

Analysis of Distance Learning Difficulty Factors of Paciran 1 State High School Students in Protein Synthesis Materials

Siti Hamidah^a, Tabitha Sri Hartati Wulandari^b

^a Program Pascasarjana Pendidikan Biologi, Universitas PGRI Ronggolawe, Tuban, Indonesia

^b Universitas PGRI Ronggolawe, Indonesia

* e-mail address: hamidahsiti415@gmail.com

Abstract

This study aims to describe information about student learning difficulties in Biology, especially Protein Synthesis in Distance Learning (PJJ) at SMA Negeri 1 Paciran. The type of research used is descriptive qualitative research. The research subjects were selected by purposive sampling technique as much as one student by considering their cognitive abilities above the class average but had a score on the Daily Assessment (PH) on the Protein Synthesis material less than the Minimum Completeness Criteria (KKM). The research data were collected from the subject using interview techniques and open questionnaires. Then analyzed through three stages, namely reduction, display, and verification of data and drawing conclusions. The conclusion of this study is that the difficulty of students in understanding the Protein Synthesis material during Long Distance Learning (PJJ) includes the characteristics of Protein Synthesis material which is classified as difficult material requiring high thinking power, because the material discussed can only be seen with a microshop tool. The level of health of the subject is less stable, the way the teacher is conveyed to the subject cannot be understood. In addition, the learning difficulties of research subjects are caused by the lack of internet quota which is vital in PJJ.

Keywords: Analysis of Distance Learning, Difficulty Factors, Protein Synthesis Materials

1. Introduction

The education unit with reference to the competency standards of graduates determines the minimum completeness criteria, hereinafter referred to as KKM. A student is said to have completed if he has reached the KKM. However, we often find students having difficulty completing their learning, especially in the context of distance learning (PJJ).

Suyono (2011) According to him, learning is an activity that has been carried out and experienced by humans, because humans will grow in the womb, cradle, and develop according to lifelong learning habits starting from children, adolescents to adults then into the future. grave. (Akhmadi, 2020). Learning must continue even in any situation, including during the current Covid 19 pandemic. Learning that is possible to do during a pandemic is from a distance which is commonly called PJJ (Distance Learning). Learning difficulties are a real disability in people who have average to superior intelligence but still learn less well, less satisfactorily. (Awal, R. Ermina, S & Rahmat, 2018).

In accordance with the President's direction to study at home and work at home, the Minister of Education and Culture then followed up on this direction through Circular Number 4 of 2020, which concerns the implementation of education policies on the transmission of corona virus disease in Indonesia. an emergency (Coronavirus disease 2019). According to the announcement, since mid-March last year, Indonesia has implemented distance learning (PJJ) in almost all fields of formal education. The purpose of implementing this learning model is to prevent the spread of Covid 19 in the education sector. (Sabiq & Sa, 2020).

Online learning, online or distance learning itself aims to meet educational standards using the use of information technology using personal computers or gadgets that are connected to each other between students and teachers. As a result, through the use of technology, the teaching and learning process can be carried out properly. (Pakpahan & Fitriani, 2020). Learning difficulties and misconceptions often occur at all levels of education. (Falk et al., 2014).

The online learning system is implemented through a personal computer (PC) or laptop that is connected using an internet network connection. Educators can carry out learning while at the same time using groups on public media such as WhatsApp (WA), telegram, Instagram, the implementation of Zoom or other media as learning media. (Subarkah & Salim, 2021).

The advantages of distance learning are that students can take part in learning anytime and anywhere based on their wishes and have an internet connection with good use, students can see the learning material again because the material provided by the teacher is in the form of pdf and power points that can be downloaded and opened again at any time , train students to learn independently as a result of wider knowledge, can save on transportation portos because they no longer need to go back to school, students have ample opportunity to ask questions because virtual learning time, evaluation points include student activeness and questions and answers are also flexible, some of the material in online learning is faster to understand than face-to-face. Learning difficulties if not addressed immediately will continue to interfere with students in receiving new knowledge. (Alawiyah et al., 2016). Many factors affect PJJ satisfaction including: technology, educational content, motivation and attitude. (Napitupulu, 2020).

However, PJJ does not always work as we expect. There are many obstacles faced during PJJ, one of which is the low level of effectiveness of learning. This is reflected in the student learning outcomes that are less than the KKM. The low score obtained by students indicates that students have difficulty learning. Learning difficulties refer to situations in which students are unable to learn naturally because of threats, barriers, or certain learning disabilities. Symptoms of learning difficulties appear in the cognitive, motor and emotional aspects of the learning process and outcomes. Characteristics of behavior that manifest as a symptom of learning difficulties. (Penelitian et al., 2018).

Difficulty in learning, especially in the Biology subject, protein synthesis material was experienced by one of the students of SMA Negeri 1 Paciran who felt constrained by PJJ, which might not have happened if the learning took place face-to-face. This assumption is taken by the author considering that these students are classified as students with good cognitive abilities. Through PJJ, the delivery of protein synthesis material cannot run optimally when compared to face-to-face activities that allow maximum communication intensity. The effectiveness of learning is a quality standard of education and is often measured using the achievement of goals, which are obtained

after the application of the teaching and learning process, which provides self-taught opportunities or to carry out the widest possible activities for students to learn. (Abidin et al., 2020). Children with learning disabilities can be seen from low learning achievement, effort in learning that is not proportional to the results achieved, indifferent attitude in following lessons, and other unnatural attitudes.. (Fay, 1967).

Based on interviews conducted with several students, they complained about the difficulty of distance learning, especially protein synthesis material. Therefore, the author tries to analyze the factors of distance learning difficulties for students of SMA Negeri 1 Paciran on protein synthesis material.

2. Research Method

The research conducted by the author was descriptive qualitative research with the research subjects of SMA Negeri 1 Paciran who were indicated to have learning difficulties in Biology subjects, especially protein synthesis material in distance learning (PJJ) with the initials SEA. The selection of research subjects was based on the characteristics of research subjects who overall had good learning achievement, but experienced difficulties in understanding the protein synthesis material. This is indicated by the daily score (PH) of 60 which is less than the KKM (70). Determination of research subjects by purposive sampling. The collected data were analyzed through three stages, namely reduction, display, and data verification.

Data collection through interview and questionnaire techniques. This research was conducted to analyze students' difficulties in learning the main subject matter of Protein Synthesis. Research is usually not aimed at testing hypotheses, but looking for information that can be used for decision making. (Rulia, 2019).

3. Research Result and Discussuion

Biology is one of the compulsory subjects for high school students with special interest in Mathematics and Natural Sciences, but it is a cross-interest subject for students with a specialization in Social Sciences. Even though it is cross-interest, Biology is mandatory for IPS students. In general, Biology material is not as difficult as exact subjects that need further explanation. However, some students have difficulty learning, especially Protein Synthesis material. According to the research subject, synthetic material is considered difficult because it explains the series of processes that take place in the cell (cell nucleus) which is very small (invisible to the eye) and implements a series of Latin terms that are still foreign.

Table 1. Results of interviews with research subjects

No	Following are the results of the author's interviews with research subjects (SEA):	Answer (research subjects)
01	Why is Protein Synthesis material considered difficult?	Because the material is about processes that are in very small cells and uses terms that are still foreign and difficult to understand.
02	Which parts of the Protein Synthesis material	The most difficult part of Protein Synthesis

	are considered the most difficult?	is about reading the code composed of symbols that will later become proteins.
03	How are the preparations made in studying protein synthesis material?	The preparations that I did include reading books or books at night so that tomorrow I will be ready to study online.
04	How is the delivery of protein synthesis material by the teacher?	The way to explain the teacher is different from the one in the term book. I was confused myself. But maybe it means the same thing.
05	How is the availability of infrastructure related to protein synthesis material?	I honestly don't have any packages, ma'am, so sometimes I can't follow the lessons. Meanwhile, the aid package from the government only got two times. Maybe if I was given a lot more I would be excited about going back to school.
06	How is the learning atmosphere related to the delivery of protein synthesis material?	I study online from home. At home the atmosphere is normal but sometimes I get sleepy. Usually, after filling in, the list of attendees continues to be distracted and sleepy.
07	How is the student's health condition related to the delivery of protein synthesis material?	I rarely get sick, usually just because I don't get enough sleep, so I'm tired and a little unwell. Sometimes also because of flu or fever.
08	How to access protein synthesis material during distance learning?	Usually, besides getting lessons from the teacher, if I have an assignment, I will search on Google or another internet, because it's easier and faster.

Following are the results of the author's interviews with research subjects (SEA):

01. Why is Protein Synthesis material considered difficult?

W (SEA). Because the material is about processes that are in very small cells and uses terms that are still foreign and difficult to understand.

In the protein synthesis material, the part that is considered difficult by the research subjects is the translation stage of codons carried by the ambassador's RNA into a series of amino acids (proteins).

The following are the results of the author's interviews with research subjects:

02. Which parts of the Protein Synthesis material are considered the most difficult?

W (SEA). The most difficult part of Protein Synthesis is about reading the code composed of symbols that will later become proteins.

The preparation made by research subjects before starting to study the

subject matter is simple by skimming the textbooks that will be studied in the evening.

The following are the results of the author's interviews with research subjects:

03. How are the preparations made in studying protein synthesis material?

W (SEA). The preparations that I did include reading books or books at night so that tomorrow I will be ready to study online.

The delivery of material by the teacher was considered different by the research subjects to those in the textbook so that the research subjects became a little confused in understanding the Protein Synthesis material.

The following are the results of the author's interviews with research subjects:

04. How is the delivery of protein synthesis material by the teacher?

W (SEA). The way to explain the teacher is different from the one in the term book. I was confused myself. But maybe it means the same thing.

The main obstacle in distance learning (PJJ) is the inadequate quota of the internet or even less for the implementation of ideal learning. Learning subjects often cannot even participate in Teaching and Learning Activities (KBM) remotely with the teacher (teacher).

The following are the results of the author's interviews with research subjects:

0.5 How is the availability of infrastructure related to protein synthesis material?

W (SEA). I honestly don't have any packages, ma'am, so sometimes I can't follow the lessons. Meanwhile, the aid package from the government only got two times. Maybe if I was given a lot more I would be excited about going back to school.

The learning atmosphere that was built in the research subject's house for the occurrence of PJJ was actually quite supportive, but sometimes the research subjects became less focused (sleepy) so they could not fully participate in the learning as a whole.

The following are the results of the author's interviews with research subjects:

0.6 How is the learning atmosphere related to the delivery of protein synthesis material?

W (SEA). I study online from home. At home the atmosphere is normal but sometimes I get sleepy. Usually, after filling in, the list of attendees continues to be distracted and sleepy.

Overall, the health level of the research subjects was quite good, they rarely got sick. But sometimes I like to complain about being tired and not fit because of lack of sleep or rest. Likewise, when the Protein Synthesis material was delivered, the research subject was not in a fit condition so that it had an effect on understanding the learning material.

The following are the results of the author's interviews with research subjects:

0.7 How is the student's health condition related to the delivery of protein synthesis material?

W (SEA). I rarely get sick, usually just because I don't get enough sleep, so I'm tired and a little unwell. Sometimes also because of flu or fever.

To access subject matter in order to increase knowledge other than those obtained from teachers (schools) it is also necessary to add access to the internet. With additional information from the internet, it will complement the knowledge that will be obtained.

The following are the results of the author's interviews with research subjects:

0.8 How to access protein synthesis material during distance learning?

W (SEA). Usually, besides getting lessons from the teacher, if I have an assignment, I will search on Google or another internet, because it's easier and faster.

Referring to the results of the study, that the difficulties experienced by research subjects related to the Protein Synthesis material in Distance Learning (PJJ) were caused by several factors including the characteristics of the material itself. Biology is a natural science subject that is relatively difficult for students to understand. Because biology is very complicated, because it explains abstract concepts and theories for students. (Akbar S & Husna, 2017). Protein Synthesis is a material that requires a further level of understanding that does not just rely on rote memorization. Protein synthesis involves a series of biological processes that take place in cells, precisely in the cell nucleus (nucleus). As we know that the cell is the smallest unit that makes up the body of a living thing which is microscopic (it can only be observed with the aid of a microscope), while the cell nucleus is one part of the cell, which is of course even smaller if we perceive it.

In addition to the above, the learning difficulties experienced by research subjects in studying Protein Synthesis material were also due to the lack of preparation made before the learning process took place. It has become a bad habit for most of their students to not even prepare themselves by providing preliminary knowledge before the Teaching and Learning Activities (KBM) take place. Learning difficulties will be minimized by careful preparation before the teaching and learning activities take place.

Factors causing difficulties in learning Protein Synthesis material are exacerbated by the lack of internet access during PJJ. Insufficient internet quota that students must have is a cause of serious learning difficulties. It was also stated that distance learning cannot be separated from the online world.(Sabiq & Sa, 2020). Complete online home learning is a new teaching method that uses electronic devices (specifically the Internet) to study.(Simanjuntak, 2020).

The teacher's role also determines the level of difficulty of students in understanding the concept of Protein Synthesis. Delivering material by the teacher properly will increase students' understanding of the learning that is being carried out. Although currently internet access dominates in information seeking, the role of teachers as a learning resource is still very decisive. When students access information from the internet with a variety of information presented, the teacher's role is to provide direction on which information is most appropriate among a series of existing information.

The overall health level of the research subjects was quite good, rarely getting sick. But sometimes I like to complain about being tired and not fit because of lack of sleep or rest. It is possible that at the time of the learning process, the Protein Synthesis material, the research subject was in a condition that was not fit, so that it affected the acceptance of information or subject matter. The impact of these health conditions, resulting in difficulty in digesting Protein Synthesis material.

4. Conclusion

The learning difficulties experienced by the research subjects were caused by several factors, including because the characteristics of the material concerned were classified as not easy to understand. In addition, the learning difficulties of research subjects are caused by the lack of internet quota which is vital in PJJ, unstable health level, less than optimal delivery of subject matter by teachers, and minimal preparation before learning

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