

## The Implementation of *Google Classroom* in Enhancing Biology Learning Outcomes of Grade XII MIPA Students at SMA Negeri 3 Lambandia

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### Abstract

Current technology is developing rapidly, so all sectors require technology, and the education sector is no exception. Educational Technology is always used for the welfare and convenience of humans. Learning today is more directed towards modernization activities with the help of modern technology and is believed to help students digest learning interactively, productively, effectively, inspiratively, constructively, and enjoyably. This online Google Classroom assists teachers in creating class groups, setting assignment submission times, assessing assignments, and determining final grades. The aim of this research is to determine the use of Google Classroom learning in improving the biology learning outcomes of Grade XII students at SMA Negeri 3 Lambandia. This research uses Classroom Action Research as a type of qualitative research because its purpose is to gain an in-depth understanding of a particular case or phenomenon in its unique context. The results of the study show an increase in student learning outcomes in the Grade XII Science (MIPA) Biology subject, as indicated by the increase in the average score of students, which was 81.46 before the use of Google Classroom and increased to an average of 86.25 after using Google Classroom. Google Classroom has proven to be a useful tool for improving the quality of learning and overcoming students' learning deficiencies.

**Keywords:** Technology, Google Classroom, Learning Outcomes

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### 1. INTRODUCTION

Technology is currently developing rapidly, so all sectors require technology, and the education sector is no exception. Educational Technology is also always used for the welfare and convenience of humans. Learning today is more directed towards modernization activities with the help of modern technology and is believed to help students digest learning interactively, productively, effectively, inspiratively, constructively, and enjoyably. In addition, students are also expected to have life skills from the technology application. Through the Google Classroom application, it is assumed that learning objectives will be easier to realize and full of meaning (Parhusip, 2021).

Google Classroom (GC) is a free online blended learning application platform. Educators can create their own classes and share the class code or invite their students. GC is intended to help all educational scopes by assisting students in finding or overcoming learning difficulties, sharing lessons, and creating assignments without having to attend class (Hariyadi, 2021).

Observations conducted at SMA Negeri 3 Lambandia on a Grade XII MIPA Biology teacher found that students still experienced difficulties in receiving lessons, resulting in less than optimal student learning outcomes. Moreover, the teacher still implemented a conventional method where the material was delivered through lectures in front of the class, causing students to become passive or just listen. In this case, the learning process in that school was still teacher-centered. Another problem found was that the learning media available at the school had not been maximally used to support the improvement of student learning outcomes. According to the results of interviews conducted with Grade XII MIPA students, the online learning carried out by the teacher was still more focused on the WhatsApp group application than the Google Classroom application. Furthermore, the limited features in WhatsApp cannot support online learning.

The problems in Grade XII MIPA at SMA Negeri 3 Lambandia require teachers to pay more attention to students, follow ICT developments, and be able to use ICT. Not only that, teachers should also use several learning media more often so that students are motivated to learn, thus improving student learning outcomes. By using the Google Classroom application, it is also hoped that there will be improvements in teaching and learning activities in the classroom by using varied learning models, methods, and media, so that the use of the lecture model in front of the class can be reduced, and the varied learning model will increase students' motivation in receiving lessons from the teacher. According to (Asniwia., et al, 2022) the Google Classroom application is an application that can be applied and is easy for teachers and students to use because they are accustomed to using smartphones with various applications in them.

Several related studies have been conducted. Research by (Fustika, 2018) on the development of career information service media based on Google Classroom in Vocational High Schools. Research by (Maskar and Wulantina, 2019) on students' perceptions of the blended learning method with Google Classroom. Furthermore, there is research by (Utami, 2019) on the analysis of student responses to the use of Google Classroom in biology learning. This research is relevant to the study currently being examined by the researcher, but it has a difference in that this research is specifically conducted on the biology subject in the context of improving the biology learning outcomes of Grade XII MIPA students at SMA Negeri 3 Lambandia. Based on the background above, this research focuses on determining the use of Google Classroom in improving the biology learning outcomes of Grade XII MIPA students at SMA Negeri 3 Lambandia.

## **2. RESEARCH METHOD**

This research uses Classroom Action Research (CAR) as a type of qualitative research because its purpose is to gain an in-depth understanding of a particular case or phenomenon in its unique context. In this research, interviews were conducted with key informants who have knowledge and experience related to the phenomenon being studied. To observe and understand the behavior and interactions of the research subjects, the researcher was directly involved in their activities. The researcher examined books, articles, and research reports related to the research topic. In qualitative research, data analysis is carried out inductively, which is by analyzing the collected data to generate research results and conclusions. Data saturation is achieved through a continuous and iterative analysis process. This study uses a qualitative method, the type of Classroom Action Research (CAR). Data collection techniques were carried out using in-depth interviews, observation, and document analysis. The research was conducted at SMA Negeri 3 Lambandia, and the informants were Grade XII MIPA students. Observation, in-depth interviews, and documentation were used to collect data. Data analysis was carried out using the Miles and Huberman model, which involves source and technique triangulation to ensure data validity.

## **3. RESULT AND DISCUSSION**

Google Classroom is an online learning platform that allows teachers and students to communicate and collaborate well. There are many features on this platform that can help improve student learning outcomes at SMA Negeri 3 Lambandia, such as the ease and accessibility of material being one of the main advantages of Google Classroom. Teachers can easily share various materials, such as guides, videos, and presentations, with all students in the class. Teachers can upload content directly to the Google Classroom platform. Google Classroom has many sophisticated features that allow for effective and efficient assessment and assignment. Teachers have the ability to create and distribute online assignments, track student progress, and provide criticism and suggestions in real-time (Abrori., et al, 2024).

Based on the research on the Use of Google Classroom in improving the biology learning outcomes of Grade XII MIPA students at SMA Negeri 3 Lambandia, it is known that the biology learning outcomes of Grade XII MIPA students before the use of Google Classroom showed tremendous potential. Students had a lot of initial knowledge and were quite active when learning. However, some shortcomings were identified, such as difficulties in understanding certain concepts. By knowing these shortcomings, Google Classroom is expected to improve students' biology learning outcomes and overcome existing problems.

The biology learning outcomes of students after implementing the use of Google Classroom at SMA Negeri 3 Lambandia can be concluded that the use of

Google Classroom can improve student learning outcomes in the Grade XII MIPA Biology subject. The research results show benefits including increasing the students' average score compared to before using it. Increased learning motivation, the interesting and interactive features make students more interested in learning with Google Classroom. The improvement in student biology learning outcomes using the Google Classroom platform helps students enhance 21st-century skills.

**Tabel 3.1 Comparison of Biology Subject Scores Before and After Using Google Classroom**

No	Respondent	Comparison of Biology Subject Scores Before and After Using Google Classroom	
		Before	After
1	Respondent 1	80	91
2	Respondent 2	79	82
3	Respondent 3	78	81
4	Respondent 4	85	91,5
5	Respondent 5	84	87
6	Respondent 6	70	78
7	Respondent 7	89	95
8	Respondent 8	86	88,3
9	Respondent 9	77	78
10	Respondent 10	86	89
11	Respondent 11	85	90
12	Respondent 12	79	88
13	Respondent 13	80	82
14	Respondent 14	82	85
15	Respondent 15	82	88
<b>Average Score</b>		<b>81,46</b>	<b>86,25</b>

The research results above were found by the researcher through the implementation of Google Classroom for Grade XII MIPA students at SMA Negeri 3 Lambandia. The implementation of Google Classroom at SMA Negeri 3 Lambandia shows an improvement in student learning outcomes in the Grade XII MIPA Biology subject, as indicated by the increase in the students' average score from 81.46 before using Google Classroom to an average of 86.25 after using Google Classroom, as well as an increase in students' motivation to learn and modern skills. Google Classroom has proven to be a useful tool for improving the quality of learning and overcoming

students' learning deficiencies. Thus, Google Classroom can help facilitate teachers and students in carrying out teaching and learning activities more deeply. This is because both students and teachers can submit assignments, distribute assignments, and discuss lessons anywhere without being bound by time limits or class hours, which makes the learning process more interesting and more efficient in terms of time management, and there is no longer any excuse for students to forget about assignments given by the teacher (Trisnawati., et al, 2023).

#### **4. CONCLUSION**

The implementation of Google Classroom for the Grade XII MIPA Biology subject at SMA Negeri 3 Lambandia shows positive results. Before Google Classroom was implemented, students had an average score of 81.46. Students showed less interest and desire to learn and found it quite difficult to understand complex Biology material. After using Google Classroom, the students' average score increased to 86.25. There was an increase in students' interest and desire to learn, and students had a better understanding of the Biology material. Supporting factors came from the Principal, Teachers, and Students.

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