience during the online learning process, during the learning process the SIPDA system is disrupted if most people access it. Plus the features contained in the SIPDA system are too many. This is in accordance with the opinion of Dini & Syahidul (2021) that online learning cannot be separated from supporting facilities such as the SIPDA system to support the learning process. Therefore, the readiness of learning support facilities must be considered by looking at the readiness of the characteristics and availability of learning facilities.

At the beginning of the lecture, the lecturer usually explains the Learning Plan for the next semester. This includes assignments that students will work on. In this course, there are several assignments given. However, not all tasks are understood by students. For example on mini research assignments and projects. Most students do not understand how to do the task. So that it makes students less than optimal in producing the expected product. The systematics of writing assignments is also poorly understood by students. However, lecturers still provide opportunities for students to improve assignments that are considered to have less good results.

Factors Causing Student Learning Difficulties During Online Learning

The factors causing for learning difficulties for biology students class of PSBD D and PSBD E 2020 in this research were obtained through a questionnaire which was distributed and filled out by each student and was analyzed. Learning difficulties factors consist of internal factors and external factors. Internal factors that cause student learning difficulties include self-readiness in participating in the online learning process, preparing learning equipment in Lower Organism Taxonomy courses, being able to understand topic in Lower Organism Taxonomy courses in accordance with the lesson plan given by the lecturer, being able to express opinions and answer questions when learning process. while in terms of external factors include: family, lecturers and facilities. This is in line with the theory expressed by Utomo, et al (2021) that based on the theory the researchers divided into two factors that hindered the teaching and learning process during the Covid- 19 pandemic, including internal factors and external factors. In this study, internal factors were health self-readiness , motivation and attitude towards learning and external factors of family, teachers, and facilities which are

the main causes of student learning difficulties.

Internal Factors

Based on internal factors, lecturers require entering class on time without tolerance to be one of the difficulties experienced by students in preparing themselves to take part in online learning process. This condition indicates that not all students have the independence to attend on time and prepare the necessary equipment for conducting online learning. Mudjiman (2011) states that independent learning is an active learning activity, which is driven by the motive to master a competency, and is built with the knowledge or competencies that have been possessed. In determining competence as learning goal and how to achieve it, both determining study time, learning resources, and evaluating learning outcomes that are carried out alone.

Understanding topic in the Lower Organism Taxonomy course is difficult for some students because of the lack of explanations given by lecturers during the online learning process. This condition indicates that the ability of students to participate in the learning process varies, some students are able to be active during the online learning process. This difference in students' abilities will affect students' cognitive abilities in receiving and understanding the subject matter. Susana (2015) also stated that cognitive processes are often used as an indicator of whether a learner has mastered learning concepts or not.

Expressing opinions and answering questions during the online learning process is difficult for some students because of the lack of encouragement or motivation for students to study Lower Organism Taxonomy course during online learning process. This is in line with the opinion of Rimbarizki (2017) that the lack of motivation to learn during online learning is caused by students who are less active in conveying their opinions and thoughts, thus causing the learning process to be boring. If students experience boredom in learning, they will get no progress in learning outcomes.

External Factors

The family factor is one of the external factors that becomes student learning difficulties in the online learning process, this is because some student parents do not facilitate them during the online learning process. This condition shows that not all parents have the funds to complete their needs during the online learning process. According to Winingsih (2020) there are four roles for parents during online learning namely, parents have a role as teachers at home, parents as facilitators, namely

parents as a means and infrastructure for their children in carrying out distance learning. however, not all parents can afford to buy quotas for the online learning process.

The lecturer factor shows that the lecturer does not use a variety of methods during online learning and only uses the lecture and question and answer method. The various methods determine whether or not the conditions are conducive to the implementation of learning activities which in turn will determine student learning outcomes. Failure will result in learning outcomes or competency achievement. According to Mc Leish in (1986), the success of a lecture depends on the expectations of students. If students like it, the lecture will be successful, but if students don't like it, the lecture will fail.

The facility factor from the results of this research shows that the facility factor is the cause of student learning difficulties during online learning, because during the SIPDA learning process there are always disturbances if most people access it. Meanwhile, the zoom application used also has time limitations. This statement indicates that the facilities used to learn fungi topic during online learning have not been maximally able to help students while carrying out learning. This is in accordance with the opinion of Dini & Syahidul (2021) that even online learning cannot be separated from the facilities that support the learning process. Every element of the school, including teachers, principals and students, experiences sudden changes that must adapt to current conditions, therefore the readiness of learning support facilities in the facilities and infrastructure used should be considered by looking at the characteristics and readiness, availability of facilities that will support the learning process.

CONCLUSIONS

Learning difficulties of PSBD D and PSBD E 2020 Biology students Universitas Negeri Medan based on DPNA relatively good score. Based on the results of the analysis conducted, there were several difficulties experienced by biology students class of PSBD D and PSBD E 2020, including difficulty understanding the topic in Lower Organism Taxonomy course with an average of 68%. Did not understand the explanation given by the lecturer with an average of 47%. Did not understand the instructions given by the lecturer during the learning process with an average of 57%. Difficulty understanding the features contained in the SIPDA system with an average of 26%. Experienced difficulties in accessing the internet network during the online learning process with an average of 60%. Experienced quota limitations during the online learning process with an average of 43%.

The Factors causing learning difficulties for biology students class of PSBD D and PSBD E 2020 include internal factors and external factors. Based on internal factors with an average of 58% classified enough difficult. While external factors with an average of 59% classified enough difficult.

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