



## Diagnosis of Student's Learning Difficulties in Online Learning in the New Normal Era Review of Student's Mathematic Understanding Ability

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### **ABSTRACT**

*The purpose of the study is to describe the implementation of online learning in the new normal era, as well as to solve problems and determine the most appropriate solution to the problems or difficulties faced by students in understanding mathematics courses in particular, for future provisions in managing life and preparing themselves as prospective educators. . This type of research is a case study research and the research method used in this research is a descriptive exploratory qualitative data method, namely digging up complete data from students who are used as research objects in accordance with this case study. Data collection techniques used in this study were interviews, observations, and questionnaires. The results of the research in the form of a diagnosis of learning difficulties which include data analysis from education and online learning can be used with consideration of paying attention to the condition of students, so that they will get used to adjusting to the online system, learning can be carried out properly.*

**Keywords:** *Online Learning in the New Normal Era; Students' Mathematical Understanding.*

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### **INTRODUCTION**

The current Covid-19 virus pandemic is increasingly spreading to various regions, especially in Indonesia, this has both negative and positive impacts. As a result, the learning process is hampered, face-to-face learning has now become online learning. Indonesia is currently entering a new normal or new life in which the government gives directions for people to wear masks, wash their hands frequently, keep their distance, and so on. The implementation of the New Normal has an impact on the world of education where students are currently studying at home with the implementation of online and face-to-face learning on a regular basis. The online obstacle in the New Normal Era is that there are many areas that have poor or not smooth internet access. Student understanding is also an obstacle in the online learning process because the learning obtained is not optimal. Both from the subject matter and assignments given by educators during the Covid-19 pandemic. The term new normal has recently become a very popular word in the ears of the Indonesian people. The term new normal has many terms that have many meanings, including new normal according to Joko Widodo, the President of the Republic of Indonesia interprets new normal "new life order", then according to William Bridge as an expert on change, new normal is defined as "a new beginning era", another opinion is Anies Rasyid Baswedan, Governor of DKI Jakarta who stated that the new normal is "a transition to welcome a new normal". The term new normal must be equally realized that it is not only limited to the definition of semantics or language, or is also a new thing. Because the concept of new normal has been written by Vickie Taylor (2002) in an article entitled The New Normal: How FDNY Firefighters are Rising to The Challenger of Life After September 11. So, the meaning of new normal is not only limited to a productive and free life from the corona virus, but has a broader meaning. The broader meaning can be seen from the era of the new normal in the field of education and learning. Whatever the conditions, education must continue to run well, this is because it is not only related to the future of the nation's generation but also for mankind. Have we thank the fighters and founders of this country who have made education a noble ideal of this country? (Hasbullah, 2010) Responding to the problems of online learning in the new normal era, researchers must have various solutions to respond to them. One solution to the problem solving above is

to help students compile case studies . In this case study, the researcher tries to discuss the problems faced by several students of the Mathematics Study Program, KH University. A. Wahab Hasbullah who has difficulty in learning Mathematics Descriptive Statistics and students' mathematical understanding. In this case the researchers tried their best to provide the best solution. (Verdianingsih, 2019) Case studies are an effort that can be used to find solutions for problematic students. So researchers are interested in conducting research on "Diagnosing Students' Learning Difficulties in Online Learning in the New Normal Era in terms of Students' Mathematical Understanding Ability". The objectives of this research are: "to identify learning difficulties of online learning students in the Mathematics Education study program of KH. A. Wahab Hasbullah in terms of students' mathematical understanding abilities

## **METHOD**

The research method used in this research is descriptive exploratory qualitative data, which is to dig up complete data from students who are used as research objects according to the problems used in this case study. This qualitative data is compiled in detail by taking information on individual backgrounds and family conditions. The qualitative approach is the data obtained such as the results of observations, results of interviews, photo shoots, document analysis, field notes, compiled researchers at the research location, not stated in the form of numbers. Researcher perform data analysis by enriching information, looking for relationships, compare, find the archetype of the original data (not converted into numeric form) (Syahwani, 2015).

In this case the researchers used several methods in collecting data, among others, through interviews addressed to students directly regarding the difficulties experienced and providing assistance in overcoming problems. Besides that, the researcher also asked the study program to get more accurate data, in addition to using interviews, the researchers also made observations by observing the behavior that emerged from the students themselves. and provide a questionnaire on questions covering environmental conditions, friends and family which are used to obtain information from students about their personalities

## **RESULT AND DISCUSSION**

### **Result**

This research is about diagnosing student learning difficulties in online learning in the new normal era in terms of students' mathematical understanding. This study aims to describe the types of descriptive statistical mathematics students' learning difficulties and find out how to overcome these difficulties. By using the results of student observations during the learning process as well as the results of the interest in learning questionnaires and the results of interviews with learning difficulties in the descriptive statistics course. The research was carried out on the KH campus. A. Wahab Hasbullah even semester of the 2020/2021 school year. The subjects of this study were second semester students of mathematics education. The research subject was taken based on certain considerations where the second semester students especially on statistical material. Meanwhile, in previous years, many students failed in achieving their learning objectives in the Statistics course, so the author only examined descriptive statistics courses.

The subjects used in this study are descriptive statistics studied by second semester or even semester students in the department of mathematics education with a total of 22 students in building A. The study is conducted on the second Monday (09:00 – 10:00). 30 WIB) where the lecturer who teaches this descriptive statistics course is Khusnul Khotimah, M.Pd. This lecture is held once in each class in one week with a weight of 3 credits. For this descriptive statistics course , 5 meetings are held before the Mid-Semester Examination (UTS), in this condition students are required to be able to master the material that has been delivered by the lecturer

### **Discussion**

Describes the difficulties experienced by students in online learning techniques, namely the infrastructure used by students and the ability of students to operate online-based learning applications. The difficulties for students in online learning on average are about technology, network signals, and students' ability to operate online learning applications. From the questionnaires obtained, they already have good and very good categories. However, from the questionnaires distributed to respondents, there are still many who experience difficulties in online learning, namely signal technical problems and inability to learn statistics through online learning. Based on these results, of course, it results in the low

progress of learning statistics achieved by students because learning with online concepts is not easy when compared to face-to-face learning systems. Students find it difficult to use online learning applications because the use of internet quotas is increasing and some students are located in areas with poor signal making students have to move locations. The availability of internet services, some students who live in urban areas allow the availability of an internet network that supports online learning, students who live in rural areas or in remote areas are most likely not to get a signal even if there is a signal, the signal obtained is very weak.

As for the solution to overcome the difficulties of learning mathematics online according to the results of the difficulties students face, for that the application of online learning of statistical material that is interesting and fun for students is still very much needed in various ways in developing learning innovations in the form of bloggers and YouTube learning mathematics, especially on statistics material and the fulfillment of infrastructure. In education, the campus also prepares a week-long learning schedule or lesson plan containing the subjects and media used when delivering the material. According to (Dewi, 2020) stating to make a lesson plan, the campus provides a schedule for students in the distribution of schedules using zoom and structured assignments. in WAG, to reduce the consumption of online data quota.

In simple terms, it can be said that all subjects can be done in an easy way through the use of internet technology, and innovations related to the use of application-based learning media, the activity is called online. According to (Sadikin & Hamidah, 2020) online learning is learning that uses the internet network with accessibility, connectivity, flexibility, and the ability to bring up various types of learning interactions.

## CONCLUSION

Based on the results of research and data analysis conducted, it can be concluded as follows:

Online learning for second semester mathematics education students uses media that make it easier for students to participate in learning, students can participate in learning statistics through online learning but with several obstacles, namely related to internet networks, students who are less focused, students are not able to study independently on statistical material, namely population, mean, mode, presentation of single or group data and so on. Lecturers as much as possible not to burden students so that learning objectives are achieved and the material is delivered. The difficulties experienced by second semester mathematics education students are signal technical problems and inability to learn online in the form of an unstable network, students are less focused when the lecturer explains or presenter friends, students are not ready in terms of learning the material. This is indicated by the results of the analysis of research questionnaires on students' difficulties in online learning of statistical material for mathematics subjects distributed through WAG, which were found to be stable because the questionnaire used was a positive questionnaire, so the results were slightly used as the cause of difficulties in online learning.

The difficulties experienced by second semester mathematics education students can be slightly reduced if this learning is carried out face-to-face or explained in detail without being long-winded. The results of this study need to be submitted several suggestions for consideration, including the difficulties experienced when online learning is a little helped if the campus communicates well with parents or classmates about any policies implemented from campus when learning online so that parents or classmates can also be called close friends (friends) at home or elsewhere domiciles such as Islamic boarding schools can control their sons/ daughter or friends in assignments given by lecturers and the second is Make lesson plans that are useful for regulating the use of quotas used by students, then lecturers can innovate in online-based teaching, students also learn from YouTube or with friends who are able to use the material, or students always interview the material that has been taught.

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