Research Article

Quality of Learning during the Pandemic based on cognitive and affective aspects in Indonesia

Muhammad Aulia Ramadhana *, Kiki Nofita Hani, Desy Andri Tri Palupi, Bagas Pradypta

Department of Geography Education, University of Jember. Jl. Kalimantan 37 Jember, 68121, Indonesia

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*Corresponding author:

E-mail:

auiamuhamad697@gmail.com

ABSTRACT

The purpose of this study is to (1) analyze the quality of learning during the pandemic, and (2) to analyze learning constraints during the pandemic. This research uses qualitative descriptive research methods. The use of qualitative descriptive methods in the study aimed to describe phenomena that focused on interrelationships between activities. The sampling technique is done by purposive sampling, which is based on provinces that have high cases of covid 19 in Indonesia. The quality of learning decreases because students do not have learning motivation. Many of the obstacles experienced during learning related to school unpreparedness relate to aspects of learning evaluation and affective. The quality of learning during the pandemic is largely determined by the optimization of information technology.

Keywords: Quality of learning, Pandemic period, Indonesia

Introduction

Jones [1] suggests that in the teaching and learning process can optimize online-based resources. In his research mentioned that online resources should be developed for the needs of students, teachers, and educational personnel. In addition, this research provides important knowledge that online resources are not only sites for accessing learning content, but also to communicate effectively and efficiently with friends, teachers, and educational staff. This can be taken into consideration in the development of online learning.

Jayawardena et al. [2] stated that based on thematic analysis, teachers identify five main

factors that they believe affect students' learning, among others: (1) family-related factors; (2) factors relating to students; (3) school-related factors; (4) factors related to mass media and technology; and (5) institutionally related factors. Technology factors have a good influence when combined with other factors. Pandemic covid 19 causes school unpreparedness in education management and sustainability of learning quality [3]. Vocational education is better to use hybrid learning to meet its learning standards [4]. The demographic characteristics of students influence the difference in stress levels in each student [5]. Big data and artificial intelligence should be developed to

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improve the quality of learning during the pandemic [6].

Information technology plays an important role in optimizing learning during the covid 19 pandemic [7, 8, 9, 10]. However, not all teachers master information technology, so online learning is not optimal. Therefore, it is necessary to develop a learning model that refers to the weaknesses of learning during the pandemic. The risk of mental health disorders in students increases during the pandemic period [11, 12]. The purpose of this study is to (1) analyze the quality of learning during the pandemic, and (2) to analyze learning constraints during the pandemic.

Methods

This research uses qualitative descriptive research methods. The use of qualitative descriptive methods in the study aims to describe phenomena that focus on interrelationships between activities. Therefore, in this study there is no population, because this study originated from a social situation that focuses on the characteristics and quality of a phenomenon. The data collection technique is (1) Observation, which is done with clear and conscious observations about students' behavior during distance learning during the pandemic. Observations also determine the accuracy of behavior performed by each informant. (2) Interview In this study, researchers asked and recorded all answers from informants as they are. The interviewer also asked for clarification regarding the answer if there are doubts about the answer submitted by the informant. The data is declared valid if there is no difference between the results of the study and what actually happened to the research object. There are two instruments developed to look at the effectiveness of student learning and behavior during distance learning. Effectiveness in this context emphasizes the learning process, while student behavior emphasizes on the responses students provide during learning.

Miles and Huberman [13] stated that the data analysis conducted in this study began during the research and ended when all data was collected (March to October 2020). The interview process is conducted several stages,

until the answers submitted by the informant have been considered credible and the collected data is saturated. In detail, the steps taken in data analysis according to Matthew B. Miles and A. Michael Huberman [13], are as follows: (1) Data Reduction as a process of selecting, simplification, literary, and rough data transformation that arises from field records, so that the data gives a clearer picture of the results of observations and interviews of students and teachers during the distance learning process; (2) Data Display, which is to compile some information to draw a conclusion. In this qualitative study, the presentation of data was conducted in the form of a brief description of the effectiveness and behavior of students in the distance learning process. (3) Conclusion Drawing or Verification, the researcher makes conclusions based on data that has been processed through reduction and display data. The withdrawal of such conclusions will be temporary in the event of changes in information and differences in information provided by some responden, but if from start to finish all the data provided has been consistent, then the withdrawal of conclusions can already be considered credible.

The sampling technique is done by purposive sampling, which is based on provinces that have high cases of covid 19 in Indonesia. The province includes East Java and West Java. This research was conducted in October 2020. Respondents to the study numbered 10 students who had undergone online learning during the pandemic. Instrument development is carried out through validation of content by experts. Indicators used in instrument development consist of: (1) student motivation, (2) learning media, (3) learning methods, (4) learning barriers. Data analysis techniques used are descriptive techniques.

Results and Discussion

The majority of teachers use the assignment method in delivering learning materials as seen in table 1. This causes students' learning motivation to be low. The overuse of assignment methods has saturated students. It also deals with the karaketeristic of different materials, so it requires different methods.

Table 1. Method, media, and students' motivation

Respondents	Learning Method	Learning Media	Students' Motivation
1	assignment method	Google Classroom	low
2	assignment method	Google Classroom	low
3	assignment method	Google Classroom	low
4	assignment method	WhatsApp	low
5	Lecture method	WhatsApp	high
6	assignment method	Google Classroom	low
7	assignment method	Google Classroom	low
8	assignment method	WhatsApp	low
9	assignment method	Google Classroom	low
10	assignment method	WhatsApp	low

The main obstacles to learning during the pandemic are in the evaluation aspect of learning and affective aspects. In Table 2, the majority of respondents stated that measuring the results of learning becomes very difficult because it relates to the validity of the test results. Test

results may be invalid because teachers cannot supervise students while taking tests. The cognitive aspect basically requires special evaluation techniques that can not be done during the pandemic.

Table 2. Pandemic learning constraints

Respondents	Implementation of Learning	Learning Evaluation	Affective Aspects
1	Concrete concepts are difficult to convey	Difficulty measuring learning outcomes	Student attitudes Difficult to identify
2	Students have difficulty responding	Difficulty measuring learning outcomes	Student attitudes Difficult to identify
3	Concrete concepts are difficult to convey	Difficulty measuring learning outcomes	Student attitudes Difficult to identify
4	Concrete concepts are difficult to convey	Difficulty measuring learning outcomes	Student attitudes Difficult to identify
5	Concrete concepts are difficult to convey	Variations of difficult questions to apply	Student attitudes Difficult to identify
6	Students have difficulty responding	Difficulty measuring learning outcomes	Student attitudes Difficult to identify
7	Students have difficulty responding	Difficulty measuring learning outcomes	Student attitudes Difficult to identify
8	Students have difficulty responding	Difficulty measuring learning outcomes	Student attitudes Difficult to identify
9	Concrete concepts are difficult to convey	Difficulty measuring learning outcomes	Student attitudes Difficult to identify
10	Students have difficulty responding	Difficulty measuring learning outcomes	Student attitudes Difficult to identify

The negative impact that comes from online learning systems is the ineffectiveness of learning obtained by students. In addition, the limitations of technological capabilities make it difficult for students to access learning. From the results of an interview to one of the private vocational school students the online learning process in his school is less effective due to the limited facilities that support the online learning process. The school does not provide full learning facilities such as zoom, google meet, edmodo, etc. In fact, according to the results of Ardiwinata research [14], learning media becomes the most important aspect of learning, especially when pandemic conditions. There are only a few teachers who take the initiative to facilitate their students so that teaching and learning activities are still carried out even though they are less effective. The lack of full learning facilities enables students to only receive materials and assignments through the WhatsApp app. To know the presence of students sometimes teachers give assignments that must be collected that day. In addition, in vocational schools there are also practicum that must be implemented, as a result of which students conduct independent practicum activities at home with basic equipment. This confuses students with their practicum. These barriers are in line with the results of the study [7, 8, 9, 10], which states that information technology plays an important role for the optimization of learning during the covid 19 pandemic, so that learning will not run optimally without information technology.

At the time of this pandemic the learning and teaching process was very less effective, as online learning was only done several times a week. Teachers are only actively assigning assignments when approaching UTS or midterm exams and Final Semester Exams. In fact, only a few teachers who actively use online learning applications Online learning is currently not effective because many students are unemployed and just playing. Teachers who are homeroom teachers are less supervised and even less embracing their students to learn effectively during this pandemic. Schools that have been fairly favorite in Jember can not make learning and teaching online in this pandemic time a good journey, they look overwhelmed to undergo

this online prison. This impact must also be felt by suburban schools even they could be more severe. So learning planning becomes very important to be associated with pandemic conditions. This is in accordance with the results of research conducted by Jufri et al. [15] which states that the ability of teachers in designing learning instruments is very important, and that can not be found during the pandemic.

Conclusion

The quality of learning during the pandemic is very low mainly due to the difficulty of measuring student learning outcomes (cognitive) effectively and validly. The ability of teachers to identify students' attitudes (affective) is also limited given the unpreparedness of the students in providing Information technology. In fact, learning during the pandemic relies heavily on optimizing information technology.

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