



## Mathematics Learning Outcomes of Students at Alabidin Bilingual Boarding School Surakarta on Online Learning during the Covid-19 Pandemic

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### **Abstract**

Learning outcomes in mathematics have become important in the Covid-19 pandemic. The purpose of this study was to see the mathematics learning outcomes of students at Alabidin Bilingual Boarding School (ABBS) Surakarta in online learning during the Covid-19 pandemic. The method used in this research is descriptive qualitative to determine the extent of students' mathematics learning outcomes. The population in this study was all students at ABBS High School Surakarta, with the sample being all students of grade 10th ABBS High School Surakarta. The results obtained from the lowest and lowest scores were grouped according to the criteria for school criteria, namely the minimum completeness criteria (MCC) to see the learning outcomes of 10th-grade students at ABBS High School Surakarta. The Minimum Completeness Criteria (MCC) is  $\geq 75$ . The acquisition of student learning outcomes in this study is measured by an indicator, namely the final exam score for semester 1 of 2020 in class X at ABBS High School Surakarta. In terms of proportion, there are 30.6% of students who reach MCC, the learning outcomes of students at ABBS High School Surakarta in brave learning during the Covid-19 pandemic are classified as a low category.

**Keywords:** *Mathematics Learning Outcomes; Online Learning; Covid-19 Pandemic*

### **Introduction**

At the end of 2019, the world is on alert for a virus called coronavirus disease (Covid-19). Covid-19 is caused by a new type of coronavirus. This virus is a new type of virus, this disease was only known to have plagued Wuhan, China in December 2019. Covid-19 is a contagious disease. Covid-19 can be transmitted easily through coughs or breaths released by sufferers of Covid-19. The splash of cough and breath by a Covid-19 sufferer who falls on the surface of an object will be able to transmit the disease through the object. If someone touches an object and then touches his nose, eyes, or mouth, he can get Covid-19. Therefore, the world health organization, namely the World Health Organization (WHO), urges to maintain a distance of more than 1 meter from other people to minimize the transmission of covid-19.

Covid-19 has become a pandemic, so governments in various countries have implemented "lockdowns" or quarantines. The Indonesian government has appealed to stay indoors and self-isolate. The Indonesian government applies the large-scale social restrictions made in the context of handling

covid-19. In the effort of social distancing, the Indonesian government has also restricted activities outside the home such as educational activities.

Education Law Number 20 of 2003 concerning the national education system which functions to develop the ability to form a dignified national character and civilization to educate the nation's life aims to develop the potential of students to become human beings who have faith and devotion to God Almighty with noble character, healthy, knowledgeable, competent, creative, independent and become citizens who are democratic and sensitive to the challenges of the times. Based on the above Law, it can be seen that national education is carried out with careful and focused planning.

This pandemic condition was not imagined by all components of society, so this pandemic changed all aspects of life including the concept of learning in schools. On March 15, 2020, the Surakarta city education office stated that teaching and learning activities can no longer be done face-to-face in class but must be done at home online. Most schools have not yet fully prepared for online learning. The infrastructure used does not support online learning.

Syah (2013: 63) "learning is an activity that is in process and is a very fundamental element in the implementation of every type and level of education". This means, that the success or failure of achieving educational goals is very dependent on the learning process experienced by students both at school and in their own home or family environment. According to Djamarah (2008: 13) "learning is a series of mental and physical activities to obtain a change in behavior as a result of individual experiences in interacting with their environment concerning cognitive, affective and psychomotor."

The author's experience when carrying out online learning mathematics lessons at ABBS High School Surakarta during a pandemic, online learning is carried out by utilizing technology, especially the internet. Online learning is carried out with a distance learning system, where Teaching and Learning Activities are not carried out face-to-face, learning is carried out online using the google meet application where teachers and students meet in the application virtually then the teacher explains the material using PowerPoint with the direct learning method. The infrastructure used, such as teaching materials, does not support online learning because the teaching materials used are in the form of printed books that are set up for face-to-face learning in class, not for online learning.

The constraint in learning that is carried out online is that there are students who are in areas with not good enough networks so that there are often students who disconnect the network and cause these students to leave the application, as well as the large number of costs incurred in the form of internet quotas to use learning applications online these. Another obstacle is the interest of students in participating in learning. Not a few students experience difficulties and are less active in conveying their aspirations and thoughts, thus making learning look more saturating.

Student interest in participating in learning is quite an important thing that affects a person in increasing his achievement. With an interest in learning, students will do something to improve their learning achievement. Therefore, it is necessary to encourage students to be enthusiastic about learning so that they can have good learning outcomes. Teacher understanding and creativity are needed in packaging online learning to attract students' attention and interest in following the online learning stages.

Based on this description, the purpose of this study was to determine how much mathematics learning outcomes of students at ABBS High School Surakarta in online learning during the Covid-19 pandemic.

## Methodology

This research uses descriptive correlational research which aims to describe and determine the results of students' mathematics learning in online learning during the Covid-19 pandemic. This research consisted of two variables, one independent variable, and one dependent variable. The independent variable is the Covid-19 pandemic, and the dependent variable is mathematics learning outcomes. The population in this research were all students at ABBS High School Surakarta, as many as 852 students. The sample in this research were all grade 10 students at ABBS High School Surakarta, as many as 284 students. The learning outcome data is obtained from the results of the final exam in semester 1 of 2020 in the mathematics specialization subject. The collected data will be analyzed using the percentage technique.

## Result and Discussion

The acquisition of student learning outcomes in this study is measured by an indicator, namely the final exam score for semester 1 of 2020 in class X at ABBS High School Surakarta. From these values, the scores are grouped according to the assessment criteria in schools, which are based on the value of the Minimum Completeness Criteria (MCC) to determine student learning outcomes in class X ABBS High School Surakarta. The Minimum Completeness Criteria (MCC) is  $\geq 75$ , then the values can be divided into several categories as in the table.

Score	Predicate
$< 75$	Poor
$75 \leq n < 80$	Fair
$80 \leq n < 88$	Good
$88 \leq n \leq 100$	Very good

Data about the learning outcomes obtained by students in grade 10th ABBS High School Surakarta in the odd semester of the 2020-2021 school year, were obtained from the final semester examination scores of 284 students. As a percentage, there are 30.6% of students whose scores reach MCC with  $MCC \geq 75$  and 69.4% of students whose scores are below the MCC, which then the scores are divided into several categories by acquisition as in the following table.

Score	Predicate	Amount	Percentage
$< 75$	Poor	197	69,4%
$75 \leq n < 80$	Fair	18	6,3%
$80 \leq n < 88$	Good	45	15,8%
$88 \leq n \leq 100$	Very good	24	8,5%
Amount		284	100%

Based on the results of the descriptive statistical data processing above, it was found that as many as 69.4% of students had low grades, therefore it can be said that the mathematics learning outcomes of students in online learning during the Covid-19 pandemic were in a poor category.

The results showed that the learning outcomes of 10th-grade students at ABBS High School Surakarta when online learning was carried out were only 30.6% of students whose scores reached the minimum completeness standard (MCC) with  $MCC \geq 75$ . This result was much lower than the results of

previous mathematics tests when The learning process is carried out face-to-face in class, namely 52.8% of students whose scores reach MCC. The main psychological factors affecting the learning process and outcomes are intelligence, talents, motivation, and cognitive abilities (Djamarah, 2008: 191). These factors are crucial for improving the quality and learning outcomes of students' mathematics.

During the Covid-19 pandemic, teachers must have the creativity to be able to arouse students' enthusiasm for learning. Motivating students in learning is important to do by teachers, especially in this pandemic, where learning is not ready face-to-face but is already online so that students can achieve learning outcomes as expected. In addition to arousing student enthusiasm for learning, teachers must also be creative in the learning process. The learning process during this pandemic was carried out in a good way by teachers starting from planning, implementing to a final evaluation of learning to ensure student learning can be maintained or improved.

Making students enthusiastic about participating in learning requires certain techniques or methods. Teacher understanding and creativity are needed in packaging online learning to attract students' attention and motivation in following the online learning stages.

### ***Results and Discussion***

Based on the results of the research obtained, it can be concluded that the learning outcomes of students at ABBS High School Surakarta in online learning during the Covid-19 pandemic were categorized as "poor" and decreased from previous learning outcomes where learning was still carried out face-to-face. There are still many students and teachers who are not ready to face online learning. Teacher understanding and creativity are need in packaging online learning to attract students' attention and motivation in following the online learning stages. Parents are also expected to play a role in online learning by monitoring learning progress and student learning processes at home. Students also have to be able to adjust to these conditions properly and wisely in learning so that learning achievement can be continuously improved or maintained.

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