THE USE OF THE GOOGLE CLASSROOM APPLICATION TO IMPROVE BIOLOGY LEARNING OUTCOMES

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A R T I C L E   I N F O

Abstract. The classroom action research conducted at SMA Negeri 1 Kuta Class XI IPA 1 Semester II aimed to improve learning outcomes in Biology subject using the Google Classroom application. The data from this research were collected by administering Biology learning outcomes tests. In analysing the data obtained, descriptive analysis methods were used. The data generated from this research consisted of initial data, cycle I data, and cycle II data. From the initial data, it was found that the class average only reached a score of 76.72 and the learning completeness only reached 69.44%. This data was far below expectations considering that the standard score of Biology at this school was 70. In cycle I, there was an increase and the percentage of learning completeness reached 83.33%. In cycle II, the average class achievement reached 93.3 and the percentage of learning completion reached 100%. The data in cycle II was in line with expectations due to the use of the constructivist Google Classroom application. The conclusion obtained was that the use of the google classroom application could improve Biology learning outcomes for Class XI IPA 1 semester II academic year 2020/2021 at SMA Negeri 1 Kuta.

INTRODUCTION

Learning has a very important role in any educational endeavor. According to Nopriadi (2016), education no longer functions solely as a means of socialisation but must be able to foster the potential of students who will be able to act as modifiers in society. One of the factors that influences the success and failure of education is determined by the cognitive abilities of students. Learning should be student-oriented, by which means students learn interactively and have the opportunity to communicate and argue (Mirayani et al., 2021). Therefore, an effective way is needed to bridge the thinking stages of students who are still in the concrete operational stage (Purnadewi et al., 2023). Learning activities are expected to be able to make students develop their reasoning power so that they are able to think critically, logically, as well as systematically, and in the end students are expected to be able to achieve satisfactory learning outcomes (Astawayasa et. al, 2022).

According to Widana et al. (2023), the development of science and technology is one of the products of educated humans, and in turn these humans need to learn more and be able to benefit and not become victims of the development of science and technology themselves. Educational outcomes really depend on the behaviour of educators in applying the technology and students in accepting it. Currently, many schools use information and

communication technology in learning. So that in exploring information, students are given freedom, flexibility, and convenience online. In this way, teachers and students have a strategic position in improving the quality of learning (Sumandya et. al, 2022).

The Covid-19 pandemic has had a major impact on all areas of activity in Indonesia, one of which is education. Education is required to prepare students who are creative, intelligent, and independent. However, the Covid-19 pandemic has presented challenges to the education sector in realising educational goals. The Covid-19 pandemic is a new challenge and problem for the world of education. Therefore, the Ministry of Education and Culture has carried out various adaptations of the learning process in avoiding the transmission of Covid-19 which is emphasised in Notification No. 4 of 2020 concerning Implementation of Education Policies for the Spread of COVID-19 in Emergency Situations. In the notification, it was explained that the learning process is providing information to students from the online learning process at home which is directed at life skills education.

In accordance with the instructions of the Minister of Education and Culture of the Republic of Indonesia Circular No. 4 of 2020 concerning the implementation of education policies during the emergency period of the spread of Covid-19 which was issued on 2 March 24 2020. As currently implemented, learning is carried out online or from home for all students to university students due to social restrictions as an effort to overcome Or at least reduce the number of corona virus spread. It often results in the learning process that was initially face-to-face to online learning (Restu Trinadi Asih et. al, 2022).

Online learning is a solution so that the learning process can still be carried out even in the Covid-19 pandemic. Online learning is not only implemented using an internet network connection, but also utilising learning media. The media is an instrument used by teachers to help convey material to students in a simple and easy to understand manner so that learning objectives can be achieved and make learning effective and efficient and improve student learning outcomes (Dina, 2020).

Google classroom can make it easier for educators to create online learning classes and share material and assignments as well as to monitor student attendance with its presence feature. Through class groups on Google Classroom, educators and students can read any materials and send assignments remotely and flexibly which can be accessed anytime and anywhere when connected to the internet. Padli & Rusdi (2020) state that students like online learning, however, there are some students who experience problems with internet facilities and the costs required which can affect student learning outcomes. Thus, it really needs online physics learning media channels that can help students understand the material provided during online learning.

The use of Google Classroom in online learning requires students to study independently. This is due to the interaction that occurs is an indirect interaction or must go through an intermediary chat application. Therefore, it is necessary for students to have independent learning so that students do not always depend on other people and are able to find solutions to the problems they face (Devi et al., 2022). Students who have learning independence are shown by a sense of responsibility and do not have dependence on other people (Ningtyas & Surjanti, 2021).

Learning independence is the attitude of students who are able to make choices and take responsibility for their own learning activities (Nurhayati, 2016 & Damayanthi et. al, 2022).

Learning independence helps students achieve an understanding of the material. This requires students to practice a lot and complete a case study to understand the material. The scope of material obtained independently is wider so that students' knowledge and understanding can increase. In addition, an attitude of independent learning will help shape students' character as individuals who are disciplined, confident, and responsible. Students who have self-confidence will be able to solve the problems they face well. As Nurzaman believes (Hendriana et al., 2017), independent students are students who are not dependent on other people, are confident, have disciplined behaviour, are responsible, take the initiative, and are able to control themselves (Widana et. al, 2023).

With online learning, teachers and students must be able to utilise technology to carry out daily learning activities. Judging from current development, it cannot be separated from Information Technology (IT), which is also increasingly developing. Information and communication technology is technology that is used as a means of information and communication among individuals (Miningsih, 2015) & (Hidayatullah et al., 2022). In addition, with the ongoing Covid-19 pandemic, the implementation of the learning process requires online learning. Teachers are required to master technology so that the learning process is online during the Covid-19 pandemic.

The reality that occurs in the field is very different. The results obtained in mastering the subject matter for students in class have only reached an average of 76.72, which is below the standar score in Biology subject at this school, which is 70. Students' classical completeness in Biology subject is only 69.44% or 25 students are classified as successful in achieving learning completeness as expected while 11 students or 30.56% are classified as incomplete.

This is caused by several factors. From teacher factors (Widana & Laksitasari, 2023): (1) teachers are less innovative in using learning methods, (2) teachers have not used learning methods optimally. From student factors: (1) students are less active in learning, (2) students get bored easily when learning. To solve these learning problems, the researcher set alternative actions to increase student activity by using Google Classroom. Google Classroom is a product from Google in the form of a set of productivity and collaboration tools with the Google Cloud system for schools and educational institutions including staff, teachers, and students to facilitate a better teaching and learning system.

From the description of the background of the problem, the researcher is interested to conduct a classroom action research to improve student biology learning outcomes through the use of the Google Classroom application in Biology learning for class XI IPA 1 semester II academic year 2020/2021.

METHOD
This research was a classroom action research using the research model from Kemmis and Taggart (Arikunto, 2013). The research subjects were 36 students of class XI IPA 1 semester II in the academic year 2020/2021 at SMA Negeri 1 Kuta. This research was conducted from January to March 30 2021. This research was carried out for 3 (three) months. To collect research data, the researcher used learning outcomes test. The test in this study was used to measure Biology learning outcomes.

The test in this research was a written test in the form of an objective test. The test was in the form of items in accordance with the material that had been taught. The criteria for

successful implementation of this action were that students were declared successful if the student's learning outcomes reached the same as or more than a score of 70 according to the standar score requirements set by the school and learning completion was at least 85%.

RESULTS AND DISCUSSION

This research was carried out in two cycles in which each cycle consisted of 3 meetings. Each cycle consisted of 4 stages, namely planning, action, observation, and reflection. The research results can be described as follows.

Table 1. Pre-Cycle Biology Learning Achievement Results

Completeness	Frequency (Number of Students)	Percentage
Completed	25	69.44%
Not Completed	11	30.56%
Total	36	100
Average	76.72	

Based on table 1 above, it appears that there were 25 (69.44%) students who had completed their studies before the action was taken and 11 (30.56%) students had not completed their studies.

In cycle I, based on data when using the Google Classroom application in cycle I, the assessment of students' ability to learn Biology showed that learning completeness reached 83.33%. Meanwhile, there were 16.67% of students who achieved below the standar score. The results of the first cycle of research can be described as follows.

Table 2. Biology Learning Achievement Results Cycle I

Completeness	Frequency (Number of Students)	Percentage
Completed	30	83.33%
Not Completed	6	16.67%
Total	36	100
Average	86.92	

Based on table 2, it appears that after the action was taken, 30 students (83.33%) completed their studies and 6 (16.67%) students had not completed their studies. Based on the success criteria, the research was said to be successful if the average class learning outcomes were >70, with a completeness requirement of >85%. This means the average learning outcome in cycle I had been achieved, but classical completeness had not yet reached the success criteria.

In cycle II, the teacher was more active in guiding students, facilitating, and providing motivation so that they were more active in learning and the material could be remembered longer. Learning was varied and not boring. The data from the research cycle II are as follows.

Tabel 3. Results of Learning Achievement in Biology Cycle II

Completeness	Frequency (Number of Students)	Percentage
Completed	36	100%
Not Completed	0	0%
Total	36	100
Average	93.3	

In table 3, it appears that the completeness of student learning in cycle II was 100% out of 36 students who completed. Based on the success criteria, the research was said to be successful if the average class learning outcomes were >70, with a completeness requirement of >85%. This meant that the average learning outcomes in cycle II had been achieved as well as classical completeness. Thus, the implementation of the action was stopped, and the research was declared successful in two cycles.

Based on the table above, the results of this study indicate that learning by using the Google Classroom Application has a positive impact on improving student learning outcomes. This can be seen from the increasingly solid understanding of students towards the material presented by the teacher (learning completeness increased from the pre-cycle, cycle I, and cycle II) namely 69.44%, 83.33%, and 100% respectively. In cycle II, students' classical learning completeness has been achieved.

Overall, the improvement in biology learning outcomes obtained in this classroom action research is summarised below.

Tabel 4. Overall Research Results

Cycle	Average	Classical Completeness (%)
Pre-cycle	76.72	69.44
Cycle I	86.92	83.33
Cycle II	93.33	100

After comparing the initial value, cycle I value, and cycle II value, there was a significant increase, which was from the average initial value of 76.72, it rose in cycle I to 86.92 and in cycle II it rose to 93.33.

These results indicated that the use of the Google Classroom application succeeded in increasing students' ability to gain knowledge according to expectations. From student responses, the results obtained were 55.75 which were classified in the positive category.

The Google Classroom application is an application that is suitable for students if teachers want their students to be able to improve their ability to become creative, argue, express opinions directly, and exchange ideas, remembering that the use of this method is to direct students to be enthusiastic about receiving lessons.

CONCLUSION

Based on the presentation of the research results, it can be concluded that the use of the Google Classroom application can improve the biology learning outcomes of class XI IPA 1 students at SMA Negeri 1 Kuta. In the pre-cycle, the average student learning result was 76.72 with classical completeness of 69.44%. From these results, it was claimed that it went

to the incomplete category. While in the first cycle of student learning outcomes obtained an average class of 86.92 with 83.33% classical completeness. In cycle II, student learning outcomes obtained a class average of 93.33 with 100% classical completeness in the complete category. There was an increase in the average learning outcomes and classical completeness from incomplete to complete. Suggestion that can be made based on the results of this research is that the use of the Google Classroom application can be adapted for application to other subjects.

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