EFFORTS TO IMPROVE LEARNING OUTCOMES BUILDING FLAT SIDE ROOMS THROUGH OFFLINE LEARNING MODEL

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ABSTRACT

This study aims to improve student’s learning outcomes on material Flat Sides Solid Figure using worksheet (LKPD) especially for 8th grade class-A student of SMP N 5 Sanggau. The method used was classroom action research. The subjects in this study were 8th grade class-A students. Data collection techniques used observation, measuring, and documentary studying techniques. The instruments used were written test. Based on the result, there is a significant improvement on student's learning outcomes. It proved by the improvement numbers of student who passed the exam after 2nd Cycle. Which were improved from Pre-Cycle, 1st Cycle, 2nd Cycle are 34%; 73,08%; 92,30% while the averages are 69; 70,96; and 80,08. It proved that applying offline learning models with LKPD in covid-19 pandemic will improved students' learning outcomes. The learning process was more liveliness because students have a chance to build their own knowledge based on what they learned.

KEYWORDS
Classroom Action Research, Learning Outcomes, LKPD

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INTRODUCTION

The spread of the corona virus disease 2019 or covid-19, has caused the world health organization (WHO) to declare the corona virus as a global pandemic, which has the impact of changing the order of life in all fields (Engko & Usmany, 2020). One of the impacts is on the education sector. The COVID-19 pandemic has presented its own challenges for educational institutions in Indonesia (Sadikin & Hamidah, 2020). The existence of covid-19 has forced school residents to stop activities at school that should be carried out as on normal days. School residents must maintain a safe distance or called physical distancing (Jamaluddin, Ratnasih, Gunawan, & Paujiah, 2020). The Covid-19 virus outbreak has an
impact on teaching and learning activities for students and teachers (Annisa, 2021). Activities which were carried out face-to-face in classrooms in a school environment have now turned into learning at home. In accordance with the Circular Letter of the Minister of Education and Culture Number 4 of 2020 concerning the implementation of education policies in the emergency period of the spread of COVID-19, it is recommended to carry out the learning process from home (BDR) through online learning (in the network) or offline (outside the network) (Yuni & Afriadi, n.d.).

This condition has an impact on the implementation of learning at SMP Negeri 5 Sanggau, where the covid-19 outbreak has an impact on the learning process carried out in a BDR (Learning from Home) way. This learning process has an impact on the learning outcomes of all subjects. One of them is Mathematics. The implementation of learning that has been carried out at SMP Negeri 5 Sanggau in the even semester of the 2020/2021 school year is still applying BDR learning adapted to the Circular of the Minister of Education and Culture Number 4 of 2020. Each subject teacher provides training materials and assignments according to school policies with strategies that has been selected (Nasution, 2017).

However, in reality, based on observations during the COVID-19 pandemic, mathematics learning in class VIIIA in semester 1 at SMP Negeri 5 was still not optimal. Because the frequency of face-to-face intensity of teachers and students is still lacking. Teaching and learning activities that are applied in BDR in mathematics subjects cause students and teachers to lose the opportunity to interact with each other (NAILA, 2021). The tasks given in the form of less structured exercises only hinder students' creative thinking skills. This results in low student learning outcomes (Niska, 2013).

The other factors that cause the low value of students in learning are also influenced by family background (Wahyuningsih, 2011). Learning from home is not easy for the families of students to pass, where parents play a role as teachers or teachers when studying at home. However, parents are not fully able to accompany them when studying at home and where they do not master the subjects given by the teacher (Arifin & Rahmawati, 2021). Students are given assignments as a means to determine the achievement or assessment of students' abilities. As for the anxiety in students where the task given by the teacher as an activity to move activities in the classroom from studying at school to studying at home is charged to students even more (Mutaqin, Asyari, Gunawan, & Nugraha, 2020).

Based on the results of initial observations of research in class VIIIA, it shows that student learning outcomes are still relatively low. Individual scores show as follows, students with scores above 70 are 34% or only 9 students from the total number of students, namely 26. The students who have not succeeded in the BDR learning process are 66% in accordance with the success desired by the field teacher studies. While the results expected by the teacher are 90% of students can achieve success.

Learning from home activities will require learning media that students need, so that students can easily understand the subject matter (Sakiah & Effendi, 2021). In this condition, it will be difficult to provide learning media because parents lack experience in teaching children material from school and students need effective and structured supporting media as a means of smooth learning (Purwanto et al., 2020). Learning from home during this pandemic is certainly different from learning activities at school, for that a teacher must be required to develop media teaching materials in the learning process (Gusty et al., 2020). Learning media or teaching materials are external factors that affect the success of learning activities, in general the benefits of learning media are to facilitate interaction between teachers and students so that learning is more effective and efficient (Abdullah, 2017).
Learning activities from home during this COVID-19 pandemic will require learning materials that are in accordance with needs, aims to make it easier for students to understand the subject matter. Students need supporting media in the form of teaching materials as a means of smooth learning. Learning mathematics in class VIII in semester 2 on this flat-sided geometry material requires structured teaching materials.

Paying attention to these problems, researchers are interested in applying mathematics learning using LKPD developed by the teacher himself which is adapted to the offline learning model at SMPN 5 Sanggau. This LKPD is a task carried out by students, containing instructions for the steps to complete tasks in the form of theory or practice.

**RESEARCH METHODS**

The form of this research is classroom action research using 2 cycles referring to Arikunto (2010). The subjects in this study were class VIIIA students of SMP Negeri 5 Sanggau in the even semester of the 2020/2021 academic year. The number of students is 26 people with details of 11 male and 15 female. While the research population is all students of class VIIIA SMP Negeri 5 Sanggau.

The study was conducted in a span of 6 months. It is carried out in the even semester from January 2021 to June 2021. While the implementation of offline learning research is adjusted to the schedule for taking and collecting assignments in class VIIIA. This research was carried out 4 times face-to-face meetings in 2 cycles which can be seen in Figure 1.

![Figure 1. Research Stages](image)

**Implementation of Cycle I**

**a. Planning Stage**

At the planning stage, the actions carried out in the first cycle include;

1) Knowing the student's ability level based on pre-cycle
2) Identifying problems that occur in learning mathematics during the covid-19 pandemic.
3) Determine the subjects and basic competencies based on the curriculum during the pandemic, here the teacher as a researcher takes the subject matter of Constructing a Flat Sided Space (BRSD) because it is adjusted to the schedule in the even semester of 2020/2021.
4) Prepare RPP that is adapted to the material and KD during the pandemic, in cycle I the teacher prepares RPP on the subject matter of BRSD, the sub-material is understanding of wake nets and building area.
5) Design and prepare teaching materials in the form of LKPD which have been previously validated by the validator. In the first cycle of the first meeting, the teacher prepared LKPD on the sub-material about nets and the area of cubes and blocks. Meanwhile, at the second meeting, they prepared LKPD for the sub-material about nets and the area of prisms and pyramids.

b. Stage of Implementation (Action)

The implementation of learning is offline, with students coming to school in stages based on groups according to the session schedule that has been determined by the school while still adhering to health protocols. Teacher guidance and guidance activities are carried out for 15-20 minutes.

c. Observation Phase (Observation)

At this stage, observations are made of all events that occur during the implementation of the action. Observation of the implementation of offline learning is carried out by colleagues from one of the teacher colleagues who work in the same school using an observation sheet.

d. Reflection

In this stage the researcher analyzes the observations obtained to determine corrective steps in the next cycle if weaknesses or other findings are found that cause difficulties in the cycle in question.

Implementation of Cycle 2

The stages in the second cycle are basically the same as the first cycle which includes the planning stage, implementation stage, observation and reflection stage. The difference in the second cycle of sub-materials in mathematics includes understanding the volume of BRSD. Actions in cycle II will undergo changes, based on analysis of changes and analysis of reflection in cycle I. Changes made in cycle II are carried out with the hope that learning activities will increase.

The research data was taken from the results of daily tests which would later be used as initial research data for the pre-cycle. The instrument used is a test instrument in the form of a written test that is given to students to find out learning outcomes and improve student learning outcomes, especially regarding mastery of the material taught by offline learning using LKPD created and developed by the teacher.

Data collection techniques were carried out using observation techniques, measurement techniques and documentary study techniques with the help of instruments in the form of observation guidelines, written tests, LKPD, documents: syllabus, lesson plans, photos and other documents deemed relevant. The data obtained in each observation activity of each cycle, were analyzed descriptively qualitatively by using the percentage technique to see the trends that occur in the learning process. As for this classroom action research, according to the target desired by the teacher is the success of 90% of students in the class having grades that are categorized as good, in accordance with the expectations of the teacher in the field of study. With an average value greater than or equal to 70.

RESULTS AND DISCUSSION

Pre-Cycle

The pre-cycle data in this study were taken from the results of the daily test of the Pythagorean material for class VIIIA students of SMP Negeri 5 Sanggau, totaling 27 people. This pre-cycle activity will be held on Tuesday 19 January 2021 (1 x 20 minutes). The results of daily tests for class VIIIA students at SMP Negeri 5 Sanggau as pre-cycle data are shown in Table 1.
Table 1. Pre-cycle data

| No | Student Initials | Indicator/Success | Written | Description |
|----|------------------|-------------------|---------|-------------|
| 1  | ARH              | 70                | 73      | Successful  |
| 2  | AA               | 70                | 80      | Successful  |
| 3  | BR               | 70                | 50      | No Success  |
| 4  | D                | 70                | 75      | Successful  |
| 5  | DM               | 70                | 68      | No Success  |
| 6  | DP               | 70                | 55      | No Success  |
| 7  | EF               | 70                | 65      | No Success  |
| 8  | FF               | 70                | 85      | Successful  |
| 9  | IP               | 70                | 80      | Successful  |
| 10 | L                | 70                | 83      | Successful  |
| 11 | M                | 70                | 68      | No Success  |
| 12 | MR               | 70                | 65      | No Success  |
| 13 | MF               | 70                | 50      | No Success  |
| 14 | NRS              | 70                | 75      | Successful  |
| 15 | ND               | 70                | 68      | No Success  |
| 16 | NLL              | 70                | 85      | No Success  |
| 17 | P                | 70                | 65      | No Success  |
| 18 | PI               | 70                | 68      | Successful  |
| 19 | PN               | 70                | 85      | Successful  |
| 20 | SKT              | 70                | 65      | No Success  |
| 21 | SA               | 70                | 60      | No Success  |
| 22 | SE               | 70                | 65      | No Success  |
| 23 | SMA              | 70                | 65      | No Success  |
| 24 | T                | 70                | 63      | No Success  |
| 25 | YE               | 70                | 68      | No Success  |
| 26 | YSR              | 70                | 65      | No Success  |
|    | Average          |                   | 69      | 9 Success   |

Based on Table 1, a recapitulation of the success of pre-cycle learning can be made as follows that the success of learning during the pre-cycle shows, from 26 students, there are 9 people with scores above the success indicator with an average success of 34% and 17 students who the score is below the success indicator with an average of 66% being unsuccessful. If it is translated based on the frequency of value acquisition, the data will be obtained in Table 2.

Table 2. Frequency of Pre-Cycle Earnings

| No | Range     | Tolly | Total | Description |
|----|-----------|-------|-------|-------------|
| 1  | ≤ 85 - 100 | ///   | 3     | Very Good   |
| 2  | ≤ 75 - < 85 | ///    | 5     | Good        |
| 3  | ≤ 60 - < 75 | ///    | 15    | Enough      |
| 4  | < 60      | ///   | 3     | Less        |

Based on Table 2, it can be said that of the 26 students there are 3 people with very good value, 5 people with good value, 15 people with sufficient value and 3 people with less value. So, it can be said from the results of Table 2 regarding the frequency of pre-cycle acquisition this research needs to be continued in Cycle I. This is because there are
still 18 students whose scores are in the sufficient or even less category.

Several factors were less successful in the pre-cycle due to the learning model used by the teacher was not optimal in the teaching and learning process besides the limited time for face-to-face meetings during offline learning between teachers and students. Another factor is that the media and learning resources used by teachers are still fixated on textbooks and worksheets from publishers. For this reason, it is necessary to make improvements with learning models and media that are in accordance with learning during the COVID-19 pandemic.

**Cycle I**

The implementation of Cycle I activities will be held on Friday, 19 February 2021 and Tuesday, 2 March 2021 at SMP N 5 Sanggau with a total of 26 students. The teaching and learning process refers to the offline learning plan as well as the schedule for taking/collecting assignments that are adjusted to the VIIIA class schedule.

In Cycle I, the mathematics learning material that will be discussed is "Build Flat Sides". The indicators studied in Cycle I are the nets of cubes, blocks, prisms and pyramids and determine the area of cubes, blocks, prisms and pyramids. The actions taken in Cycle I can be described as follows. The first meeting was held on February 9, 2021, while the second meeting was held on Friday, February 19, 2021. The material discussed was nets of cubes and blocks and their surface areas. Learning is carried out offline with limited face-to-face meetings in each group formed with a meeting duration of 15-20 minutes per session. Each group consists of 5 to 6 students. The test scores for learning outcomes in mathematics for class VIIIA SMP N 5 Sanggau in Cycle I to see the success of the application of the offline learning model using the LKPD developed by the teacher can be seen in Table 3.

| No. Sort | Student Initials | Assignment at BDR LKPD1 | Assignment at BDR LKPD2 | Average assignment at BDR | Test Cycle I | Information B / TB |
|----------|------------------|--------------------------|--------------------------|--------------------------|--------------|-------------------|
| 1        | ARH              | 80                       | 80                       | 80                       | 85           | B                 |
| 2        | AA               | 78                       | 80                       | 79                       | 83           | B                 |
| 3        | BR               | 40                       | 50                       | 45                       | 55           | TB                |
| 4        | D                | 70                       | 80                       | 75                       | 80           | B                 |
| 5        | DM               | 75                       | 75                       | 75                       | 70           | B                 |
| 6        | DP               | 60                       | 68                       | 64                       | 55           | BB                |
| 7        | EF               | 73                       | 73                       | 73                       | 70           | B                 |
| 8        | FF               | 83                       | 85                       | 84                       | 85           | B                 |
| 9        | IP               | 80                       | 80                       | 80                       | 80           | B                 |
| 10       | L                | 83                       | 85                       | 84                       | 83           | B                 |
| 11       | M                | 70                       | 70                       | 70                       | 73           | B                 |
| 12       | MR               | 70                       | 60                       | 65                       | 70           | B                 |
| 13       | MF               | 20                       | 20                       | 20                       | 25           | TB                |
| 14       | NRS              | 70                       | 70                       | 70                       | 75           | B                 |
| 15       | ND               | 75                       | 75                       | 75                       | 73           | B                 |
| 16       | NLL              | 85                       | 85                       | 85                       | 85           | B                 |
| 17       | P                | 70                       | 73                       | 71.5                     | 65           | TB                |
| 18       | PI               | 80                       | 78                       | 79                       | 75           | B                 |
| 19       | PN               | 85                       | 85                       | 85                       | 85           | B                 |
In Table 3 it can be seen that the learning outcomes of Cycle I are as follows: From the recapitulation of the learning outcomes of Cycle I, it shows that the learning outcomes of Cycle I of 26 students, there are 19 students with scores above the success indicator with an average success of 73.08% and 7 students whose scores were below the success indicator with an average of 26.92% unsuccessful. While the class average on the BDR assignment using LKPD showed 71.06 results while the average learning outcomes test was 70.96.

Based on Table 3, it can be concluded that in the first cycle the average learning outcomes of students by applying the offline learning model using LKPD increased when compared to the average learning outcomes during the pre-cycle. This increase can be seen from 26 students in the first cycle of activities there are 19 people who successfully meet the success indicators while in the pre-cycle only 9 students achieve success indicators. So there is an increase of 10 students. In the first cycle the average success was 73.08% and during the pre-cycle only 34%, so that there was an increase in the average success of 36.08%. If it is translated based on the frequency of value acquisition, the data will be obtained in Table 4.

| No | Range        | Tolly | Total | Description     |
|----|--------------|-------|-------|-----------------|
| 1  | ≤ 85 – 100   | 4     | 4     | Very Good       |
| 2  | ≤ 75 - <85   | 6     | 13    | Good            |
| 3  | ≤ 60 - <75   | 13    | 13    | Enough          |
| 4  | <60          | 3     | 3     | Less            |

Based on Table 4 regarding the frequency of the acquisition of the first cycle, it can be seen that there was an increase in students in the very good and good categories compared to the results of the Pre-Cycle. In addition, there is a decrease in the sufficient category. Where in Cycle I there were 4 people who succeeded very well while in the Pre-Cycle activities there were 3 people who succeeded very well so that there was an increase of 1 student. In the good category, it can be seen that in Cycle I there were 6 people who succeeded, while in the Pre-Cycle activities only 5 people succeeded, so there was an increase of 1 person.

From the results of students' learning mastery with the observation that 4 people are very good, 6 are good, 13 are quite and 3 are less, which are obtained by students, in Cycle I this has not reached the indicator of success that researchers expect, namely the average success of the class. by 90%. On the basis of this data, there are students who are less developed in learning outcomes. For this reason, research is needed to improve
Mathematics Learning Outcomes in Building Materials for Flat Sided Space. After analyzing in Cycle I, the research will be carried out in Cycle II.

Some of the weaknesses in cycle I, there are students who still do not understand how to understand BRSD material, students are less active in asking questions during face-to-face meetings, lack of preparation made by teachers, and time management is still less effective due to time constraints causing face-to-face meetings, there are learning barriers. Due to the lack of achievement that is not in accordance with the indicators of success, the researchers conducted Cycle II.

To achieve indicators of success in the teaching and learning process in accordance with the expectations of researchers, it is necessary to make improvements to the weaknesses in Cycle I. In order to Cycle II, the average student learning outcomes can achieve 90% success.

**Cycle II**

Based on the findings in Cycle I, namely that the 90% success expected by the researcher has not been achieved, then Cycle II will focus on this problem by carrying out what has been agreed in an effort to improve student learning outcomes.

The offline learning activities for Cycle II will be held on Friday, March 12, 2021 and Tuesday, March 23, 2021, while the Cycle II test will be held on Tuesday, March 30, 2021, in class VIIIA of SMPN 5 Sanggau, with a total of 26 students taking the test.

The first meeting was held on Friday, March 12, 2021, while the second meeting was held on Tuesday, March 23, 2021. The material discussed was the volume of cubes and blocks. Learning is carried out offline with limited face-to-face meetings in each group formed with a meeting duration of 15-20 minutes per session. Each group consists of 5 to 6 students. The learning outcomes of mathematics subjects on the volume of cubes, blocks, prisms and pyramids from class VIIIA students of SMPN 5 Sanggau in Cycle II can be seen in Table 5.

**Table 5. Learning Outcomes Data Cycle II**

| No. Sort | Student Initials | Assignment BDR LKPD1 | Assignment BDR LKPD2 | Average Assignment at BDR | Test Cycle 2 | Information B / TB |
|----------|------------------|-----------------------|----------------------|--------------------------|--------------|-------------------|
| 1        | ARH              | 85                    | 85                   | 85                       | 85           | B                 |
| 2        | AA               | 88                    | 90                   | 89                       | 85           | B                 |
| 3        | BR               | 70                    | 78                   | 74                       | 75           | B                 |
| 4        | D                | 75                    | 83                   | 79                       | 78           | B                 |
| 5        | DM               | 73                    | 75                   | 74                       | 75           | B                 |
| 6        | DP               | 68                    | 70                   | 69                       | 68           | TB                |
| 7        | EF               | 70                    | 70                   | 70                       | 75           | B                 |
| 8        | FF               | 83                    | 85                   | 84                       | 85           | B                 |
| 9        | IP               | 80                    | 88                   | 84                       | 83           | B                 |
| 10       | L                | 90                    | 85                   | 87.5                     | 90           | B                 |
| 11       | M                | 81                    | 80                   | 80.5                     | 83           | B                 |
| 12       | MR               | 80                    | 80                   | 80                       | 80           | B                 |
| 13       | MF               | 65                    | 70                   | 67.5                     | 65           | TB                |
| 14       | NRS              | 80                    | 90                   | 85                       | 85           | B                 |
| 15       | ND               | 80                    | 70                   | 75                       | 75           | B                 |
| 16       | NLL              | 80                    | 85                   | 82.5                     | 85           | B                 |
Based on Table 5, a recapitulation of the learning outcomes of cycle II can be made as follows: that in cycle II the average score of each student on the learning outcomes test and also the BDR task using the LKPD using the offline learning model has increased when compared to the average score tests and assignments during Cycle I. The average increase in learning outcomes and learning success in Cycle II shows that of the total 26 students, there are 24 students whose scores are above the success indicator with a success rate of 92.30% and 2 students whose scores are still below the success indicator with a percentage of failure of 7.7% where the average grade point in Cycle II is 80.08 and the average value of the assignment is 80.85.

The learning outcomes obtained by students in cycle II have already reached the indicators of success that researchers expect, namely the average learning outcomes are above 90%. This shows that the application of the offline learning model using LKPD can improve student learning outcomes. With an average success indicator of the increase from the first cycle of 73.08% to the second cycle of 92.30% so that the increase is 19.22%. A clear description of the success or completeness of students in cycle II can be seen in table 6.

Table 6. Frequency of Cycle II.

| No | Range       | Tolly | Total | Description |
|----|-------------|-------|-------|-------------|
| 1  | ≤ 85 – 100  | ///// | 11    | Very Good   |
| 2  | ≤75 - <85   | ///// | 13    | Good        |
| 3  | ≤60 - <75   | //   | 2     | Enough      |
| 4  | <60         |       | 0     | Less        |

From the results of students' learning mastery with the observation that 11 people are very good, 13 are good, 2 are enough, and 0 is less. So that in this second cycle, students have achieved the success indicator that the researcher expects, namely the average class success with a percentage of 90%. When compared with cycle I, the value of students in cycle II has experienced a significant increase.

Improved learning outcomes and completeness of student learning outcomes in each cycle carried out by the teacher. These results can be seen in table 7.

Table 7. Percentage of Student Learning Success in Cycle I and Cycle II

| Cycle | Succeed | Not Successful |
|-------|---------|----------------|
| I     | 73.08%  | 26.92%         |
| II    | 92.30%  | 7.7%           |
| Increase/Decrease | 19.22% | 19.22%         |
The data in Table 5 shows an increase in the average learning outcomes of students from the Pre-Cycle by 34% of the success of students with an average score of 69. While in Cycle I the average learning outcome of students is 73.08% with an average success score of 70, 96. And in the second cycle treatment of 92.30% with an average success value of 80.08. While the increase in success from the treatment of Cycles I and II was 19.22% of students who succeeded. Students who did not succeed experienced a decrease of 19.22%.

Based on Table 7, it can be concluded that there is an increase in learning outcomes from pre-cycle to cycle I of 1.96 where pre-cycle learning outcomes are 69 and learning outcomes in cycle, I are 70.96. Then from Cycle I to Cycle II there was an increase of 9.12 seen from the learning outcomes of the first cycle of 70.96 and the second cycle of 80.08 learning outcomes and the overall increase in learning outcomes from pre-cycle to cycle II increased by 11.08. The increase in student success can be seen significantly in Graph 1.

Figure 1 shows that after the offline learning model using the LKPD developed by the teacher in the mathematics learning process was carried out for two cycles, the learning outcomes of mathematics experienced a significant increase. This increase in learning outcomes occurs because the teacher carries out all the steps of offline learning well.

CONCLUSION

Based on the discussion of the results of the research that has been carried out, it is concluded that there is an increase in the average learning outcomes of students from the pre-cycle by 34% of the success of students with an average score of 69. While in the first cycle the average learning outcomes of students are 73.08% with a grade of the average success is 70,96. And in the second cycle treatment of 92.30% with an average success value of 80.08. While the increase in success from the treatment cycles I and II was 19.22% of students who were successful. Students who did not succeed experienced a decrease of 19.22%. This shows that the application of the offline learning model during the COVID-19 pandemic in mathematics subjects can improve student learning outcomes.

The implementation of learning using the Offline Learning Model using LKPD is an interesting and fun learning, students are able to build their own knowledge through what is learned. With his creations so that he can improve learning outcomes of mathematics learning materials for Constructing Flat Sided Space (BRSD).
From the results of the research that has been done, it shows that with the appropriate learning model, students feel happy and not burdened. Students are encouraged to learn independently to build creativity in using their knowledge to understand the material being taught. And the teacher directs students to follow the learning steps according to the LKPD with offline learning models so that the efforts made by the teacher can improve student learning outcomes in accordance with the desired achievement indicators.

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