



GAME'S APPLICATION: Learning Method Using Maze Game Media to Increase the Learning Outcomes of Early Childhood Students

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Abstract

Student learning outcomes can measure the achievement of learning objectives, so increased learning outcomes can also determine the success of a lesson. Efforts to improve student learning outcomes can be made by implementing Classroom Action Research (CAR). Providing action in the form of a game-based learning approach using maze game media in classes where the learning process tends to be monotonous has the potential to be a solution to improving student learning outcomes. This action was carried out on class II students who had problems with low student learning outcomes. At the pre-cycle stage, the average grade II grade was only 51.6, and the classical completeness was only 40%. The action in applying a game-based learning approach using maze game media given to class II succeeded in increasing student learning outcomes in each cycle. In the first cycle, the average score was 68.3 and the classical learning mastery was 65.2%; in the second cycle, the average value was 78.3 and the classical learning mastery was 82.6%.

Keywords: *Game-Based Learning, Maze Games, Childhood Learning Outcomes*



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INTRODUCTION

Learning and teaching are activities that are familiar in human life, especially in the field of education. Learning is done by someone consciously and results in positive changes, such as increased knowledge and better behavior, while also increasing the skills they already have. Learning is a process of interaction in a learning environment between students and educators who provide assistance in acquiring knowledge (Amral & Asmar, 2020). Many experts define learning as a process of changing behavior through experience (Zebua, 2020). Learning is also said to be a process of connecting stimulus and response, which is strengthened by the conditioning carried out in the learning process. Conditioning by providing a stimulus to achieve a response is what is meant by assistance in learning. In Pavlov's theory, there are two types of stimuli in conditioning: natural stimuli and conditioned stimuli. The natural stimulus in learning is the provision of knowledge, while the conditioned stimulus is a condition that is intentionally sought by the teacher to be able to provide knowledge optimally. Response is an attitude shown by students after a stimulus is given. If you want student responses to be active and happy to take part in the lesson, then the stimulus provided by the teacher must provide knowledge that is packaged in a fun way as well as facilitate students active participation (Jasiah, 2017).

The response shown by students in a lesson is also related to their learning outcomes. Learning outcomes are everything that has been achieved and changes that occur in students after getting experience from learning activities. In Indonesia, learning outcomes are observed from various aspects, namely cognitive abilities, affective abilities, and psychomotor abilities (Zebua et al., 2021). Maximum learning outcomes can be achieved if students' learning motivation is high (Lestari, 2020). Learning motivation is a driving force that awakens students' enthusiasm for learning. High motivation in the learning process is passion, enthusiasm, and pleasure when doing it, so that students will have a lot of energy to carry out learning activities. This makes learning motivation very important in the ongoing learning process. The learning process will feel its effectiveness if students who receive all stimuli have high learning motivation. Students with high learning motivation will certainly respond well. One of them is the achievement of learning outcomes in accordance with the expected competencies (Luturmas et al., 2022).

Good learning is learning that is adapted to the development, interests, and needs of students. Based on Piaget's theory, the developments that occur in SD/MI students indicate that children at this age have already passed the pre-operational development stage (2–7 years) and are starting to enter the operational development stage (7–11 years). In the operational development stage, students are able to use symbols that describe objects around them, and in the operational development stage, students are able to think logically and concretely, pay attention to more than one dimension at once, and relate them to one another. Based on the description of the child's developmental level, it can be seen that at the age of the lower class (6–9 years), students cannot think abstractly, so they need learning that is complemented by concrete examples (Luturmas, 2022).

One of the best learning outcomes can be achieved by holding a learning process that is in accordance with the development, needs, and interests of children

at their age. Lower-grade children have an interest in activities that are fun and don't overwhelm them (Zebua, 2021). This can be applied to learning, such as conducting learning with a game-based learning approach or simply playing while learning (Zebua & Sunarti, 2020). Students in lower grades also like something that appeals to their sense of sight, so media, learning resources, and the classroom atmosphere must be able to facilitate that (Pakpahan, 2020; Setiawan et al., 2021).

In theory, this is ideal, but in reality, the implementation is not always as expected. Based on the observations of researchers, 9 out of 12 class teachers at the school carried out learning based only on thematic books and LKS books (student worksheets), without providing learning media and only using the question-and-answer or lecture method (Ramli, 2011). This proves that there are still schools that carry out conventional learning processes and do not facilitate students' interests and developmental needs (Alhamuddin & Zebua, 2021). This makes student learning motivation low and also affects low learning outcomes (Saputra, 2021). Therefore, this classroom action research is needed to provide a solution that can improve student learning outcomes (Parlina et al., 2022).

One solution that can be used to solve this problem is to use interesting learning media, new variations, and in accordance with the material (Ansorida, 2022). In this research, a maze game will be applied. Maze games are educational games that are one of the interesting variations of learning media, according to the material and according to student characteristics (Susiloningsih et al., 2023). Maze game media is also able to facilitate the psychological development of students at their age because in it there are various kinds of pictures, symbols, and other visual equipment arranged in such a way as to facilitate students' ability to think logically and concretely. Game activities in an interesting and fun maze game for children will make them try to continue to enjoy it (Wahab et al., 2022). The use of games in learning activities is very useful for facilitating the characteristics of child development because the presentation of interesting and fun material will make students directly involved in learning and try to find ways to understand it. So, the use of learning media in the form of games is also able to increase the learning motivation of MI/SD students. Maze game media is able to condition students to do activities according to the interests of children their age so they can take part in learning well. Through games, his favorite thing, it is hoped that students' learning motivation will be higher so that they can influence the increase in learning outcomes.

METHODOLOGY

This research was conducted using the CAR method (classroom action research) or classroom action research. CAR is carried out by the teacher by analyzing the management of learning that has been done and continuing to make improvements. In this study, the CAR design used was the Kemmis & Taggart spiral model, which was developed by observing the school and interviewing class teachers prior to implementation. These observations and interviews were conducted to determine the use of methods, approaches, and instructional media in each class at school. CAR is carried out in several cycles until the improvement, which is the research goal, is achieved. The research cycle will stop when student learning outcomes have reached the completeness criteria according to school standards. The individual learning mastery standard set by the school is if students are able to get a

score of 70% of the maximum score, and for classical learning mastery, it is 75% of the total students. ≥ 70 , so that the average achievement of students in the class must also be ≥ 70 . In this study, the population is low-class students, with a total of 137 students. In this study, the subjects used as samples were class II students, totaling 27 students or 19.57% of the entire population. The sampling technique used in this research is purposive sampling. Data collection techniques that will be used to obtain data in this study are tests, observations, and documentation. The data analysis in this study was carried out in the following stages: data reduction, data presentation, and drawing conclusions.

RESULTS AND DISCUSSION

The planning stage of Cycle I was passed by researchers by compiling all learning tools, such as a syllabus, lesson plans using game-based learning, question sheets for assessment, research observation sheets, and maze games as learning media. All the learning tools are adapted to the material on theme 8 "Safety at Home and Travel", sub-theme 1 "Safety Rules at Home" and lesson 3. Student assessment in the implementation of cycle I is carried out through a written test regarding the material in lesson 3, with question sheets provided by the researcher. The questions are in the form of multiple choices, with three choices totaling 10 questions. Students are given 10 minutes to complete a written test. The maximum score of this assessment is 100, and the standard of student learning completeness is 70%, so each student must at least get a score of 70 to achieve completeness. Based on the test results data, it can be seen that in this first cycle, there was a change in the class average score and the number of students who completed. The class average score was 68.3, and the number of students who completed this cycle was 15 out of a total of 23 students who attended the learning activities in cycle I, so that the percentage of classical completeness was 65.2%.

During the implementation process in cycle I, apart from providing action and assessment, observations were also made to observe the implementation of CAR. Researchers as educators, accompanied by class teachers who become observers. The observer observed the researcher while he taught and gave class action and observed student behavior during the learning process in cycle I. The following are the results of observing the implementation of class actions that have been filled out by the observer: Based on all the teacher's observation points, there is one point of implementation that was not carried out by the researcher as a teacher in cycle I. The researcher did not convey the learning objectives in the preliminary stage. In fact, the delivery of these learning objectives helps students know the learning objectives that must be achieved, so that students can focus more on understanding the essence of learning that day. As a result, students also do not have an idea of the learning outcomes of the material studied in this first cycle. The results of observing the implementation of CAR on students above show that there are two observation points that have not yet been carried out as planned. The researcher, as a teacher, brings the flow of learning into the classroom but misses the presentation of learning objectives at the beginning of class, so students cannot listen to the delivery of learning objectives. In addition, many students still cannot listen to the material properly, even though they have been given learning media.

In this first cycle, there was an increase in the average class scores and percentage of classical completeness when compared to the results of the previous pre-test. However, the improvements that have occurred are still below the school completeness standard, which is a minimum of at least 70% of students having completed, so it is necessary to hold the next cycle. Based on observations of the implementation of CAR made by the class teacher, in this first cycle, the researcher forgot to convey the learning objectives before presenting the teaching material. This is an important note for researchers to pay more attention to and be able to improve it in their learning in the next cycle. The results of observing the implementation of CAR on students also need to be material for improvement for implementation in the next cycle because, in this first cycle, there were still many students who could not focus on listening when teaching material was being delivered. So, for learning activities in the next cycle, researchers must be more interactive when conveying teaching material or provide short breaks when students start to lose focus. During the playing session, the class atmosphere became noisy, so the tables and chairs were not neatly arranged. It is better if the teacher always reminds, even from the beginning of the game, so that students maintain class cleanliness.

The planning stage of cycle II is generally carried out by researchers by compiling all the learning tools as they were during the planning of cycle I. Syllabus, lesson plans using game based learning, question sheets for assessment, research observation sheets, and maze games are prepared for the implementation of CAR cycle II. Preparation of learning tools in cycle II adapted to teaching material on theme 8 "Safety at Home and Travel", sub-theme 1 "Safety Rules at Home", lesson 6.

Student assessment in the implementation of cycle II was also carried out through a written test regarding the material in learning 6, with question sheets provided by the researcher. The questions are in the form of multiple choices, with three choices totaling 10 questions and a maximum score of 100. Students are given 10 minutes to complete a written test. The results of the assessment in cycle II are as follows: The maximum score for this assessment is 100, and the standard for student learning completion is 70%, so each student must get a minimum score of 70 to achieve learning completion. Determine the number and percentage of students in cycle II who are learning to completion. In cycle II, changes in class average scores and the number of students who complete also occur. The class average score was 78.3, and the number of students who completed this cycle was 19 out of a total of 23 students who attended the learning activities in cycle II, so that the percentage of classical completeness was 82.6%.

An observation of the implementation of CAR in cycle II was also carried out to complete the provision of action and assessment. The class II teacher who accompanied the researcher during cycle II was still an observer. The class teacher observed the researcher while teaching and gave class instructions. She also observed student behavior during the learning process in cycle II. The following are the results of observations that have been filled in by the observer: Observations in the second cycle illustrate that what researchers and students should have done has been carried out in accordance with what was planned. Learning activities in cycle II run more optimally; researchers have improved the flow of learning in class, and student contributions during learning also help the implementation of learning to be more effective.

Reflections on the implementation of CAR cycle II were: In cycle II, the average class scores and percentage of classical completeness increased from the test results in cycle I. The average score increased from 68.3 to 78.3, and the classical completeness class in cycle II has passed the school completeness standard, which is as much as 82.6%. The results of the observations of researchers as teachers in cycle II also showed improvements from the previous cycle. The researcher has conveyed the learning objectives at the beginning of the learning process and has also provided icebreakers to be played when the class conditions are not conducive. According to the results of observations of students, in this second cycle, students are more able to listen when learning material is being delivered. Even during the question-and-answer activity, the students' enthusiasm was higher and they were more active compared to the previous cycle. The conditions during the play session were still rowdy, but in cycle II, the researcher was able to handle this by always inviting students to tidy up chairs or tables that were starting to look messy, so that class tidiness was maintained.

Classroom action research in class II was carried out in 3 stages, namely pre-cycle, cycle I, and cycle II. At the pre-cycle stage, the researcher observed, collected information related to usual classroom learning, and collected data on class II student learning outcomes before the action was implemented. The results obtained from this pre-cycle stage were teacher statements regarding the application of instructional media that were rarely applied, student learning outcomes were low with an average grade of 51.6, and only 10% of the students present were able to achieve learning mastery.

In cycle I, giving action by implementing game-based learning using maze game media began to be carried out. Researchers also began to become teachers, who brought the flow of learning into this cycle. The implementation of game-based learning, which was first carried out in class II, caused its implementation to be less conducive because students became less focused when listening to learning and wanted to play quickly. After implementing game-based learning, an assessment process was carried out to find out student learning outcomes in cycle I, and the average obtained was 68.3, with a classical completeness of 65.2%, which is still below the minimum level of completeness. So, reflection on the implementation of cycle I was also carried out to improve learning in the next cycle, so that learning in class became more conducive and effective and that learning outcomes could increase.

Cycle II was started from the time the lesson plan was prepared, considering the points of reflection for the implementation of cycle I. In this cycle, the researcher was able to carry out the learning process better, and the class became more conducive. Students began to listen to the lesson delivered by the researcher, especially after the ice-breaking was given to learning in cycle II. The application of game-based learning was carried out well, and learning outcomes based on assessment in cycle II showed improvement. The class average value obtained was 78.3, with classical completeness of 82.6%, which had reached the minimum level of completeness.

Based on the research discussion that has been presented, it can be seen that the application of game-based learning with maze game media given to class II is able to improve student learning outcomes. The increase in learning outcomes can

also be seen in the percentage of students' learning completion, which has increased after being given the action of implementing game-based learning with maze game media. The increase in learning outcomes that occurred in this study was certainly due to the reflection and improvement that were always made in each cycle. This really helps teachers continue to optimize the learning process.

CONCLUSION

Class II has a class average that tends to be low. Learning that is conventional and tends to be monotonous without a variety of learning methods and media is one of the causes of this. The low average value of this class was known directly by the researcher when conducting a pre-test at the pre-cycle stage of the study. With a grade point average of 51.6, only 10 out of 25 students (40%) managed to achieve the school completion standard. Learning with a game-based learning approach is something new and can be said to be successful in applying thematic learning in class II. The application of game-based learning is able to improve the learning process and student learning outcomes. This is evidenced by the always increasing class average scores and the number of students who complete each cycle. In cycle I, the class average score became 68.3 with 65.2% of students completing and increased to 78.3 with 82.6% of students completing. The use of maze game media in this study greatly supports the application of game-based learning in thematic learning, so that an increase in class II student learning outcomes can be achieved, even exceeding the completeness standard set by the school, which is 70%. It is evident from the classical completeness achieved in the final cycle of 82.6% (with an increase from the previous cycle of 17.4%), with 19 students completing and 4 students not completing. Class II student learning outcomes can increase after the application of a game-based learning approach with maze game media is carried out through this research. Thus, the learning approaches and media studied have been proven to be used to improve student learning outcomes.

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