International Journal Of Humanities Education And Social Sciences ***(IJHESS)*** *E-ISSN:* **2808-1765**
Volume 2, Number 1, August 2022, *Page. 263 – 277*
Email : editorijhess@gmail.com

Optimization Of Blended Learning With Google Classroom Towards Increasing Students' Learning Outcomes In Relationship Materials Function Of Class VIII SMPN 1 Sawahlunto TP. 2020/2021

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Abstract

Mathematics learning activities at SMPN 1 Sawahlunto during the covid 19 pandemic were previously very weak where only by giving assignments via WA experienced a significant increase by applying blended learning, where students carried out independent learning by participating in learning in google classroom. The average student in class VIII.2 SMPN 1 Sawahlunto at the stage of the second cycle has strongly agreed with blended learning Mathematics with Google Classroom, both in terms of student acceptance on the convenience of Google Classroom and the performance of Google Classroom. Student activity in google classroom in cycle 2 has shown a good average, student activity in answering questions is 66% (good), asking questions 61% (good), Doing activities in LKPD is 62% (good), presentation is 64% (good), opinion is 60% (enough) and writing is 63% (good). Based on the data analysis carried out, it was concluded that learning Mathematics using blended learning with Google Classroom has been running optimally, this is shown by the increase in the results of the evaluation of learning by using the blended learning learning model through Google Classroom with an average of 75.52 and completeness. classic 83%. Observation of the ease of Google Classroom and its performance, more than 50% of students stated strongly agree and agree it was concluded that learning Mathematics using blended learning with Google Classroom was running optimally, this was shown by the increase in the results of the evaluation of learning using the blended learning model through Google Classroom with an average of 75.52 and classical completeness of 83%. Observation of the ease of Google Classroom and its performance, more than 50% of students stated strongly agree and agree it was concluded that learning Mathematics using blended learning with Google Classroom was running optimally, this was shown by the increase in the results of the evaluation of learning using the blended learning model through Google Classroom with an average of 75.52 and classical completeness of 83%. Observation of the ease of Google Classroom and its performance, more than 50% of students stated strongly agree and agree..

Keywords: Covid-19 pandemic, Blended Learning, google classroom, Mathematics Learning

INTRODUCTION

The current COVID-19 pandemic has had a significant impact on various aspects of life. Daily data shows that there are still high confirmed cases of COVID-19 (data from the Covid-19 acceleration task force, covid19.go.id), and Indonesia has entered a state of national emergency. This brings various changes and policy updates to be implemented quickly and accurately. Various sectors experienced policy changes due to the COVID-19 pandemic, including the education sector, Andriani, H. (2020).

Through the Circular Letter of the Minister of Education and Culture of the Republic of Indonesia No. 3 of 2020 concerning Prevention of Covid-19 in Education Units, all levels of education require students to study from home (Restian, A. (2020). In order to support the government's call for physical distancing, and stay away from activities in all forms of crowds, gatherings, and avoiding gatherings that involve large numbers of people, as an effort to suppress the expansion of COVID-19 (Agustin Y. (2021). This recommendation to stay at home and physical distancing was also followed by the emergence of policies that must be adaptive in which changes in learning patterns from face-to-face to online are a must, including SMPN 1 Sawahlunto.

During the Covid-19 emergency period, the city of Sawahlunto had implemented face-to-face learning, but this condition could be applied if it was in a yellow zone condition by observing strict Covid protocol standards, including one of the limitations of the number of students and the learning time. trimmed, as a result, teachers must be able to adapt to these conditions and strive so that learning materials can be absorbed by students. SMPN 1 Sawahlunto applies distance learning. The learning can be applied online or offline. Online learning or online by utilizing WhatsApp (WA). Through WA, students can access learning materials and assignments sent by the teacher every week, conduct discussions through chatroom forums. At present, almost 100% of students at SMPN 1 Sawahlunto are already using Android phones. It is known from dapodik data information that each student gets internet quota assistance from dapodik for online learning, but only 50% have received the assistance, so only half can take online learning.

From an economic point of view, the parents of SMPN 1 Sawahlunto students are middle class..However, some of them cannot afford internet quota for their children's learning. Sometimes one cellphone is used for 3 to 4 children. This complaint was submitted directly by the parents of the students to the Head of the City Government, and then ordered the relevant Education Office to establish and supervise this online learning, including (1) Not giving assignments to students who eat a lot of internet quota, (2) It is not allowed to burden students with many questions, only 3 to 5 questions are enough. (3) The answers to the questions given must be in the learning package book that has been lent by the library. However, after being given free internet quota for all students,

After observing the motivation and learning outcomes of students, especially in learning Mathematics grade 8 Daily Assessment I KD-1 The Number Line Pattern declined sharply, the ability of students to answer Daily Test questions was around 31%, as shown in the graph below (data attached).)

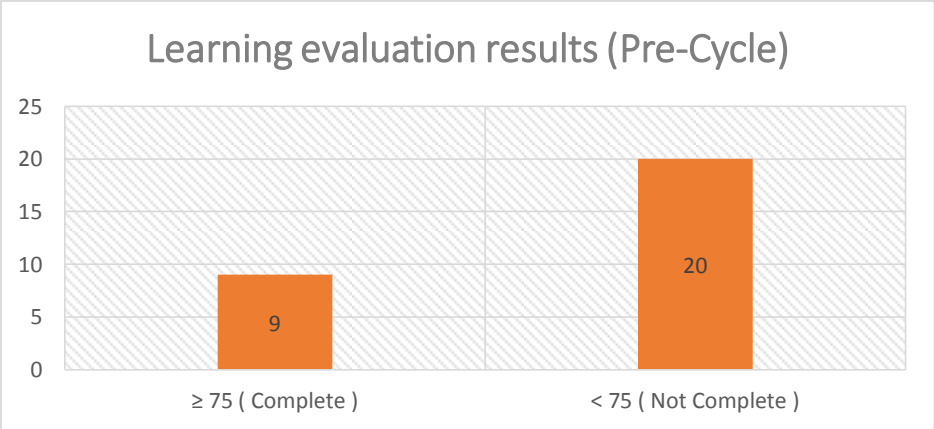


Figure 1. Graph of learning evaluation results (Pre-Cycle)

This indicates that students' understanding of mathematics learning materials is very low. Learning activities during the COVID-19 pandemic require students to have independence in learning (Bilda, W., & Fadillah, A. 2020). Independent learning (Self Regulated Learning) is needed by students in building the concepts and principles they learn. Learning independence is a self-awareness to learn by not depending on others and feeling responsible in achieving the desired goals (Hamka, D. & Vilmala, BK, 2019). Independent learning is one of the important factors in learning. According to Ranti, MG, et. al (2017) when the learning process places less emphasis on the aspect of learning independence, it indicates that the aspect of learning independence has not been considered an important factor affecting student learning outcomes, even though there is a tendency where the higher the level of education, the higher the learning independence required (Brooman, S., & Darwent, S. 2014). However, the real condition is not

so based on the results of observations on mathematics subjects which mostly have abstract concepts and must be studied by paying attention to the facilitation of learning independence from students, there are still many students who have difficulty without guidance from the teacher (Hiebert, J., & Grouws, D. A. 2007). Students generally collide on understanding the concept and the steps that must be taken in understanding the concept. Given the importance of independent learning for students, a learning pattern is needed that pays attention to the facilitation of learning independence (Taber, K. S. 2009). One of the learning models that can be applied during the COVID-19 pandemic is the Blended Learning model with Google Classroom. Based on the above background, a class action research was carried out with the title "Optimizing Blended Learning with Google Classroom on Improving Student Learning Outcomes in Class VIII Class Function Relation Materials at SMPN 1 Sawahlunto TP.2020/2021".

RESEARCH METHODS

This study uses a quantitative approach with analytical descriptive method. The location of the study was carried out at SMPN 1 Sawahlunto, Lembah Segar District, Sawahlunto City. This research was conducted in class VIII.2 SMPN 1 Sawahlunto. The time used in this classroom action research is for 4 months, from mid-August to mid-November, semester I for the 2020/2021 academic year.

Table 1. Research Schedule

No	Description of Activities	Month													
		August			September					October				Nov	
		III	IV	V	I	II	III	IV	V	I	II	III	IV	I	II
1	Preparation / Preparation of PTK Proposals														
2	Develop Research Instruments														
3	Implementation														
4	Data processing														
5	Preparation of PTK Report														

The subjects of this study were students of class VIII.2 SMPN 1 Sawahlunto for the 2020/2021 academic year, totaling 28 people. Consisting of 12 men and 16 women. The data obtained from this study are primary data. Primary data is data obtained directly from research subjects, namely data sourced from students of class VIII.2 SMPN 1 Sawahlunto in the form of evaluation results, student activity data in the implementation of online learning. The data collection techniques used in this study were Tests, Non-Tests (Observation, Documentation, Questionnaires) Research Instruments (1) Learning Implementation Plans (RPP), (2) Student Worksheets (LKPD), (3) Observation Sheets, (4) Questionnaire. Data Analysis Techniques (1). Student/teacher activity data uses a quantitative approach in the form of a percentage, (2). Likes Data on Google Classroom Applications (Questionnaire). (3) Learning Outcomes Data by comparing the initial condition test scores with test scores after cycle I and cycle II. Based on the learning outcomes data, the analysis was continued by grouping students into grades and predicate intervals that had been determined at SMPN 1 Sawahlunto with one KKM model for

all subjects. The specified KKM is 75. Therefore, the value and predicate intervals also have one size.

This type of research is classroom action research (Action Research), the steps of this classroom action research use the spiral model proposed by Tanggart (1988) in Wiratmaja (2006: 66) that one cycle consists of 4 steps, namely: 1) Planning, 2) Action, 3) Observation, and 4) Reflection. This research consists of two cycles, the first cycle will be held in one meeting with the material "Relations and Functions" (Fauzi. R. 2021). The same thing also applies to the second cycle, one meeting was held with the material "Relations and Functions". At the end of each cycle, observation of learning activities is carried out to see changes in student activity in each cycle. As well as a questionnaire to see student responses to the ease of using google classroom and the performance of google classroom itself.

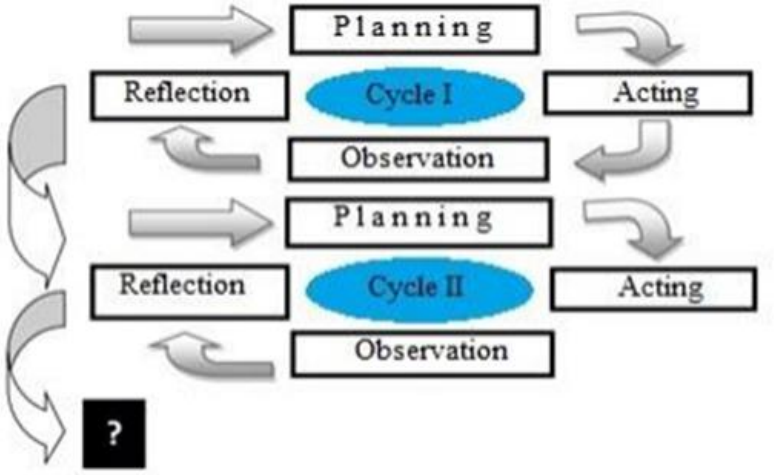


Figure 2: Classroom Action Research Flowchart

RESULTS AND DISCUSSION

Based on the results of the evaluation before the action was taken, data was obtained from the number of students in class VIII.2 there were 29 people, who got a score of reaching the KKM (75) and 9 people who got a score less than the KKM (<75) there were 20 people.. Result data learning obtained without using the blended learning model through google classroom can be seen in table 2 and figure 3 below.

Table 2. Research Schedule

No	Score	Amount	Percentage
1	≥ 75	9	31%
2	<75	20	69%
Total		**29**	**100%**

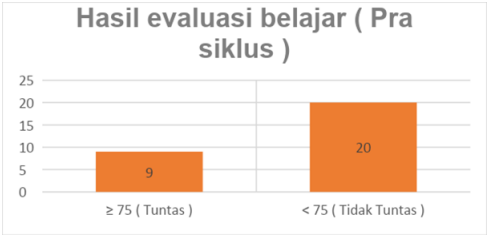


Figure 3.

Classroom Action Research Flowchart

1. Student Response to the Use of Google Classroom (Questionnaire)

After conducting research in the first cycle, of the 30 total class VII.2 students who were given Cycle I treatment, only 29 students could access the Google Classroom (subject of the study), while the other 1 person could not access it for various reasons. such as not having

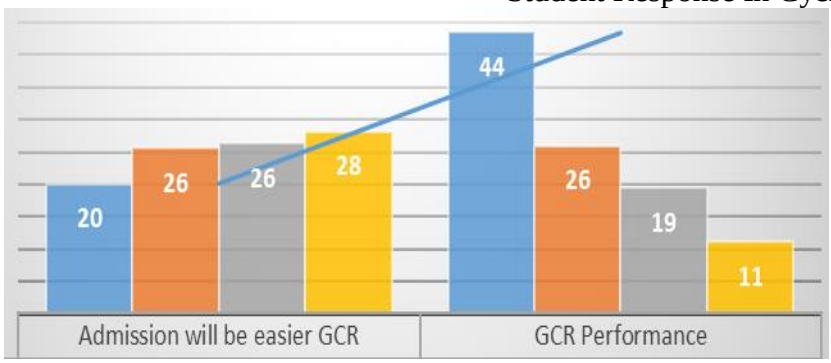
an android cellphone (tasks are collected immediately), not having internet data or interference with internet network signals in their area. However, data obtained from the questionnaire filled out by the students regarding the ease of use of Google Classroom as many as 10 questions, and the performance of Google Classroom as many as 4 questions, then the average results obtained are as follows:

Table 3. The results of filling out a questionnaire about the use of google classroom cycle I

NO	INDICATOR	Average Student Answer (%)			
		SS	S	TS	STS
A	Admission will be easier GCR	20	26	26	28
B	GCR Performance	44	26	19	11
	Average	32	26	23	20

Based on the table above, it can be concluded that the ease of student acceptance is still moderate. It can be seen from the average of student responses which are still at the level of agreeing. As illustrated in the following graph 4.

Student Response In Cycle I



Note:moan:
Series 1 (SS) = Strongly Agree
Series 2 (S) = Agree
Series 3 (TS) = Disagree
Series 4 (STS) = Strongly Disagree

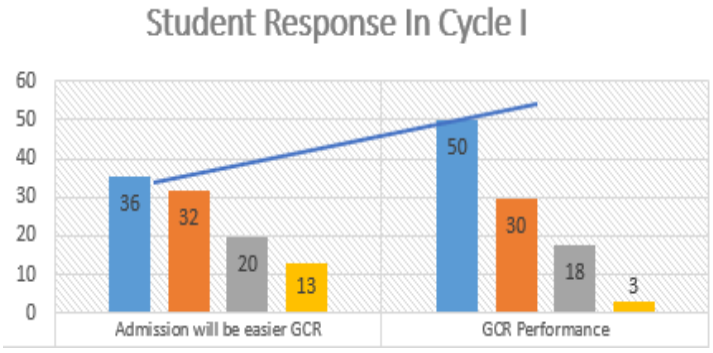
Figure 4. Graph of Student Responses to the Use of GCR in Cycle I

After analyzing the data and reflecting on the first cycle, it can be concluded that the average student still has difficulty in using google classroom. It can be seen from the average percentage of student answers, only 20% stated strongly agree, 26% said agreed, and 26% said disagreed and 28% said strongly disagree. From the results above, the researcher can conclude that students do not fully understand the use of this google classroom. For this reason, researchers plan actions in cycle II with a plan to provide direct explanations to students how to use google classroom.

In Cycle II, the researcher guided students in the use of google classroom by trying it directly in the classroom. With the new material learning, the second meeting was about Function Relation of sub KD Function characteristics. The results of the research obtained in the second cycle turned out to be a direct increase and also the responses of students regarding the use of google classroom also increased. The number of students who can respond to participate in Google Classroom is increasing.

Table 4. The results of filling out a questionnaire about the use of google classroom

NO	INDIKATOR	Average Student Answer (%)			
		SS	S	TS	STS
A	Admission will be easier GCR	36	32	20	13
B	GCR Performance	50	30	18	3
	Average	43	31	19	8



Note: moan:
Series 1 (SS) = Strongly Agree
Series 2 (S) = Agree
Series 3 (TS) = Disagree
Series 4 (STS) = Strongly Disagree

Figure 5. Graph of Student Responses Using GCR Cycle II

2. Observation of Student Activity in Google Classroom

On the student activity observation sheet in Google Classroom, observations were made on several assessment indicators as shown in Appendix 3 and the results from the first cycle obtained data as shown in table 5 below:

Table 5. Results of Observation of Participants' Activities in Google Classroom (Cycle I)

CYCLE I	OBJECT OF OBSERVATION						TOTAL CATEGORIES
	Answering Questions	Asking Questions	Doing Activities in LKPD	Presentations	Opinions	Writing	
Meeting I	64	50	53	57	52	62	C
Meeting II	66	61	62	57	52	63	
Enhancement	2	11	9	0	0	1	
Average	65	55	57	57	52	62	
Category	B	C	C	C	C	B	

From the table above, it can be concluded that student activity in Google Classroom is still lacking or can be said to be low. This is because students are not familiar with using this application, because of its implementation during the pandemic, students are only notified via WA or by zoom meeting. And even then only some of the class members can follow. The results of observing student activities in the use of google classroom above can be seen in the following graph :

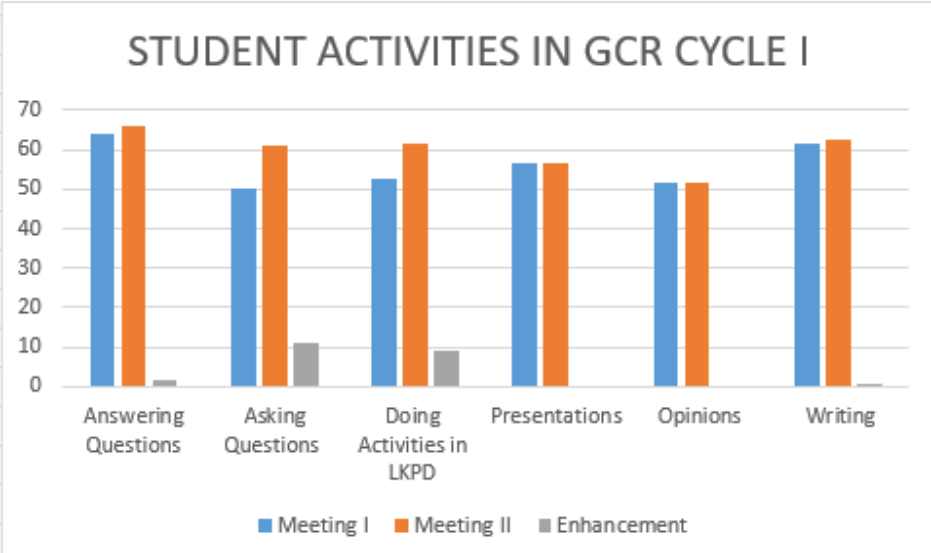


Figure 6. Graph of student activity in google classroom (Cycle I)

Seeing from the results of observations of student activities in the google classroom, the researchers planned to improve learning in the next cycle, namely by providing ways or instructions for using the google classroom in the classroom. At that time the school had begun to meet face-to-face at school, because it was already a yellow zone. The results of observing student activities in cycle II can be observed in table 6 below:

Table 6. Results of Student Activity Observation in Google Classroom (cycle 2)

CYCLE II	OBJECT OF OBSERVATION						TOTAL CATEGORIES
	Answering Questions	Asking Questions	Doing Activities in LKPD	Presentations	Opinions	Writing	
Meeting I	66	61	62	64	60	63	B
Meeting II	68	63	62	65	60	64	
Enhancement	2	3	0	1	0	2	
Average	67	62	62	65	60	63	
Category	B	B	B	B	C	B	

From table 6, it can be concluded that the students' activities in Google Classroom are good as a whole. It looksfromThe number of students who can use Google Classroom has increased from 29 people, 22 people are already in the Good category. This means that there has been an increase in the number of students in the use of google classroom and it can be said that the purpose of blended learning using google classroom has worked well. The results of observing student activities in google classroom can be depicted in the following graph:

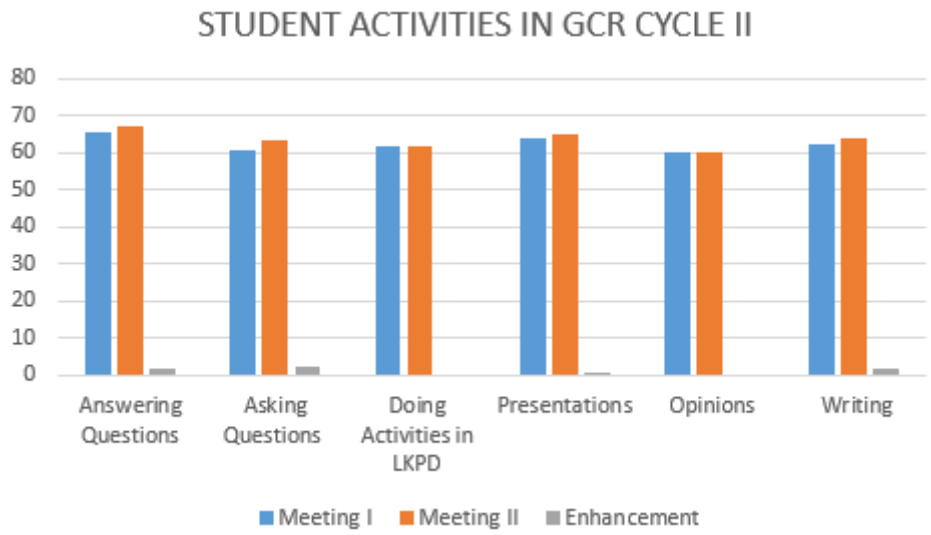


Figure 7. Graph of student activity in Google Classroom (Cycle II)

From the picture above, it has been shown that the activity of students in using google classroom in cycle II has increased. The average is good at carrying out activities in Google Classroom. However, there are still some people who cannot be forced to participate in learning in Google Classroom because they do not have complete facilities at home. there are also students who live in areas that have difficulty getting an internet signal. Because Sawahlunto area is surrounded by many hills. There are still many students at SMPN 1 Sawahlunto who do not have an internet signal near their residence. In this case, the researcher does not impose this situation. To see the optimization of blended learning using Google Classroom in cycle I and cycle II, see the graph below:

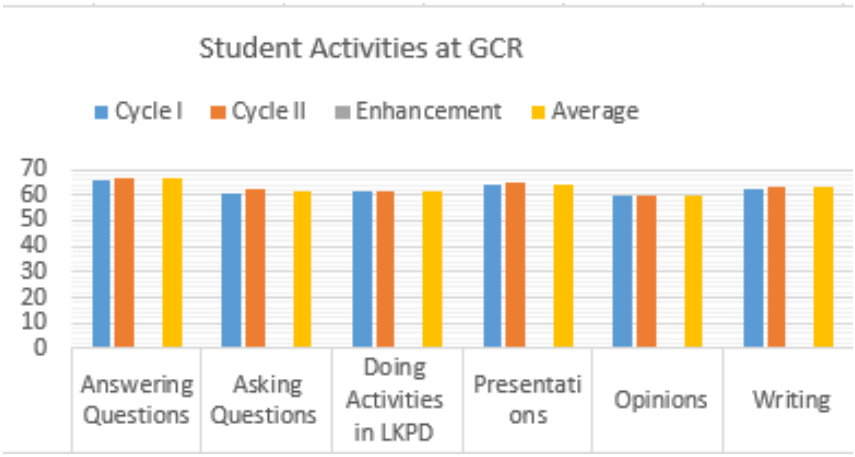


Figure 8. Graph of student activity in google classroom

Based on the graph above, it can be seen that the actions in the second cycle can have a significant influence on the actions in the first cycle. The number of students is actually quite high because more than 50% have participated in google classroom activities, but it cannot be forced 100% of students to be able to be active in google classroom during this covid 19 pandemic.

3. ResultsObservation of Teacher Performance at GCR

The results of observing teacher performance at GCR in cycle I can be seen in table 7 below, with category C (Enough)

Table 7. Results of Observation of Teacher Performance at GCR (cycle 1)

Results Of Teacher Performance Observations AT GCR

CYCLE I

No	Activity	Cycle I	
		P1	P2
1	The teacher explains the learning objectives and the learning model used	3	3
2	Generating student interest and curiosity	2	3
3	Asking questions about factual processes in everyday life related to the topic of discussion	2	2
4	Encourage students to remember their daily experiences and show their relevance to the learning topic being discussed	2	2
5	Encourage students to explain concepts in their own sentences	3	3
6	Encouraging and facilitating students to apply concepts/skills in new/other settings	3	3
7	Summarizing and evaluating learning	2	2
8	Observing the knowledge or understanding of students in terms of applying new concepts	2	2
9	Summarizing learning outcomes	2	2
10	Explain the learning objectives of the next meeting and evaluation	2	2
Total score		**23**	**25**
Percentage		**57.5**	**62.5**
Average		**60**	
Category		**c**	

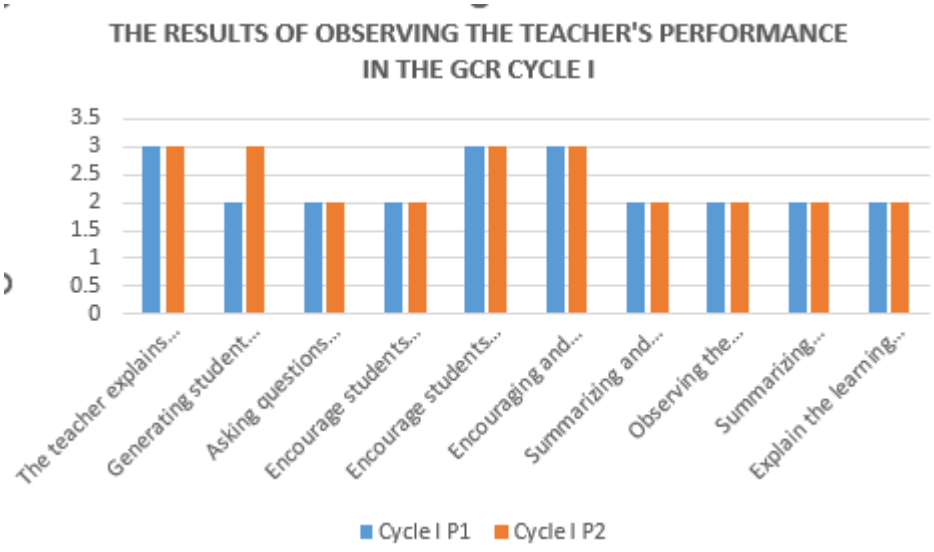


Figure 9. Graph of Teacher Performance Observations at GCR (Cycle 1)

The results of observations of teacher performance in cycle II are shown in table 8 below with category B (Good), there is an increase from cycle I to II

Table 8. Results of Observation of Teacher Performance at GCR (cycle II)

RESULTS OF TEACHER PERFORMANCE OBSERVATIONS AT GCR CYCLE Ii

No	Activity	Cycle II	
		P1	P2
1	The teacher explains the learning objectives and the learning model used	3	3
2	Generating student interest and curiosity	3	3
3	Asking questions about factual processes in everyday life related to the topic of discussion	2	3
4	Encourage students to remember their daily experiences and show their relevance to the learning topic being discussed	3	3
5	Encourage students to explain concepts in their own sentences	3	3
6	Encouraging and facilitating students to apply concepts/skills in new/other settings	3	3
7	Summarizing and evaluating learning	2	2
8	Observing the knowledge or understanding of students in terms of applying new concepts	2	3
9	Summarizing learning outcomes	2	3
10	Explain the learning objectives of the next meeting and evaluation	2	2
Total score		25	**28**
Percentage		62.5	**70**
Average		**66.25**	
Category		**B**	

The results of Observing Teacher Appearances in Google Classroom in Cycle II can be seen in the following picture:

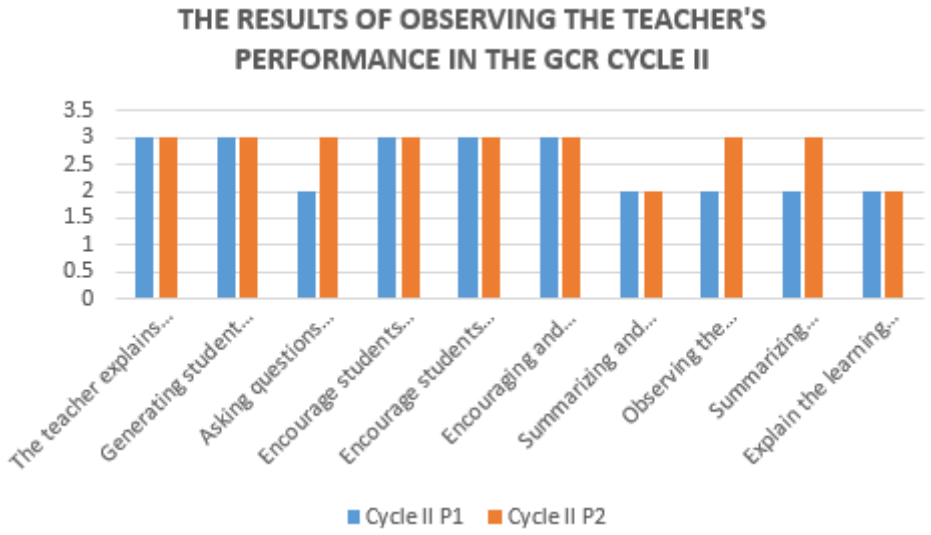


Figure 10. Graph of Teacher Performance Observations at GCR (cycle II)

4. Evaluation of Learning Outcomes

After observing the implementation of the actions in the first cycle, an assessment was made of the students. Evaluation results orevaluationIt is known that of the 29 students of class VIII.2 SMP Negeri 1 Sawahlunto who took part in the evaluation, there were 12 people (41%) who scored the same or more than the KKM (≥ 75), and 17 people (59%) scored below the KKM. The following is the result of the assessment in the form of a range of values in the table below:

Table 9.Results of Learning Evaluation Through GCR (cycle I)

No	Score	Amount	Percentage
1.	≥ 75 (Completed)	12	41%
2.	< 75 (Not Complete)	17	59%
		29	**100%**

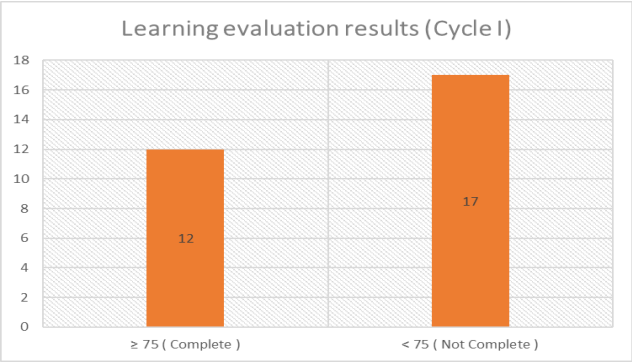


Figure 11.
Graph of Learning Evaluation Results Through GCR (Cycle I)

Low this learning outcome is caused by various factors, misunderstanding with the material, not understanding how to send assignments / daily tests so that they do not take the exams that are carried out, this is marked by students whose grades do not exist, which results in a low average score obtained, namely 59.31. In cycle II, they were given more information on how to submit the tasks carried out in Google Form and sent to the GCR to students, as well as the uploaded material in the form of videos that students could replay and replay the learning videos given. The following are the results of the evaluation in cycle II

Table 10
Results of Learning Evaluation Through GCR (cyc

No	Score	Amount	Percentage
1.	≥ 75 (Complete)	24	83%
2.	< 75 (Not complete)	5	17%
		29	**100%**

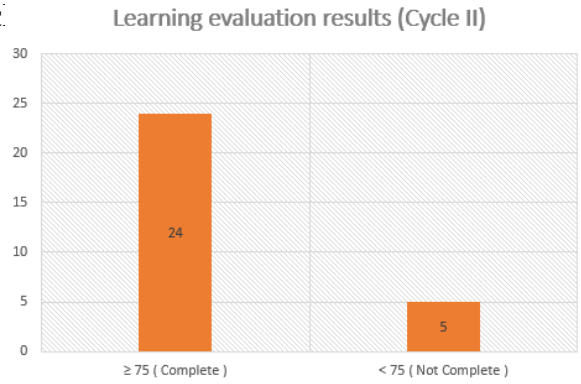


Figure 12

Graph of Learning Evaluation Results Through GCR (Cycle II), Based on the results of tests conducted on students, starting from the pre-cycle, cycle I and ending with cycle II, it shows a tendency to increase student learning outcomes, this can be seen from the graphic image.recapitulation of differences in student learning outcomes through the following GCR.

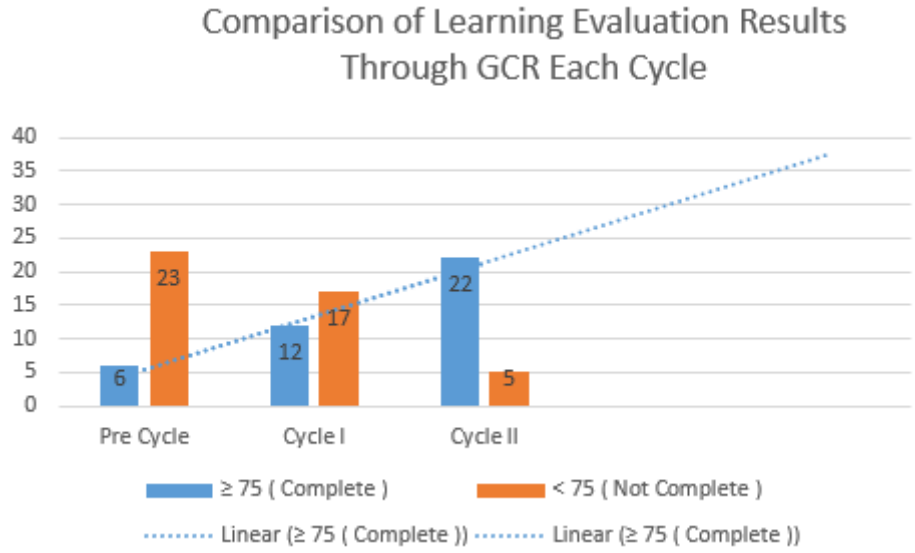


Figure 13
Comparison Graph of Learning Evaluation Results for Each Cycle

1. *Reflection Cycle I*

Reflection of Cycle I Based on the results of observations of student activities in cycle I, it can be concluded that:

a. The use of Google Classroom is still new among students so there are several items answered by respondents who do not agree.
b. Teachers still have difficulty in dividing tasks because not all students can be contacted during the covid-19 pandemic.
c. From the teacher's observations in the Google Classroom, there are still many who are less active in entering the Google Classroom, besides that there are not too many students who participate in providing comments and answering the evaluation questions that have been posted there. Likewise with teaching materials, there is still a small percentage of children who read and watch the learning videos.

1. *Reflection Cycle II*
   In general, student activity in using google classroom has increased compared to cycle I. This is indicated by several things, including:

a. The response of students to the use of Google Classroom has been good. This is evidenced by the number of students who answered strongly agree and agree to the questionnaire distributed.
b. The activity of students about activities in Google Classroom has also increased. This is marked by the increasing number of students who can access the Google Classroom and the students' activities in the Google Classroom which have increased dramatically, especially in the LKPD work.

The research findings described above are used as a starting point in conducting further studies on why the Blended Learning learning model through Google Classroom can improve mathematics learning outcomes for grade VIII.2 students of SMP Negeri 1 Sawahlunto. The results of hypothesis testing indicate that the Blended Learning learning model through Google Classroom can improve mathematics learning outcomes in class VIII.2 SMP Negeri 1 Sawahlunto Semester I for the 2020/2021 academic year. This is evidenced that there is an increase in learning outcomes, in the first cycle an average of 59 .31 and 41% classical completeness, while in the second cycle obtained an average of 75.52 with 83% classical completeness. In addition to increasing learning outcomes, it is also accompanied by an increase in student learning activities. In the first cycle, of the 6 indicators observed, 4 indicators got sufficient qualifications and 2 indicators got good qualifications, overall the qualifications for student learning activities were sufficient. In cycle II, student learning activities have increased with good qualifications.

CONCLUSION

Mathematics learning activities at SMPN 1 Sawahlunto during the COVID-19 pandemic were previously very weak where only by giving assignments via WA experienced a significant increase by applying blended learning, where students carried out independent learning by following learning on Googleclassroom. The average student in class VIII.2 SMPN 1 Sawahlunto at the stage of the second cycle is alreadyveryagree on the blended learning of Mathematics with Google Classroom both in terms of student acceptance on the convenience of Google Classroom and the performance of Google Classroom. Student activity in google classroom in cycle 2 has shown a good average, student activity in answering questions is 66% (good), asking questions 61% (good), doing activities in LKPD is 62% (good), presentation 64% (good), think 60% (enough) and write 63% (good).

Based on the data analysis carried out, it was concluded that learning Mathematics using blended learning with Google Classroom has been running optimally, this is shown by the increase in the results of the evaluation of learning by using the blended learning learning model through Google Classroom with an average of 75.52 and completeness. classic 83%. Observation of the ease of Google Classroom and its performance, more than 50% of students stated strongly agree and agree

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