

THE IMPLEMENTATION OF ROTATION ORIENTED BLENDED LEARNING MODEL IN THE NEW NORMAL ERA COVID 19

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To improve the quality of education in facing the future, it is necessary to change the learning paradigm through shifting the procedures for organizing educational and learning activities. Moreover, the spread of the virus in Indonesia which was dangerous and had previously been felt by the whole world before 2020, namely the Corona Virus Disease 2019 or known as COVID-19 made the learning process hampered. These conditions make the learning system that was originally face-to-face in class must be adapted to learning at home. This study aims to implement a two-way communication-oriented Blended Learning model in the new normal era of covid 2019. However, this learning model is adjusted to the conditions in the school area where the research is carried out. The trial was conducted on 36 students of class XI SMA Yapim Taruna Dolok Masihul. Student learning outcomes were measured using various instruments. Assessment of student knowledge is carried out using multiple-choice tests; assessment of student skills is measured using portfolio assessment, while attitude assessment is measured using questionnaires. The results of this study indicate that the implementation of the Blended Learning learning model is able to improve student learning and learning outcomes. This can be seen from the learning activities of students in the class whose data was taken based on a questionnaire in the first cycle in the good category of 58.33% and in the second cycle it increased to 63.89% in the good category and 16.67% in the very good category. The increase in student learning activities was followed by an increase in student mastery of learning as shown in the posttest results at the end of the cycle. In the first cycle, the number of students who scored 70 was 25 students or 69.44%. In the second cycle, there was an increase of 24.45%, namely 88.89% or as many as 36 students who had obtained a score of 70.

Keywords: Implementation, e-Learning, face-to-face, science

1. INTRODUCTION

In this digital era of the 21st century, science learning has also undergone many changes and requires the ability to use internet technology. The availability of advanced digital technology has changed the way we think about how learning can be done effectively. Moreover, if this animated video is presented using the Blended Learning approach, which is a mixed learning approach between ordinary face-to-face learning (classroom face-to-face) with face-to-face learning in cyberspace (online face-to-face), where the learning resources, in the form of descriptions of learning materials, Assignments, as well as tests that can be in the form of text, images, sound, or video are placed on the internet so that they can be accessed by students 24 hours a day. Blended Learning supports all the benefits of e-learning including cost reduction, time efficiency and ensuring a comfortable location for students and what is more important is the understanding of each individual and his motivation (Yonge, 2014).

At the beginning of 2020, a dangerous virus spread in Indonesia and had been felt by the whole world before 2020. This familiar virus is called Corona Virus Disease 2019 or known as COVID-19



is a very dangerous and deadly virus because it makes people who are infected suffer. Pneumonia is an infection that attacks the tissues and air sacs in the lungs and attaches to the respiratory tract and the mutation rate is very high. After hearing about this virus, WHO (2020), then took further action and gave a statement that covid-19 can be transmitted from one individual to another. WHO states that this virus can be spread if someone coughs or sneezes. In dealing with the Covid-19 problem, the government has implemented a policy of implementing a lockdown where the lockdown is expected to stop the spread of this virus. Therefore, what the public can do is obey the government by following the lockdown procedures and practicing social distancing as much as possible.

This condition has an impact on educational conditions that require learning to be carried out at home. However, in 2021 a new normal policy was issued which gave a little leeway, namely that some schools in the green zone were able to attend school but used a schedule, such as face-to-face only for 30 minutes, or only collecting assignments (Offline) and some doing it online. This is done because the condition of students does not allow for online implementation at home. As research put forward by Amar (2020), states that teachers, students, and schools experience many obstacles during the biology learning process during the covid-19 pandemic. The obstacles experienced by each subject are different, but the general obstacle felt is the facilities that do not support the learning process during the covid-19 pandemic. The learning choice during the pandemic is online learning, and learning that is carried out as an alternative in dealing with obstacles is conducting offline learning.

According to Syarifah (2020), this new normal era education certainly has many things that need to be prepared, especially in the application of learning. The implementation of new normal learning certainly needs to be carried out in a learning process that is functionally developed and learning can be achieved optimally. The strategy used in the learning effort is certainly different from the previous learning process. The way of packaging in the learning process designed for students will greatly affect the meaning of a learning.

There are several types of conventional learning, such as training, classroom learning, and mentoring, but there are also various electronic learning options, ranging from e-learning classes, online support systems, templates, decision support tools and knowledge bases (Sutopo, 2012). One of the supporting learning models during the Covid-19 pandemic is the Blended Learning Model, which is a learning model designed to facilitate the learning process during the COVID-19 pandemic and is one of the innovations in integrating technological advances in education or the learning process. The learning process encourages students to digitize and utilize technology. A study conducted by Edwards, Williams and Roderick showed that the use of various media (multimedia) in the learning process showed significantly better learning outcomes than the learning process that only used traditional media such as textbooks (Munir, 2017).

McSpornan, M & King (2005), said that Blended Learning is a mixed method that is selected and used in carrying out various types of learning according to the needs of different users. Thus, Blended Learning means the use of two or more different learning methods, including the following combinations: (1) Combination of face-to-face learning in the classroom with online learning; (2) Combination of online learning with access to instructors or study members; (3) Combination of simulation with structured learning; (4) Combination of on-the-job training with informal sessions; (5) Combination of managerial training with e-learning activities.

The Blended Learning learning model has various forms of learning so that the learning process can run under any conditions. Ansori (2018), said that in general there are four models for developing Blended Learning, namely: (1) Face to face driver model, a model that uses technology only as a support for face-to-face learning. So face-to-face learning is the main learning while online learning is only as a complement to learning; (3) Rotation model, is a structured combination model, where face-to-face and online learning have their own schedules so that these two types of learning are completely separate; (4) Flex model, is a Blended Learning model that focuses on independent learning through online learning. The teacher in this model is only a facilitator; (5) Online lab school model, is a learning model that is carried out in a digital laboratory room and fully uses online learning. Meanwhile, the teacher is only a facilitator who guides the learning process in the laboratory.

Hendarita (2020), said that there are five main keys in the blended learning learning process by applying the learning theory of Keller, Gagne, Bloom, Merrill, Clark and Gery, namely: (1) Live events, direct or face-to-face learning synchronously in the right time and place. the same or the same time but different places; (2) Self-paced learning, which combines with independent learning so that students learn anytime and anywhere online; (3) Collaboration, combining collaboration between students and teachers and students with students; (4) Assessment, teachers are able to mix a combination of online and offline assessment types; (5) Performance Support Materials, teaching materials are prepared in digital form and can be accessed by students both online and offline.

The development of the Blended Learning learning model above is used and adapted to the needs of the party who will carry out the learning. Because basically the goal is the same, namely to make it easier for students and teachers to carry out the learning process. During the current pandemic, the models that can be used in general are the rotation model and the flex model. Learning is done online by utilizing various technologies. However, by reconsidering that not all parties have the same ability to do online learning, it is necessary to design an appropriate learning model to meet learning needs and can be applied to the current situation by considering the abilities of all parties involved in the learning process. One of them is a blended learning model that combines face-to-face and online learning processes. Related to these problems, the purpose of this research is to implement the Rotation Model-oriented Blended Learning learning model in the new normal era of covid 2019.

2. METHOD

2.1 Research Approach and Type

This research was conducted at SMA Yapim Taruna Dolok Masihul in January – February 2021. The researcher implemented the Blended Learning model in chemistry subjects and the material being studied was acid-base. The sample in this study were 36 students of class XI IPA. The approach in this study uses a qualitative approach. Qualitative research is a research approach that describes an event, condition or certain social situation correctly which is described using words (Satori, D., Komariah, 2017). Therefore, the researcher chose a qualitative approach in this research process to produce data on the implementation of the blended learning model in class XI SMA during the Covid-19 pandemic which was described descriptively in the form of writings obtained from data sources.

2.2 Action Plan

This study uses classroom action research (classroom action research). "Classroom action research is research conducted by the teacher to the classroom or at the school where he teaches with an emphasis on improving or improving the process and practical learning" (Arikunto, 2014). "Classroom Action Research is a research activity by observing a learning activity that is given action, which is deliberately raised in a class, which aims to solve problems or improve the quality of learning in the class" (Paizaluddin and Ermalinda, 2013). The design or classroom action research model that will be used in this study refers to Kurt Lewin's model. This model is based on the concept that action research consists of four main components which also indicate steps, namely: (1) Planning or Planning; (2). Implementation or Acting; (3). Observing; (4). Reflection or Reflecting The implementation of this research can be described as in the flow chart as follows:

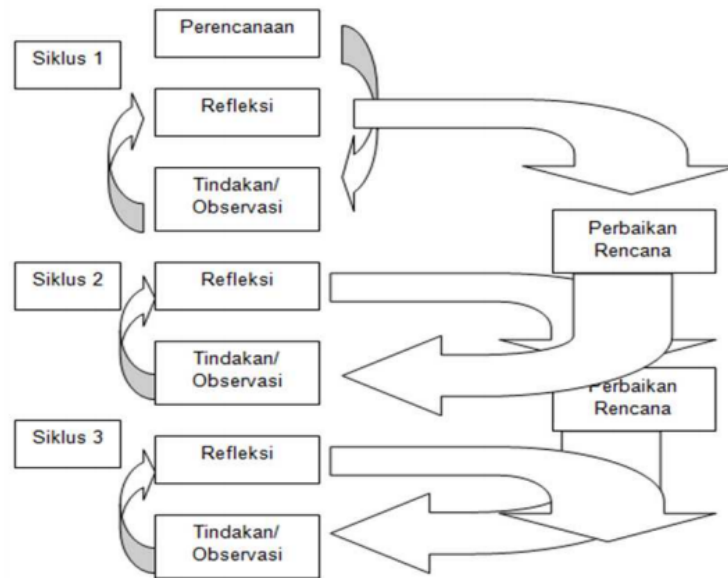


Figure 2.1 Classroom action research flowchart

2.3 Research Procedure

The researcher conducted classroom action research, using steps that had been conceptualized by Kemmis and Mc. Taggart. The implementation of action research is a process that occurs from the first cycle to the next cycle. Each cycle consists of four series of repetitive activities. The activities in each cycle are (a) planning, (b) implementation, (c) observation, (d) reflection. The data collection techniques used consisted of (1) direct observation techniques, namely direct observation of objects to determine the existence of objects, situations, contexts, and their meanings in an effort to collect research data, and (2) measurement techniques, namely how to collect quantitative data. to find out the level or degree of certain aspects compared to certain norms as well as the relevant unit of measurement. While the data collection tools used in this study were (1) Questionnaire Sheet, which used student questionnaires, and (2) Test, which was to give written tests to students to answer 20 multiple choice questions, before and after the action in order to measure the extent to which students' abilities in the concept of acid-base material.

The action of improving student chemistry learning outcomes becomes a benchmark for the success of learning activities carried out after using the Blended Learning learning model. There is a change that is if the research subject has achieved good criteria with the presentation of student learning outcomes achieving an average score in the high category The criteria for the success of this classroom action research is an increase in student learning outcomes in biology both in terms of test results at the end of each cycle and in terms of student activity in following the lesson. The Minimum Completeness Criteria (KKM) for Chemistry subjects at Yapim Taruna Dolok Masihul High School is 70. Students are declared complete if they get a score of 70 while students are declared incomplete if they get a score of 70.

The data obtained in each observation from the implementation of the research cycle will be analyzed descriptively to see the trends that occur in learning activities, namely by using two ways of data collection analysis techniques as follows: (1) Qualitative data analysis, namely about student and teacher activities in learning by using the model. Blended Learning to improve chemistry learning outcomes. Qualitative analysis was carried out by reflecting the results of observations on the learning process carried out by researchers and students in the classroom; (2) Analysis of quantitative data that is about student learning outcomes at the end of each cycle carried out. In this quantitative analysis, the

researcher wants to know student learning outcomes from assignments and tests. According to (Trianto, 2009), complete learning is achieved if 85% of all students in the class have reached the KKM. In this case the KKM set at the school is 70.

3. RESULTS AND DISCUSSION

This study aims to describe the improvement of teachers' abilities in preparing lesson plans, overcoming students' learning difficulties during the Covid-19 pandemic. Therefore, to achieve the objectives to be achieved, classroom action research is used which consists of two cycles with each cycle consisting of four stages, namely planning, implementation, observation, and reflection.

3.1 Cycle I

Table 4.1 Student Learning Activity Questionnaire Results Cycle I

| No | Category | Score | The number of students | Percentage |
|--------------|-----------|------------------|------------------------|------------|
| 1 | Poor | $X < 45$ | 0 | 0 % |
| 2 | Fair | $45 \leq X < 55$ | 15 | 41,67 % |
| 3 | Good | $55 \leq X < 65$ | 21 | 58,33 % |
| 4 | Very good | $65 \leq X$ | 0 | 0 % |
| <i>Total</i> | | | 32 | 100 % |

To clarify the level of student learning activity in cycle I, a picture is presented in the form of a bar chart:

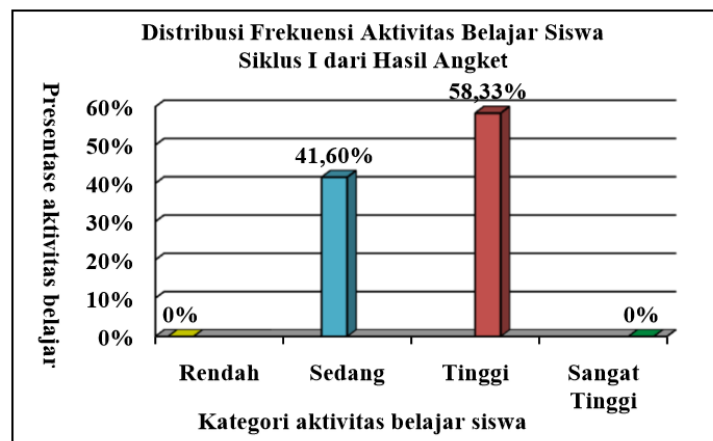


Figure 3.1 Graph of Student Learning Activities in Cycle I from the Results of the Questionnaire

So, based on the results of the questionnaire on the activities of teachers and students in learning Belnded Learning, it is known that student activities in cycle I have not been so visible to all students, there are some students who do not give suggestions or other opinions if there are deficiencies that are conveyed not together.). Furthermore, based on the results of the questionnaire recap of student learning activities in the first cycle, the results did not vary, because there were no students who were poor and very good categories or it could be said 0%. But in the fair category there are as many as 15 students or 41.60% of students. While in the good category there are 21 students or 58.33% of students. Although in the first cycle, the highest percentage was in the good category, but it did not show the success rate of the action because students who entered that category had not reached 75% of the total number of students.

Table 3.2 Learning Outcomes Cycle I

| Score (X) | Frequency (F) | Pretest | Presentase | Posttest | Percentage |
|-----------|---------------|---------|------------|----------|------------|
|-----------|---------------|---------|------------|----------|------------|

| | | | | |
|-----------|----|--------|----|--------|
| ≥ 70 | 14 | 38,89% | 25 | 69,44% |
| < 70 | 22 | 61,11% | 11 | 30,56% |

Based on the table above, it can be said that the number of students who achieved a score of 70 were 25 students or 69.44% of students and the remaining 11 students or 30.56% of students had a score of < 70 . To further clarify, it can be seen from the following bar chart:

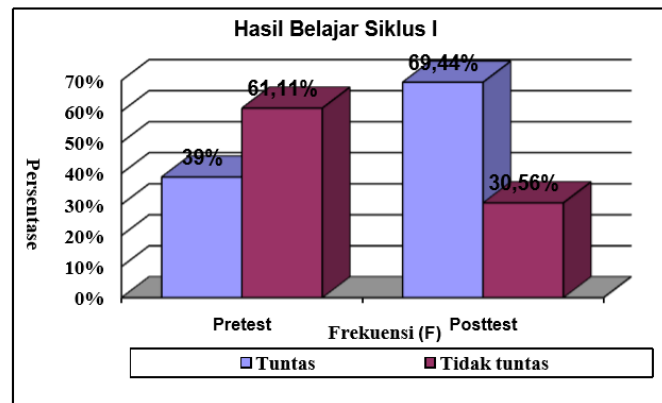


Figure 3.2. Cycle I . Learning Outcomes Graph

Based on the results of questionnaires and observations, the application of the Blended Learning model in the first cycle has not significantly increased student learning activities. The success of the action occurs when at least 75% of students or 27 students reach the good category. From the results of the first cycle of the questionnaire, only 21 students or 58.33% reached the good and very good categories. In the first cycle, the students' attention to the lesson was still low. The learning atmosphere is not yet conducive because there are still many students who do not understand learning using the Zoom Meeting application at the online face-to-face stage. So many students don't know what to do in this lesson. It can be seen that during discussion activities, many students turn off the Zoom Meeting camera and don't care. This is largely due to the lack of signal in the area so that the teacher's delivery is intermittent (unclear) which makes students no longer care about what the teacher says. In addition, students' sense of responsibility is still low. This can be proven at the time of the first meeting only 8 people were present in the Zoom Meeting room and 10 people who submitted assignments in Google Classroom.

3.2 Cycle II

Likewise in cycle I, to assess student learning activities during the application of the Blended Learning model, questionnaires and observation sheets were used to strengthen learning outcomes. In the second cycle, the level of student learning activity has increased. The following are the results of the questionnaire on student learning activities in cycle II, which can be seen in table 3.3.

Table 3.3. Cycle II Student Learning Activity Questionnaire Results

| No | Category | Score | Number of students | Presentage |
|-------|-----------|------------------|--------------------|------------|
| 1 | Poor | $X < 45$ | 0 | 0% |
| 2 | Fair | $45 \leq X < 55$ | 7 | 19,44% |
| 3 | Good | $55 \leq X < 65$ | 23 | 63,89% |
| 4 | Very good | $65 \leq X$ | 6 | 16,67% |
| Total | | | 36 | 100% |

Based on the results of the table, it can be described in the second cycle the questionnaire results show that there are 7 students or 19.44% of students in the fair category, as many as 6 students or 16.67% in the very good category, 23 students or 63.89% of students in the good category. , it means that the good and very good categories have exceeded the target of 75%. For more details in reading

the percentage of student learning activities based on the results of the questionnaire. The following is presented in the form of a bar chart of the percentage of student learning activities.

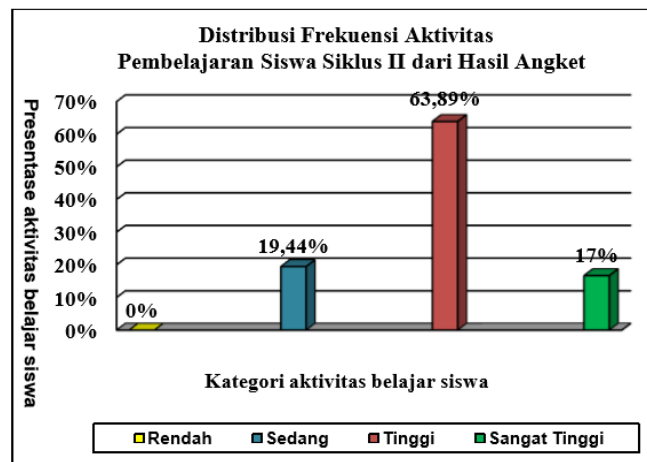


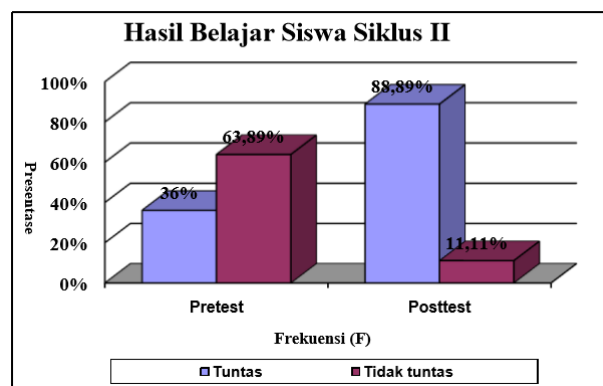
Figure 3.3 Graph of Student Learning Activities Cycle II

Student learning outcomes can be seen from student test results at the end of each cycle. The second cycle test is the same as the first cycle which consists of 20 multiple choice questions and the second cycle there is an increase in the number of students who reach the limit of learning mastery in Chemistry subjects using the Blended Learning model. The following is a table in cycle II:

Table 3.4. Student Learning Outcomes Cycle II

| Score(X) | Frequency (F) | | | |
|-----------|---------------|------------|----------|------------|
| | Pretest | Presentase | Posttest | Percentage |
| ≥ 70 | 13 | 36,11% | 32 | 69,44% |
| < 70 | 23 | 63,89% | 4 | 30,56% |
| Total | 36 | 100% | 36 | 100% |

Based on the table above, it can be said that in the pretest the number of students who achieved a score of 70 was only 13 students or 36.11%, and the rest who scored < 70 were 23 or 63.89% students. Meanwhile, in the posttest score, the number of students who reached 70 or as many as 32 students or 88.89%, and the rest who scored < 70 were 4 students or 11.11%. That means there has been an increase from the pretest to posttest scores and from cycle 1 to cycle 2. To further clarify the reading of the table,



it can be seen from the following bar

Figure 4.4. Graph of Student Learning Results Cycle II

With the continuous improvement of learning outcomes, from cycle I to cycle II, this proves that the application of Blended Learning can improve student learning outcomes in class XI-IPA SMA, because students are easier to understand lessons with these techniques because they can see the material exposure directly by the teacher. teachers (via Zoom Meetings) and easily see recaps of assignments given to students (via Google Classroom), in addition to the Blended Learning model, students feel more challenged to pay attention to the material being discussed when learning to understand Chemistry material.

4. Conclusions

Based on the research results, the following conclusions can be drawn: (1) The implementation of the Blended learning model can improve student learning activities. This can be shown by increasing the percentage of learning activities in accordance with the results of observations which show that there is an increase in student learning activities from cycle I to cycle II. In addition, based on the results of the questionnaire showed that there was an increase in student learning activities from cycle I to cycle II. In the first cycle of 58.33% of students in the good category. In the second cycle there was an increase to 63.89% of students in the good category and in the first cycle there were no students who achieved very good scores, in the second cycle there were 16.67% of students in the very good category; (2) The implementation of the Blended learning model can improve chemistry learning outcomes. This can be shown by the increasing percentage of the number of students who complete learning seen from the test at the end of each cycle. In the first cycle the number of students who completed learning was 69. Rizka Hilda Siregar, Erlina Rusli, Rina Bukit44% and the second cycle the number of students who completed learning increased to 88.89% so that the percentage of grades from cycle I to cycle II increased by 19.45% and it was said to be successful.

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