

## ***Efforts to Improve Science Learning Results in Animal Life Cycle Materials Through Quizziz Applications in the Covid-19 Pandemic***

Laila Mumtaz\*, Venny Oktaviani, Eva Oktaviana  
Pendidikan Guru Sekolah Dasar, STKIP Kusuma Negara, Indonesia  
\*[lailamumtaz@stkipkusumanegara.ac.id](mailto:lailamumtaz@stkipkusumanegara.ac.id)

### **Abstract**

The purpose of this research is to improve science learning outcomes in Animal Life Cycle material through the Quizziz application for fourth grade students in the even semester of the 2021/2022 academic year. This research method is classroom action research that follows the Kemmis and Taggart models. This research includes 4 stages namely Planning (Planning), Acting (Implementation), Observing (Observation) and Reflecting (Reflection). The research time was 2 months, from May to June 2022 with 13 research subjects, while data was collected through tests, interviews and observation. The results showed that there was a significant increase in science learning outcomes in fourth grade students. This is evidenced in each increased cycle that is in the pre-cycle = 54.00; cycle I = 56.15; and cycle II = 82, 69 and the results of the interviews conducted concluded that learning science through learning media, namely the Quizziz application game is fun for students. This study concluded that learning science using learning media, namely the Quizziz application game, can improve students' natural science learning outcomes.

Keywords: learning outcomes, science, quizziz application.

## **1 INTRODUCTION**

Education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, personality self-control, intelligence, noble character, and the skills needed by themselves and society. Education in schools is carried out in a process called learning. Learning is a relatively permanent change in behavior as a result of reinforced experience or practice.

However, currently the quality of learning is declining due to the spread of the virus outbreak covid-19. With this outbreak, the government has implemented that people are carrying out a pandemic, namely staying at home to reduce the spread of the Covid-19 virus. Decree of the Minister of Education and Culture of the Republic of Indonesia Number 01/KB/2020 of 2020 Concerning Guidelines for Organizing Learning in the 2020/2021 Academic Year and 2020/2021 Academic Year during the 2019 Coronavirus Disease Pandemic (Covid-19) states that learning is carried out face-to-face for educational units in the green and yellow zones, while for education units in the orange and red zones, learning is carried out online (Kemendikbud, 2020). The Covid-19 pandemic has had a major impact on the education system in the world and in Indonesia. The Covid-19 pandemic caused many schools to be closed to stop the spread of Covid-19, which disrupted learning activities. The Covid-19 pandemic changed the education system where the learning process that was usually carried out in face-to-face classes changed to distance learning or online learning.

Online learning raises several problems, one of which is the lack of focus on students during learning because the teacher who teaches uses the lecture method so that the material presented is too monotonous and students become bored. In addition, online

learning makes it difficult for students to understand the lessons from the teacher because they do not get optimal learning. Both from the subject matter and assignments given by the pandemic teacher Covid-19 this is direct.

This means that the online learning process requires a process of habituation for students, parents and teachers. In addition, the online learning process must also be balanced with various strategies, methods, sources and learning media so that learning objectives can still be achieved. The impact of online learning is that teachers are required to be able to create learning by utilizing technology that can increase students' creativity, knowledge and thinking skills. In addition, the use of technology during the pandemic is also expected to be able to assist students in improving learning outcomes, especially in science subjects in a contextual, effective, interesting, interactive, efficient and fun way. One of the factors for achieving effective, efficient, and enjoyable learning is to use learning media.

The world of education has various kinds of subjects, one of which is the subject of Natural Sciences (IPA). Natural Science (IPA) or science is a field of knowledge which consists of facts, concepts, principles, laws and theories that can be achieved through the learning process. In science learning it is not enough for students to master science by memorizing concepts, theoretical principles and so on, but in science learning they must provide opportunities for students to act, think and act like scientists.

One of the goals to be achieved in the learning process is that the material delivered can be conveyed to students properly, and facilitates students to gain learning experiences. To achieve quality education, efforts are needed

continuously to always improve the quality of learning. A learning quality is said to be low if its effectiveness cannot be achieved optimally.

To overcome this problem in the midst of a pandemic situation Covid-19 that teachers must be able to use learning media that are appropriate and in accordance with the conditions encountered, so as to generate interest in students in participating in learning activities. Based on the problems above to increase students' interest in learning, it is necessary to improve the learning process. The teacher innovates using learning media in the form of using learning media for learning evaluation activities. Which is one of the media used when evaluating online learning activities is Quizizz. Quizizz is an interactive quiz application originating from Santa Monica, California, United States. Quizizz is an application that provides formative questions with various choices that are presented in a fun and interesting way for all students (Herlina, 2020).

Use of interactive applications (games) like Quizizz actually make it easier for teachers to manage learning and convey information quickly and accurately to students. Quizizz is a web for creating interactive quiz games that can be used in classroom learning and can also be used for learning evaluation. Quizizz is also a web tool for creating interactive quiz games for use in classroom learning, for example for formative assessment (Salsabila, 2020). Quizizz can be used as a good and fun learning strategy without losing the essence of ongoing learning. Even this strategy can involve active student participation from the start.

With the competition vying to learn to get the best grades it is estimated that it can improve the learning outcomes of Class IV SDS Islam Ar Rofi'iyah students through the application of appropriate media, namely application media Quizizz learning that provides opportunities for students to be able to do exercises in the classroom. Quizizz also allows students to compete with each other and motivates them to study so that learning outcomes can increase. Quizizz games can help motivate student learning and improve learning outcomes, so far paper tests are used. Quizizz can now be downloaded on the Playstore for Android users so that it is more practical to use and of course mobile friendly (Setyo, 2020).

Based on the problems above, it is necessary to conduct research to determine the increase in student learning outcomes in learning Animal Life Cycle Science in class IV SDS Islam Ar Rofi'iyah. Observation shows that out of 13 students in class IV SDS Islam Ar Rofi'iyah, 11 students obtained a low score for Science material on the Life Cycle of

Animals below 70 (84.61%), and only 2 students received an assessment score above 70 (15.38%). Therefore, the author wishes to conduct Classroom Action Research with the title "an effort to increase learning outcomes of animal life cycle natural science material through the Quizziz application for even semester IV grade students at SDS Islam Ar-Rofi'iyah for the 2021-2022 academic year" ..

## 2 RESEARCH METHODS

Based on the research objectives, the method used in this research is classroom action research. This Action Research is research that aims to improve the effectiveness and efficiency of learning, especially science learning outcomes. This study uses the Kemmis and Mac Tanggart models (Kemmis, 1992) with four stages: planning, action, observation, and reflection.

This research was carried out at SDS Islam Ar-Rofi'iyah in semester II of the 2021/2022 school year from May to June 2022. The subjects of this study were class IV students, totaling 13 students consisting of 6 male students and 7 male students. educate girls.

Data collection techniques in this study are: a) Tests, used to obtain test data on student learning outcomes. The data for this test were taken in each cycle which consisted of two cycles, so that each cycle obtained post-test data regarding the Animal Life Cycle material; b) Observation, used to obtain data regarding students' process skills in the learning process that implements the Quizziz game media.

Data analysis tests in this study were data reduction and data description. The description of the data is also divided into two, namely qualitative and quantitative data. Quantitative data on the results of the elaboration research are explained as follows.

### Learning Outcome Data

The data analysis technique that the researcher uses in obtaining data on student learning outcomes is a written test, analyzed using the average formative test score which is calculated by the following calculation:

$$\text{Average} = \frac{\text{value amount}}{\text{data numbers}}$$

### Study Completeness Result Data

Data on learning completeness results are presented in tabular form and then analyzed using percentage values. The calculation is as follows.

$$K = \frac{\sum T}{n} \times 100\%$$

Information :

K = Completeness

$\sum T$  = Number of students who complete

n = Number of students

The data validity technique in this study was carried out by a triangulation process, namely as data from various sources in various ways and at various times. So that triangulation can be grouped into three types, namely triangulation of sources, triangulation of data collection, and triangulation of time. The minimum completeness criterion score in this study is the minimum completeness score that has been applied by the school, which is 70. The results of understanding 92% of students in class IV SDS Islam Ar-Rofi'iyah for the 2021/2022 academic year are more than KKM (70).

### 3 RESULT AND DISCUSSION

Based on the pre-action learning outcomes as data in Table 1. In the pre-action in the observation in the form of a learning achievement test, the average score of students was still below the KKM, which was equal to 54 while the KKM set by the school for science subjects is 70.

For values that are still in bawah KKM or in the unfinished category with a score of 35-45 obtained by 6 students, in the range of 50-55 scores 3 students, 60-65 scores 2 students. As for students who have reached above the KKM, namely the value of 70-85 as many as 2 students.

Overall, the percentage for the unfinished category was 84.61% and for the completed category it was only 15.38%. While the average value is only 54.08 from the KKM that has been set by the school at 70 for science subjects, this result is of course still not optimal from the KKM.

From the results obtained on the list of student learning outcomes through the use of learning media, namely the Quizziz application in cycle I, the average value is still below the KKM standard of 70. The percentage with less or incomplete value data is 10 students or 76.92% while for the percentage with data good grades or complete as many as 3 students or only 23.08%. Cycle II, there is an increase in student learning outcomes. Observations are also used as a measure of the success of the action and as material for reflection for the next cycle of action. For scores below the KKM with the unfinished category as many as 1 student or 7.69%, namely with a value of 65. While students who have obtained grades in the complete category or above KKM with a value of 70-75 are 4 students, the value 80-85 by 4 students, and values ranging from 90-100 were obtained by 4 students. So that overall the students who scored above the KKM were 12 students or 92.31%. This result has increased by 69.07% with an average value of 82.69. This is of course the very maximum results produced by researchers together with the homeroom teacher through actions in cycle II. All of this can be seen from the results of observations and interviews that have been described in the table above regarding efforts to improve students' natural science learning outcomes through the Quizziz application learning media.

Based on the recap of the results of observations, the learning activities of each cycle experienced a better improvement, namely the pre-cycle average score was 54.07, the first cycle was 56.15, and the second cycle score was 82.69. Meanwhile the teacher's activities in each cycle experienced an increase in the learning process of applying Quizziz learning media, this can be seen from the results of the observations made. The following is a recapitulation table of student learning outcomes in science lessons.

Table 1. Recapitulation of Science Learning Outcomes per cycle

	Pre cycle	Cycle I	Cycle II
Average	54.07	56,15	82,69
complete	15.38%	23.08	92.30%
Not finished	84.61%	76.92%	7.69%

### 4 CONCLUSION

Based on the research and discussion that has been done, it can be concluded that using the Quizziz application learning media can improve science learning outcomes in fourth grade students. In the pre-cycle which was held on May 23 2022, for grades that were still below the KKM or in the incomplete category, there were 11 students or 84.61%. As for

students who have achieved a score above the KKM, namely 2 students or 15.38% in the complete category.

In cycle I which was held on June 2, 2022, for scores that were still below the KKM or in the incomplete category, there were 10 students or 76.92%. As for students who have achieved a score above the KKM, namely 3 students or 23.8% in the complete category. While the average value is only 56.08, from the KKM which has been set at 70 for science subjects, this result is of course still not optimal from the KKM.

Actions in cycle II which were carried out on June 6 2022 for scores that were still below the KKM were 1 student or 7.69%. The students who have achieved a score above the KKM are 12 students or 92.31% in the complete category.

In this result there was a significant increase in the learning outcomes of class IV students at SDS Islam Ar-Rofi'iyah. So, by using learning media, namely the Quizziz application, it can make the learning atmosphere fun and make students feel self-motivated to fight and compete in getting the best grades so that learning outcomes can increase from the cycle stages carried out. So that the action which states that students' science learning outcomes can be increased by using learning media, namely the Quizziz application, is quite effective. This can be seen from the graph of increasing learning outcomes.

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