

Optimization of Science Learning Blended Learning Method with Google Classroom for Increasing Learning Activities of Students During the Covid-19 Pandemic Class VIII, SMPN 6 Sawahlunto 2021/2022 Academic Year

Yeni Agustin^{1,3}, Abdulah^{1,4}, Nurhizrah Gistituati², Alwen Bentri²

¹Doctoral student of Educational Sciences, Padang State University

²Lecturer of Education at State University of Padang

³Science teacher at State Junior High School 6 Sawahlunto

⁴Lecturer at STKIP Muhammadiyah Muaro Bungo



Abstract – Blended learning is a combination of face-to-face learning and online learning with the help of information and communication technology. Based on the results of the preliminary study, it is known that the learning activities of students during the Covid-19 pandemic at home are still very low due to a lack of interest in learning, the lack of meetings between teachers and students, so learning is used blended learning with google classroom which can help students in the learning process. . This study aims to determine the optimization of blended learning learning using google classroom for the learning activities of class VIII students of SMPN 6 Sawahlunto. This research method is a quasi experimental design. The experimental design used in this study was a posttest only control design. Data collection techniques in this study were tests in the form of questions, observation sheets and questionnaires. The research method is pre- experimental research using one group pretest-posttest design. The research subjects consisted of 20 students and 1 model teacher. The learning implementation is carried out in 2 cycles on additive material with the plan, do, see and reflection stages 2 times. Obtained student activity data in the google classroom in cycle 2 has shown a very high average for the number of students 75.86%, student activity in answering questions is 80.69% (very high), Asking questions 72.73% (very high), Doing activities in Student Worksheets (LKPD) for 81.82% (very high), 68.18% presentation (high), had an opinion of 61.36% (high) and wrote 79.55% (very high). Based on data analysis using N-Gain, it can be concluded that science learning using blended learning with Google Classroom has been running optimally.

Keywords – Covid-19 Pandemic, Blended learning, Google classroom, Learning Activities.

I. INTRODUCTION

The Covid-19 pandemic that is currently happening has had quite an impact significant in various aspects of life. Daily data shows the occurrence the confirmed warning of covid-19 is still high (data from the acceleration task force covid-19, covid19.go.id), and Indonesia is also in a state of national emergency. This brings various changes and policy updates to be implemented quickly and precisely. Various policy changes that have occurred due to the pandemic Covid-19 also occurs in the education sector.

Through the Circular of the Indonesian Minister of Education and Culture No. 3 of 2020 concerning Prevention Covid-19 in the education unit, all higher education in Indonesia, no with the exception of SMPN 6 Sawahlunto, which requires students to study from home support the government's appeal to carry out physical distancing, and stay away from activities in all forms of crowd, gatherings and avoid there is a meeting involving many people, in an effort to suppress expansion of covid-

19. Even this suggestion to stay at home and physical distancing followed by the emergence of policies that must be adaptive where changes learning patterns that were originally carried out face-to-face became online is a must. During the emergency Covid-19 disaster, SMPN 6 Sawahlunto enforces distance learning. This learning can be applied online and offline. Online or online learning using WhatsApp (WA). Through WA, students can access assignments sent by the teacher every week, while offline learning is carried out by picking up assignments to school by parents of students every day Monday for all subjects, then submitted back to school answers of these assignments on the following Monday by the parents of students or student guardian. As a result, student learning

activities have decreased at this time.

Almost 100% of SMPN 6 Sawahlunto students already use Android phones. It is known from the information on dapodik data that every student gets internet quota assistance from dapodik for online learning, but only 50% have received this assistance, so only half can take part in online learning. From an economic point of view, the parents of students at SMPN 6 Sawahlunto are classified as middle to lower class, generally they cannot afford to buy internet quota for their children's learning. Sometimes one cell phone is used for 3 to 4 children.

This complaint was conveyed directly by the parents of students to the Head of the City Government, and then ordered the related education office to establish and enforce this online learning, including (1) Not allowing assignments to students who consume a lot of internet quota, (2) It is not permissible to burden students with a lot of questions, only 3 to 5 questions. (3) The answers to the questions given must be in the learning package books that have been lent by the library. However, after giving free internet quota to all students from dapodik, online learning can be implemented.

After observing the students' motivation and learning outcomes, especially in the 8th grade science lesson, the MID scores dropped sharply, the students' ability to answer the semester 1 MID Sains exam questions was around 45%. This indicates that students' understanding of science learning material is very low

Learning activities during the Covid 19 pandemic require more students to have independence in learning. Learning independence (Self Regulated Learning) is needed by students in building the concepts and principles they learn. Independent learning is a self-awareness to learn independently from others and feel responsible for achieving the desired goals (Hamka, D. & Vilmala, B.K., 2019).

Learning independence is an important factor in learning. According to Ranti, MG, et.al (2017) when the learning process does not emphasize the aspect of independent learning, it indicates that the independent learning aspect 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 independent learning which is being demanded even higher. However, the real conditions are not so based on the results of observations in natural science subjects, which mostly have abstract concepts and must be studied with due regard to facilitating independent learning from students, there are still many students who have difficulty in carrying out evidence without guidance from the teacher.

Students generally bump into conceptual understanding and the steps that must be taken in proof of concept. Considering the importance of independent learning for students, a learning pattern is needed that pays attention to facilitating independent learning. 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 classroom action research was carried out with the title "Optimizing Blended Learning Learning with Google Classroom to Increase Students' Learning Motivation in Science Learning Additive Material for Class VIII SMPN 6 Sawahlunto Tp.2020/2021".

1.1 Bended Learning

Blended learning is a term that comes from English, which consists of two syllables, blended and learning. The word Blend means a mixture which means that there are various kinds of learning patterns used. Whereas learning has a general meaning, namely learning, thus it can be interpreted as a learning pattern that contains elements of mixing, or a combination of patterns with other patterns. Dwiyo (2016) defines blended learning as referring to learning that combines or mixes face-to-face learning and computer-based learning (online and offline).

Driscoll (2009) in Rusman (2012: 275) defines: "Blended learning integrated or blends learning programs in different formats to achieve a common goal" which can be interpreted as blended learning integrating or combining learning programs in different formats in achieving learning goals. Stein and Graham (2014: 12), state "Blended courses as a combination of onsite (i.e. face-to-face) with online experiences to produce effective, efficient, and flexible learning". From this definition it is said that blended learning is a combination of conventional (face-to-face) learning with online experiences to produce effective, efficient and flexible learning.

Blended learning can combine positive aspects of two learning environments, namely learning that is carried out in the classroom with learning with e-learning (Bonk and Graham in Sutopo, 2012: 168). So it can be concluded that blended learning is learning that integrates or combines online learning (*e-learning*) with traditional learning (*face-to-face*) harmoniously to achieve learning objectives.

1.2 Google Classroom

Google Classroom is a free online blended learning application platform. Educators can create their own class and share the class code or invite students. Google Classroom is intended to help all spheres of education that helps students to find or solve learning difficulties, share lessons and create assignments without having to attend class.

Google Classroom's main goal is to streamline the process of sharing files between teachers and students. Google Classroom combines Google Drive for assignment creation and distribution, Google Docs, Sheets, Slides for writing, Gmail for communication, and Google Calendar for scheduling. Students can be invited to join classes via a private code, or be automatically imported from the school domain.

Each class creates a separate folder in each user's Drive, where students can submit work for the teacher to grade. This application is available for mobile users of iOS and Android devices which allows users to take photos and attach assignments, share files from other applications and access information offline. The teacher can monitor progress for each student, and once assessed, the teacher can return to work together with comments.

The development model in blended learning used is a hybrid learning model, where this model is directly connected to the internet online (Suhartono, 2016: 548). Blended learning is conducted online and can be accessed according to the agreement between the teacher and students. The stages of material development are determined by the lesson plan that will be carried out by the teacher. Making a story board determines the learning that will be carried out on google classroom. The story board is a learning plan that will be carried out through the media. The contents of the story board in question are learning topics, types of activities, activity plans, and information.

Learning topics are obtained through the analysis of core competencies, basic competencies, indicators and learning objectives. The results of the analysis get the learning topics to be implemented. The activity plan contains things that will be done in google classroom, such as providing videos, questions, discussions or materials. All of this depends on the teacher as a user and must be adapted to the characteristics of the learning topic. The information referred to in the story board is a note if needed during the implementation stage. Making a story board is the first step in online learning. The results of this creation are the basis for making online learning on google classroom.

Google classroom learning in Elementary School targets students who are already in high class. Higher grade students have an interest in concrete practical, everyday life. According to Mulyani and Syaodih (2009: 15) high class students are at the stage of investigating, trying, and experimenting. Students at that age are technology literate, ready to accept the times through existing technology.

1.3 Learning Activities

Effective learning is learning that provides learning opportunities by yourself or doing activities on your own. The learning process carried out in the classroom is an activity to transform knowledge, attitudes, and skills (Martinis Yamin, 2007: 75). Activities are very important principles or principles in teaching and learning interactions (Sardiman, 2006: 96). When learning takes place students are able to provide feedback to the teacher.

Sardiman (2006: 100) states that learning activities are activities that are both physical and mental. In learning activities the two are related. Oemar Hamalik (2009: 179) states that learning activities are activities carried out by students in learning activities. Learning activities can be realized if students are actively involved in learning. Martinis Yamin (2007: 82) defines active learning as a human effort to build knowledge within himself. Learning will produce a change and increase in abilities, knowledge and skills in students.

Students are able to explore their abilities with curiosity so that the interactions that occur will become experiences and the desire to know something new. Based on the above opinion, it can be concluded that learning activities are activities or actions both physically and mentally carried out by individuals to build knowledge and skills in learning activities. Learning activities will make learning effective. Teachers do not only convey knowledge and skills. However, the teacher must be able to bring students to be active in learning.

II. RESEARCH METHOD

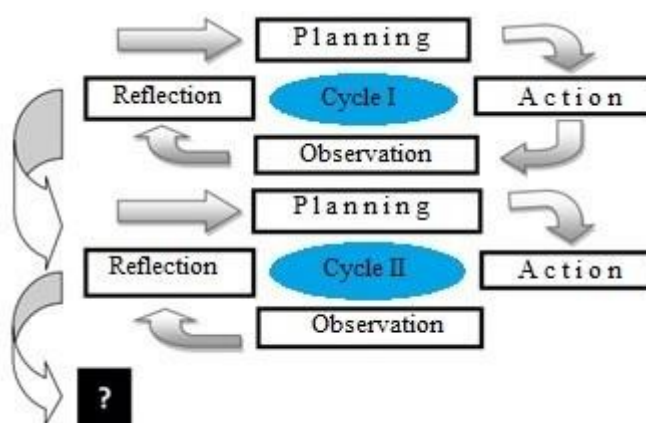
The research subjects were students of class

VIII.2 SMP Negeri 6 Sawahlunto semester 1 of the 2020- 2021 school year, the number in this class was 29 students consisting of 16 girls and 13 boys. The research was conducted at SMP Negeri 6 Sawahlunto, Jl. Jendral Soedirman, Muarokalaban Village, Silungkang District, Sawahlunto City. The research was conducted for two months starting from the third week of October 2020 until the fourth week of November 2020

This type of research is a class 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 consisted of two cycles, namely the first cycle will be held once a meeting with the material "Additives in food". The same is true in the second cycle, a one-time meeting with the material "Addictive Substances and Psychotropics". At the end of each cycle, observations of learning activities were 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.

1.4 The stages in classroom research



Pictute.1. Classroom Action Research Design Model Kemmis & Mc Taggart

1.5 Description Per Cycle

a. Cycle I

The first cycle stage is applied research action using blended learning with Google Classroom, namely as follows:

1) Planning

Planning arrangement refers to the improvement of student learning outcomes in science subjects. Classroom action research planning uses the following steps: (a) Conditioning the class so that it can be used for classroom action research. (b) Preparing research tools, including: (1) Compiling a research questionnaire. (2) Develop observation guidelines. (3) Prepare guidelines for data analysis.

2) Action

Carry out classroom action research, using the following scenarios: (1). Provide explanations to students through the WA group about the use of Google Classroom and materials that must be studied, and which are done independently. (2) Assigning students to answer questions related to the subject matter of 5 essays and made in an exercise book. (3) Students make it at their respective homes then when it's finished taking photos and sending them to Google Classroom.

(4) The teacher corrects the results of the student's assignment. (5) The teacher provides a questionnaire about students' learning motivation using google form. (<https://forms.gle/X8Kc2YfYSD2pnwC5A>)

3) Observation

Researchers make observations or observations during the learning process and report on the work of students in the form of a collection of assignments and a questionnaire using google classroom.

4) Reflection

Based on the results of observations or observations and interviews during the first successive activity, data on learning outcomes and motivation during learning were obtained. This data is used as the basis for compiling an action plan in the second cycle.

Reflection activities are carried out to determine the weaknesses of the first cycle of action, whether there has been a change or not, and how to overcome the weaknesses that occur in that cycle, then it is used to plan the second cycle of action.

b. Cycle II

Classroom action research in the second cycle was carried out based on the reflection of the implementation of the first cycle of action. The implementation of the second cycle of action is carried out with the aim of correcting the weaknesses of the first cycle of action. The second cycle action steps are as follows:

1) Planning

The second cycle planning activities are as follows:

(a) Develop plans or scenarios for repeated actions based on evaluations and notes obtained based on the results of the first cycle reflections. (b) Prepare action kits in the form of data collection sheets and data analysis tools. (c) Implementing the second cycle action plan with a blended learning learning model using google classroom. (d) Prepare teaching materials, learning media, LKPD and evaluation on google classroom. (e) Explain the use of Google Classroom in detail when face to face at school. So not only through WA.

2) Action

In the second cycle, the researcher took action in the form of improvement from the first cycle of action, using the same model as the first cycle, namely the blended learning model but by explaining in detail to students about the use of google classroom while at school (face-to-face).

3) Observation

Activities carried out at the time of observation are

- (1) Providing learning materials, LKPD to students through google classroom about the material that must be studied, and the tasks that must be done. (2) Researchers make observations or observations using observation sheets on students' learning motivation using google form. (3) Collecting data on student learning outcomes using google form. (4) Distribute a questionnaire on the use of Google Classroom via Google Form (<https://forms.gle/evSt5SBt6TRJQ3yQ6>)

4) Reflection

The activities carried out during the reflection are

- (1) Checking questionnaires and student learning outcomes. (2) Identify the weaknesses that arise in the second cycle of action. (3) Conduct a comprehensive evaluation of the process and student work results during the second cycle.

1.6 Research Instruments

The research instrument is a tool used by researchers to collect data and information about objective variables to answer problems in research. The instruments used in this study are as follows:

a) Learning Implementation Plan (RPP)

RPP is a learning implementation plan that is used to measure the level of achievement of basic competencies in the content standard in the syllabus. The lesson plan also serves to provide an overview of plans for learning in accordance with the blended learning model.

b) Student Worksheet (LKPD)

According to the Ministry of National Education (2008) student worksheets (LKPD) are sheets containing tasks that must be done by students. Activity sheets are usually instructions, steps for completing a task. The advantage of using LKPD is that it makes it easier for educators to carry out learning, for students they will learn independently and learn to understand and carry out a written assignment.

c) Observation sheet

Observation is an observation made by the researcher following the research process by mixing directly with the object of research. Observations in this study were carried out to obtain data on student motivation towards learning

d) Questionnaire

The questionnaire contains student acceptance on the convenience of Google Classroom and about the performance of google classrooms.

e) Data analysis

N-Gain analysis is a test analysis of learning outcomes which usually contains pretest and posttest values. This study uses the pretest and posttest values, so there will be a difference between the two which is called Gain. The difference in value can indicate differences in students' knowledge at the beginning and at the end of learning in the experimental class and the control class. The N-Gain formula is as follows:

$$\langle g \rangle = \frac{\langle S_{post} \rangle - \langle S_{pre} \rangle}{100\% - \langle S_{pre} \rangle}$$

The N-Gain interpretation criteria are as follows:

Table 1. N-Gain Interpretation Criteria

<i>N-Gain</i>	Interpretation Criteria
<i>N-gain</i> > 0,7	High
$0,3 \leq N\text{-gain} \leq 0,7$	Moderate
<i>N-gain</i> < 0,3	Low

(Hake, 2002)

III. RESULTS

A. Research Results Cycle I

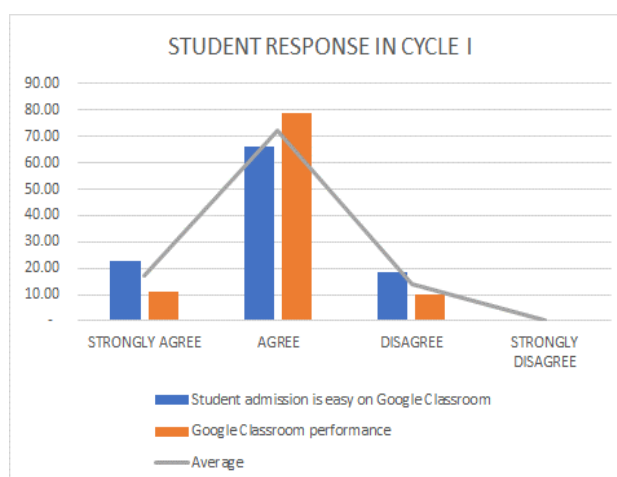
1) Student Responses to the Use of Google Classroom (Questionnaire)

After the research was carried out in the first cycle, of the 29 students in class VII.2 who were given Silkus 1 treatment, only 16 students could access google classroom, while the other 13 people could not access for various reasons such as not having a cellphone. android, does not have internet data or interference with the internet network signal in the area. However, data was obtained from the questionnaire filled out by the students regarding the ease of use of the google classroom for 10 questions, and the performance of the googleclassroom for 4 questions in attachment 2, then the average results were obtained as follows:

Table 2 Results of filling out a questionnaire about the use of google classroom cycle 1.

No	Indicator	Average students who answered			
		Strongly agree	Agree	Disagree	Strongly disagree
A	Student admission is easy on GoogleClassroom	23.0%	66.0%	18.0%	0%
B	Google Classroom performance	11.2%	78.8%	8.0%	0%
Average		17.11%	72.40%	14.19%	0%

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 response of students who are still at the agreed level. As illustrated in graph 1 below.



Graph 1. Student Response In Cycle 1

Seeing from the results obtained from cycle I, where the number of students who entered the google classroom was still low and the students' responses to the use of google classroom were still low, the researchers planned to carry out actions for the second cycle, with the hope that the results from filling out the student questionnaires would increase, and the number of students who enter google classroom is increasing.

After analyzing the data and reflecting on the first cycle, it was concluded that on average students still had difficulty using google classroom. It can be seen from the average percentage of students' answers, only 14% who strongly agree, 72% agree, and 14% 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 by planning to provide direct explanations to students how to use google classroom.

B. Research Results Cycle II

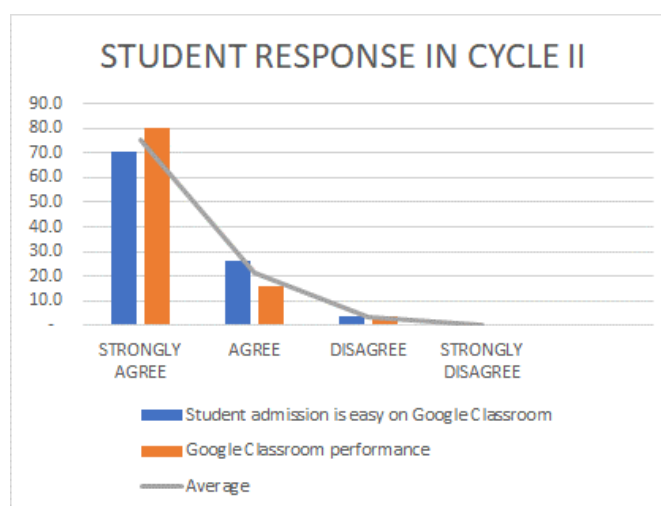
In Cycle II the researcher guided students in using google classroom by testing it directly in class. With the new learning material the second meeting is about additive, addictive and psychotropic substances. The results of the research obtained in cycle II turned out that there was an increase in the number of students who took part in

learning using google classroom directly and also the responses of students regarding the use of google classroom also increased. The number of students who can take part in the google classroom has increased by 6 to 22 people, while others are still constrained by tools and facilities that cannot be forced.

Table 3 Results of filling out a questionnaire about the use of google classroom cycle 2.

No	Indicator	Average students who answered			
		Strongly agree	Agree	Disagree	Strongly disagree
A	Student admission is easy on Google Classroom	70.21%	26.28%	3.51%	0%
B	Google Classroom performance	80.0%	16.04%	3.96%	0%
	Average	75.11%	21.16%	3.74%	0%

These results can be seen in Graph 2 below



Graph 2. Student Response In Cycle II

2) Observation of Student Activities 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 obtained from cycle I obtained data as in table 4 below

Tabel 4. Student Activity Observation Sheet in Google Classroom

No	Assessment Indicators	Rating Description
1.	Answer the question	4. Students can provide answers with appropriate questions 3. Students can provide answers but not exactly according to the question. 2. Students answer questions that are not in accordance with the questions 1. Students cannot answer questions at all
2.	Asking question	4. Students ask questions according to the material and the level of high difficulty. 3. Students ask questions according to the material and the level of difficulty is medium. 2. Students ask questions not according to the material. 1. Students never ask questions.
3.	Carrying out activities at LKPD	4. Students carry out all activities in the LKPD correctly and correctly. 3. Students do all the activities in the LKPD, but they are not precise and correct 2. Students do the activities in the LKPD correctly, but only partially. 1. Students do not do all activities in the LKPD

4	Presentation	4. Students can present their opinions well, can answer questions from other groups satisfactorily and on time. 3. Students can present their opinions well, can answer questions from other groups but are not satisfactory and on time. 2. Students can present their opinions poorly, can answer questions from other groups satisfactorily but not on time. 1. Students present their opinions poorly and cannot answer questions raised by other groups and are not on time
5.	Argued	4. Students can give their opinion properly and correctly. 3. Students can give opinions, but not quite right and right. 2. Students can give an opinion, but it is not true 1. Students have no opinion at all
6.	Write a conclusion	4. Students can write conclusions properly and correctly. 3. Students can write conclusions, but they are not correct and correct. 2. Students can write conclusions, but they are not correct 1. Students have no opinion at all

Percentage Average Value = total score / maximum score $\times$ 100% The determined success rates are:

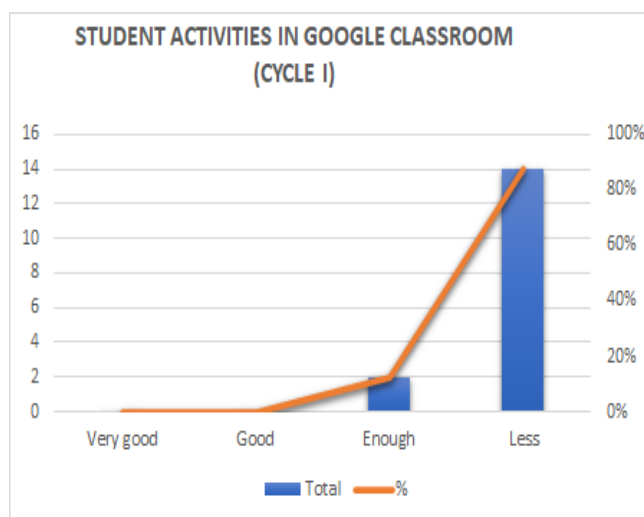
a. $86\% \leq NR \leq 100\%$: Very Good

b. $71\% \leq NR \leq 85\%$: Good

c. $55\% \leq NR \leq 70\%$: Enough

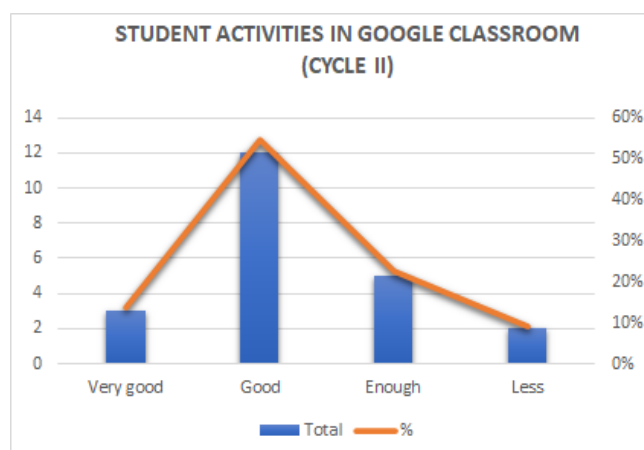
d. $0\% \leq NR < 55\%$: Less

From the data processing, 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 during the pandemic, students are only informed via WA or by zooming meetings. Even then, only some of the class members can participate. The results of observations of student activities in using google classroom above can be seen in the following graph 3.



Graph 3. Student activities in Google Classroom (Cycle I)

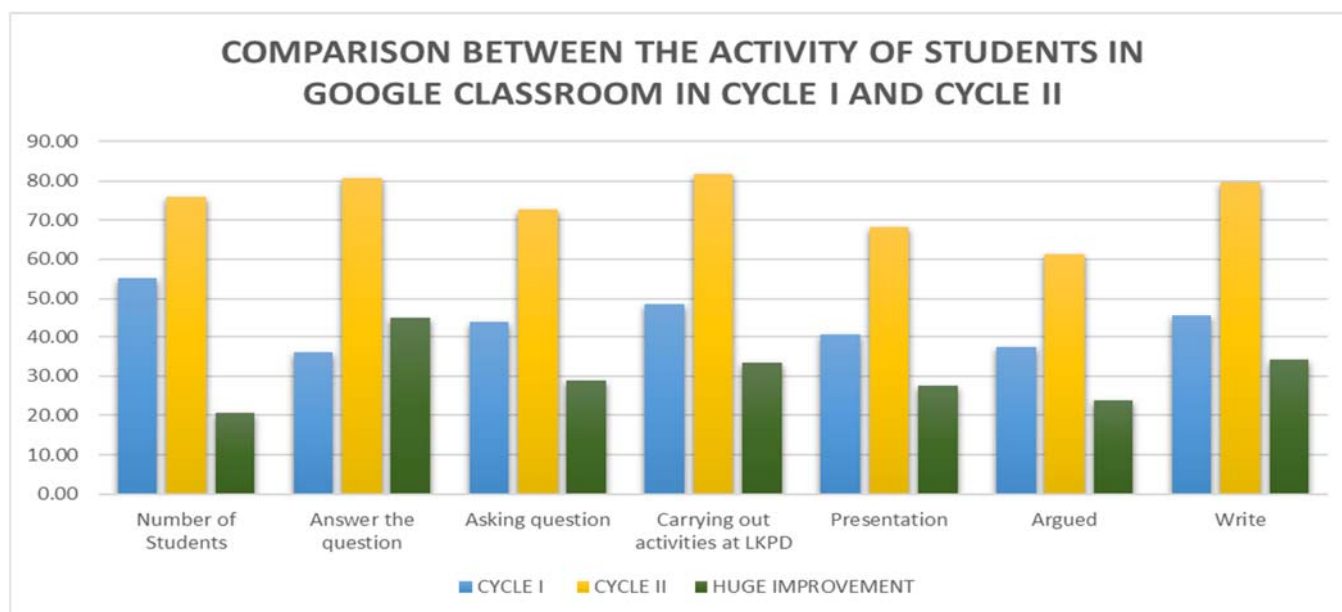
Seeing from the results of observations of student activity in the google classroom, the researcher plans to improve learning in the next cycle, namely by providing methods or instructions for using the google classroom in the classroom. At that time the school had started face-to-face at school, because it had the yellow zone status. The results of observing the activities of students in cycle II can be observed in graph 5 below!



Graph 4. Student activities in Google Classroom (Cycle II)

From the picture above, it shows that student activities in using google classroom in cycle II have increased. On average, it is good to carry out activities in google classroom. However, there are still around 7 students who cannot be forced to take part in learning in Google Classroom because they do not have complete facilities at home. Like you don't have an Android cellphone or laptop, because a small proportion of students at SMPN 6 Sawahlunto are at a low economic level. So they haven't been able to have these tools. Apart from that there are also students who live in areas that have difficulty getting internet signals. Because the area of Sawahlunto is surrounded by hills. There are still many students at SMPN 6 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 learning using google classroom in cycle I and cycle II, it can be seen in the following graph 5.



Graph 3. Comparison Between The Activity Of Students In Google Classroom In Cycle I And Cycle II

Based on the graph above, it can be seen that the actions in cycle II can have a significant effect on the absence in cycle I. For indicators to answer questions, the largest increase is 44.74%. Meanwhile, for the opinion the increase is still small, around 23.86%. The number of students is actually quite high because more than 50% have participated in google classroom activities, namely 55.17%. However, 100% of students cannot be forced to be able to participate in google classroom activities during the Covid-19 pandemic.

IV. DISCUSSION

1. Reflection Cycle 1

Based on the results of observations of student activities in cycle 1 it can be concluded that: (a). The use of google classroom is still new among students so there were several items that were answered by respondents who disagreed. (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 observation in the google classroom, there are still a lot of leftovers who are not active in entering the google classroom, besides that there are not too many students who also comment and answer the evaluation questions that have been posted there. Likewise with teaching materials, there is still a small percentage of children who read it.

2. Reflection Cycle 1

In general, student activity in using google classroom has experienced an increase compared to cycle 1. This is indicated by several things, including: (a). The students' response to the use of google classroom is good. This is evidenced by the number of students who answered strongly agree and agree with the questionnaire that was distributed. (b). The activities of students about activities in google classroom have also increased. This is indicated by the increasing number of students who can access the google classroom and student activities in the google classroom that have increased drastically, especially in the work of LKPD.

Based on the data analysis that has been done, the summary can be seen in table 5 below:

Table. 5 N-Gain The activity of using google classroom in cycles 1 and 2

Activity	Number of Students	Answer the question	Asking question	Carrying out activities at LKPD	Presentation	Argued	Write
CYCLE I	55.17	35.94	43.75	48.44	40.63	37.50	45.31
CYCLE II	75.86	80.68	72.73	81.82	68.18	61.36	79.55
N-GAIN	0.46	0.70	0.52	0.65	0.46	0.38	0.63
CRITERIA	<i>Medium</i>	<i>High</i>	<i>Medium</i>	<i>Medium</i>	<i>Medium</i>	<i>Medium</i>	<i>Medium</i>

According to Dimiyati and Mujiono (1999: 125), 51% -75% activeness criteria are high. From the results of the analysis of the activities of students on Google Classroom in cycle 1, it can be seen that the number of students who participated was classified as high, namely 55.17%. Meanwhile, student activity in google classroom is low. Namely, the activity of students in answering questions was 35.94%, Asking questions 43.75%, Doing activities in LKPD by 48.44%, presentation 40.63% and having an opinion of 37.50%.

After reflection in cycle 1 then planning and carrying out cycle 2 there were significant changes. This can be seen from the percentage of all activities in cycle 2, namely in terms of the percentage of the number of students 75.86% (very high), the activity of students in answering questions of 80.69% (very high), Asking questions 72.73% (very high), Doing activities in LKPD of 81.82% (very high), 68.18% presentation (high), having an opinion of 61.36% (high) and writing 79.55% (very high)

Based on data analysis using N-Gain, it is concluded that science learning using blended learning with google classroom has been running optimally. The average N-gain criterion is moderate, and to answer the question is high. The same research has also been conducted by Suci Pratiwi Agustin (2019) "The Effect of Google Classroom Assisted Blended Learning on High School Student Learning Outcomes in the Concept of Straight Motion" Blended Learning learning assisted by Google Classroom has an effect on student learning outcomes in experimental class increases higher (N-gain). 0.56 moderate category) compared with the control class students (N-gain 0.35 moderate category). The most visible learning outcome in the experimental class is the C4 cognitive process with an N-gain of 0.67 in the high category. The N-gain score of the control class in C4 cognitive process is 0.27 in the low category.

V. CONCLUSION

Science learning activities at SMPN 6 Sawahlunto during the Covid 19 pandemic which were previously very weak where only by giving assignments through WA had increased significantly by implementing blended learning, namely synchronous activities in the introduction of learning, asynchronous in core activities to the conclusion where students carried out learning independently by following learning in google classroom.

On average, students in class VII.2 SMPN 6 Sawahlunto at the second cycle stage strongly agreed with blended learning science learning with google classroom both in terms of student acceptance on the ease of google classroom and google classroom performance.

Student activity in the google classroom in cycle 2 has shown a very high average for the number of students 75.86%, student activity in answering questions is 80.69% (very high), Asking questions 72.73% (very high), Doing activities in LKPD is 81.82% (very high), presentation 68.18% (high), having an opinion of 61.36% (high) and writing 79.55% (very high)

Based on data analysis using N-Gain, it is concluded that science learning using blended learning with Google Classroom has been running optimally. The average N-gain criterion is moderate, and to answer the question is high.

After seeing the results of the research, discussion and conclusions, the researchers gave the following suggestions: (a). Teachers are advised to continue to carry out blended learning with google classroom to be able to increase student learning activities during the COVID-19 pandemic. (b). Teachers in other fields of study can carry out blended learning with google classroom because this online learning can help overcome difficulties in providing learning during the pandemic period because

of limitations in meeting face to face with students and students.

REFERENCES

- [1] Agustiana, I Gusti Ayu. 2014. Konsep Dasar IPA Aspek Biologi. Yogyakarta: Penerbit Ombak.
- [2] A.M, Sardiman. 2007. Interaksi dan Motivasi Belajar Mengajar. Jakarta : Raja. Grafindo Persada
- [3] Arikunto, Suharsimi. 2006. Penelitian Tindakan Kelas. Jakarta : PT. Bumi aksara
- [4] Asrori, Mohammad. 2007. Penelitian Tindakan Kelas. Bandung : CV. Wacana prima
- [5] Capone, R., De Caterina, P., & Mazza, G. (2017). Blended Learning, Flipped Classroom and Virtual Environment: Challenges and Opportunities for The 21st Century Students. Proceedings of EDULEARN17 Conference, (pp. 10478- 10482). Barcelona, Spain
- [6] Dimiyati dan Mudjiono. 2002. Belajar dan Pembelajaran. Jakarta: Rineka Cipta dan Depdikbud
- [7] Djaali. 2007. Psikologi Pendidikan. Jakarta : Bumi Aksara.
- [8] Dwiyoogo, Dwiyoogo, W. D. (2018). Developing a blended learning-based method for problem-solving in capability learning. Turkish Online Journal of Educational Technology-TOJET, 17(1), 51-61.
- [9] Gambari, et.al. (2017). Effectiveness Of Blended Learning And ELearning Modes Of Instruction On The Performance Of Undergraduates In Kwara State, Nigeria. Malaysian Online Journal of Educational Sciences, 5(1), 25-36.
- [10] Hamka, D. & Vilmala, B.K. (2019). Pengembangan Perangkat Pembelajaran Blended Learning Melalui Aplikasi Google Classroom Untuk Peningkatan Kemandirian Belajar Mahasiswa. Journal of Education Informatic Technology and Science (JeITS), 1(2), 145-154.
- [11] Iftakhar, S. (2016). Google classroom: what works and how. Journal of Education and Social Sciences, 3(1), 12-18.
- [12] I Made Alit Mariana dan Wandy Praginda. (2009). Hakikat IPA dan Pendidikan. IPA. Bandung.
- [13] Kamarga, Hanny, 2002, Belajar Sejarah melalui e-learning; Alternatif Mengakses Sumber Informasi Kesejarahan, Inti Media, Jakarta
- [14] Joseph, Arbuscato. (1995). Teaching Children Science: A Discover Approach. Fourth Edition US: A Simon & Schuster Company
- [15] Koran, Jaya Kumar C. (2002), Aplikasi E-learning dalam Pengajaran dan pembelajaran di Sekolah Malaysia.
- [16] Kusuma, Wijaya. 2011. Penelitian Tindakan Kelas. Jakarta: PT Indeks
- [17] Mulyani Sumantri & Nana Syaodih (2007), Perkembangan Peserta Didik,. Bandung: Universitas Terbuka
- [18] Mulyatiningsih, E. 2011. Metode Penelitian Terapan Bidang Pendidikan. Yogyakarta: Alfabeta.
- [19] Nana Syaodih Sukmadinata. (2004). Landasan Psikologi Proses Pendidikan. Bandung: PT remaja Rosdakarya
- [20] Ngalm Purwanto. (2002). Prinsip-prinsip dan Teknik Evaluasi Pengajaran. Bandung: PT Remaja Rosdakarya
- [21] Oktarina, Y., Nurhusna, N., & Saputra, M.A. (2019). Implementation of Blended Learning Through Smartphone-Based Applications in Disaster in Nursing Courses. *INDONESIAN NURSING JOURNAL OF EDUCATION AND CLINIC (INJEC)*, 3(2), 113-120.
- [22] Padmono, Y. (2010). Evaluasi Penerapan Kurikulum Tingkat Satuan Pendidikan (KTSP) di Sekolah Dasar. *Jurnal Inovasi Pendidikan*, 11(1).
- [23] Pappas, Christopher (2015). "Google Classroom Review: Pros And Cons Of Using Google Classroom In eLearning"
- [24] Puskur. (2010). Pengembangan Pendidikan Budaya dan Karakter. Bangsa Pedoman Sekolah. Jakarta

- [25] Ranti, M. G., Budiarti, I., & Trisna, B. N. (2017). Pengaruh kemandirian belajar (self regulated learning) terhadap hasil belajar mahasiswa pada mata kuliah strukturaljabar. *Math Didactic: Jurnal Pendidikan Matematika*, 3(1), 75-83.
- [26] Rusman.(2012). Model – Model Pembelajaran. Depok : PT RajagrafindoPersada
- [27] Stein, J. and Graham, C.R. (2014). What is Blended Learning? In Vai, M. (Edt.) 2014. *Essentials for Blended Learning: A Standards-Based Guide*. p.p. 12-13. Routledge. New York: USA
- [28] Sugihartono, dkk, 2007. *Psikologi Pendidikan*. Yogyakarta: UNY Pers
- [29] Surhartono, (2016). Menggagas Pendekatan Blended Learning di Sekolah Dasar. Prosiding Temu Ilmiah Nasional Guru VIII yang diselenggarakan oleh FKIP UT, tanggal 26 November 2016. Tangerang: Universitas Terbuka
- [30] Sutopo. 2012. *Teknologi Informasi dan Komunikasi dalam Pendidikan*. Yogyakarta: Graha Ilmu.
- [31] Sumadi Suryabrata, 2005, *Psikologi Pendidikan*, Jakarta, Rajawali Pers.
- [32] Tabrani Rusyan, Drs., dkk. 1994, *Pendekatan dalam Proses Belajar Mengajar*, Bandung : Remaja Rosdakarya
- [33] Wicaksono, V. D., & Rachmadyanti, P. (2017). Pembelajaran blended learning melalui google classroom di sekolah dasar.