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Application of Game-Based Learning to Improve Student Learning Outcomes at SDN 29 Pagar Alam

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Abstrak

Penelitian ini dilatar belakangi oleh kurangnya hasil belajar siswa yang rata-rata dibawah KKM, kurang bervariasinya penerapan model pembelajaran oleh guru yang menyebabkan siswa mudah bosan dalam pelajaran, dan kurangnya interaksi antara guru dan siswa. Problema ini diatasi dengan menggunakan penerapan Game Based Learning. Tujuan penelitian ini untuk meningkatkan hasil belajar siswa. Jenis penelitian ini adalah Penelitian Tindakan Kelas yang dilakukan dua siklus, terdiri dari empat tahap yaitu perencanaan, pelaksanaan, pengamatan, dan refleksi. Penelitian ini dilakukan di SDN 29 Pagar Alam subjek penelitian ini yaitu siswa kelas IVA yang berjumlah 21 siswa. Teknik pengumpulan data menggunakan observasi, tes dan dokumentasi. Alat pengumpulan adalah data hasil tes belajar siswa dan lembar observasi siswa. Hasil belajar siswa dalam pembelajaran berturut-turut sesuai perbandingan pra siklus, siklus I dan siklus II. Pra siklus sebesar 23,8 %, kemudian meningkat pada siklus I sebesar 52,3 % lalu meningkat lagi siklus II sebesar 90,4 % sehingga dengan menggunakan penerapan Game Based Learning mampu meningkatkan hasil belajar siswa. Adapun faktor pendorong penelitian ini adalah kemampuan pengelolaan kelas yang baik oleh guru dan pemanfaatan media belajar secara efektif sehingga meningkatkan kefokusannya siswa dalam belajar. Sedangkan faktor penghambatnya seperti suara gaduh dan ribut dari luar kelas. Namun, hal ini dapat teratasi dengan memberikan bimbingan dan motivasi serta pengalihan yang lebih intensif kepada siswa. Hal ini dapat disimpulkan bahwa menggunakan penerapan Game Based Learning dapat meningkatkan hasil belajar siswa.

Kata Kunci: *Game Based Learning, Hasil Belajar*

Abstract

This research was motivated by the lack of student learning outcomes that are, on average, below KKM, the lack of variation in the application of learning models by teachers that cause students to get bored quickly in lessons, and the lack of interaction between teachers and students. This problem can be overcome by using the application of game-based learning. The purpose of this study is to improve student learning outcomes. This type of research is called classroom action research, which is carried out in two cycles, consisting of four stages: planning, implementation, observation, and reflection. This research was conducted at SDN 29 Pagar Alam. The subjects of this study were IVA students in the class, totaling 21. Data collection techniques include observation, tests, and documentation. The collection tools are student learning test result data and student observation sheets. Student learning outcomes in successive learning according to the pre-cycle, cycle I, and cycle II comparison. Pre-cycle by 23.8%, then increased in cycle I by 52.3%, and then increased again in cycle II by 90.4%, so using Game-Based Learning can improve student learning outcomes. The driving factor of this research is the ability of teachers to manage classrooms well and the effective use of learning media to increase student focus on learning. At the same time, the inhibiting factors include noise from outside the school. However, this can be overcome by providing guidance, motivation, and more intensive diversion to students. It can be concluded that applying Game-Based Learning can improve student learning outcomes.

Keyword: *Game-Based Learning, Learning Outcomes*

INTRODUCTION

Learning is a process by which humans can experience change due to the learning process itself. It can also be interpreted as a process in which individuals acquire new knowledge, skills, understanding, or attitudes through experience, study, or instruction. It involves processing and using information to improve one's abilities and expertise. A teacher must be able to observe changes in behavior after assessment. The benchmark for student success is usually in the form of grades obtained. The value is obtained after students complete the learning process within a certain period and then take the final test. Then, from that test, the teacher determines the learning achievement of his students (Rusman, 2016). Activeness between teachers and students and students with students in a learning process is also called interactive learning.

The interactive learning model is a learning approach that refers to the constructivist view. This constructivist view is that students are active participants in acquiring knowledge and are involved in restructuring, mani satiation, rediscovering, and experimenting with the knowledge to make it meaningful and permanent (Wahyuning, 2022). Those components can be grouped into three main categories: content or learning materials and

students. The interaction between the three main components involves infrastructure, such as learning methods, learning media, and the arrangement of the learning environment, to create a learning situation that allows the achievement of previously planned goals. Thus, teachers play a central role in learning (Sumiati, 2019). That's why teachers have an essential role in the learning process, which attracts their students' attention (Mujib, 2013).

For children, games are an essential learning vehicle as a process of self-maturation, helping to maintain emotional stability, encouraging prosocial behavior, and introducing them to the broader world. Changes in overall behavior characterize Learning Outcomes, and this insipid means that behavior change as a result of learning includes all aspects of behavior and not just one aspect or two aspects. Behavior change includes cognitive, affective, conative, and motor aspects (Lefudin, 2014). The wordplay In Indonesian comes from the word main. The wordplay itself in the Indonesian extensive dictionary means "doing deeds to have fun (with certain tools or not); do things as you please, just do carelessly." (Pratiwi, 2017). Play activities by type consist of active play and passive play. Active play can be interpreted as an activity that provides pleasure and satisfaction to children through activities they do alone. At the same time, passive play can be interpreted as an activity that does not involve too much physical activity—for example, reading, watching comics, watching movies, listening to the radio and music.

Based on research observations conducted at SDN 29 Pagar Alam located in JL. Brigadier General Yahya Bahar, Bangun Rejo Village, North Pagar Alam District, Pagar Alam City. In the teacher-learning process, when only conventional methods are used, student activity is lacking in the learning process, which results in students not focusing on the learning process. Some students chat and play with their deskmates, have a low understanding of student concepts in science lessons due to combined science learning from science and social studies, and the average results of students' daily tests do not reach KKM, as evidenced by the appendix of student grades. The learning process will get learning results, so that learning is successful or not. Changes in overall behavior characterize Learning Outcomes, and this insipid means that behavior change as a result of learning includes all aspects of behavior and not just one aspect or two aspects.

Behavior change includes cognitive, practical, conative, and motor aspects (Lefudin, 2014). Learning outcomes are several experiences students obtain that include cognitive, affective, and psychomotor domains. Applying game-based learning like this is very suitable for the classroom to help the learning process because it can attract students' appreciation and make learning not dull. In addition, students will focus on the learning

process. The understanding of the material and student learning outcomes are expected to increase. However, in practice, teachers only use conventional methods in learning activities and rarely use game activities in the learning process. Based on the background above, the researcher is interested in raising the title "Application of Game-Based Learning to Improve Student Learning Outcomes at SDN 29 Pagar Alam."

RESEARCH METHODS

The type of research that researchers will conduct is Classroom Action Research or PTK. Sukamto et al. (Subhi, 2022) stated that action research is passed by individuals or groups who want change in certain situations by planning, implementing, and participatory; Yan is expected to solve the problem at hand. Classroom Action Research is carried out in two cycles, consisting of four stages: planning, implementation, observation, and reflection. This research was conducted at SDN 29 Pagar Alam. The subjects of this study were IVA students in the class, totaling 21. Data collection techniques include observation, tests, and documentation. The collection tools are student learning test result data and student observation sheets.

RESULTS AND DISCUSSION

Research Results

This study used test sheets to measure student learning outcomes achieved using the application of *Game-Based Learning*. Assessment in this study includes using observation sheets on teachers and students during the learning process.

1. Pre Cycle

At this stage of the cycle includes several steps:

a. Action planning

In the pre-cycle stage, the material delivered is objects in nature. Teachers still use conventional models through the lecture method in the learning process at this stage before applying *Games Based Learning*. Learning resources teachers use are still minimal and are limited to books. So, by applying *Game-Based Learning*, students are expected to have a high enthusiasm for learning and a pleasant learning atmosphere to produce the best results or meet the KKM.

b. Execution of actions

The initial activity began with the teacher saying the opening greeting, praying, checking students' attendance, and continuing learning through the lecture method. After

each meeting, we ended by saying *lafaz hamdalah*.

c. Observing Actions

The teacher observes the motivation of student learning through the lecture method. This observation was made to determine the results of science teaching in chapter 7 about human needs carried out by the lecture method.

2. Cycle I

Cycle I consists of several stages: planning, implementation, action, observation, and reflection.

a. First Meeting

In the first cycle of action planning activities, the first meeting is by creating and compiling science lesson teaching modules about human needs and preparing learning media. The implementation of the first cycle of the first meeting of learning activities at the implementation stage are:

1) Introduction

The teacher opens with greetings, asks how they are doing, and checks students' attendance. Furthermore, the teacher provides a motivational perception and then delivers the material to be learned.

2) Core

First of all, the teacher conveys the competencies to be achieved to students. The teacher presents the material as an introduction regarding the topic of discussion to find problems in the learning process. After that, the teacher explained the material about me and my needs. After the explanation, the teacher allowed students to ask questions about the material they did not understand. After that, the teacher conducts the class so that the learning process is fun so that the teacher is motivated to follow the learning material. After the teacher conducts the class, the teacher then assigns the students to recall the material that has been learned.

Then, the teacher uses the Game-Based Learning application by dividing groups of students into four groups with a random system and distributing picture cards about human needs to students for each group. The teacher provides boxes about human needs, including picture cards about human needs that have been distributed. Students take turns in each group to include picture cards about human needs that have been distributed. Afterward, the teacher reads each group that correctly inserts its picture cards into the boxes provided. The teacher rewards the group with the most excellent correct presentation. Students explain ahead of the board to obtain the information they have

found in the learning activity.

3) Cover

In the closing activity, students make conclusions about learning outcomes together. The teacher allows students to express opinions about the learning that has been followed, ask questions, and answer the material that has been discovered. Afterward, the teacher invites students to pray and say lafaz hamdalah to end the lesson.

4) Second Meeting

In the first cycle of action planning activities, the second meeting is created, and science lesson teaching modules regarding human needs are compiled, learning media is prepared, student observation sheets are ready, and evaluation sheets are prepared, namely, 20 questions.

The implementation of the first cycle of the second meeting of learning activities at the implementation stage are:

1) Introduction

The teacher opens with greetings, asks how they are doing, and checks students' attendance. Furthermore, the teacher provides a motivational perception and then delivers the material to be learned.

2) Core

First of all, the teacher conveys the competencies to be achieved to students. The teacher presents the material as an introduction regarding the topic of discussion to find problems in the learning process. After that, the teacher explained the material about me and my needs. After the explanation, the teacher allowed the students to ask questions about the material they did not understand. After that, the teacher will conduct the class to make the learning process fun and motivate the students to follow the learning material. After the teacher conducts the class, the teacher then assigns the students to recall the material that has been learned.

Then, the teacher uses the Game-Based Learning application by dividing students into four groups using a random system and distributing picture cards about human needs to students for each group. The teacher provides boxes about human needs, including picture cards about human needs that have been distributed. Students take turns in each group to include picture cards about human needs that have been distributed. Afterward, the teacher reads each group that correctly inserts its picture cards into the boxes provided. The teacher rewards the group with the most correct presentation. Students explain ahead of the board to obtain the information they have

found in the learning activity.

3) Cover

In the closing activity, students make conclusions about learning outcomes together. The teacher allows students to express opinions about the learning that has been followed, ask questions, and answer the material that has been discovered. Then, the teacher conducts an assessment of learning outcomes. Afterward, the teacher invites students to pray and say lafaz hamdalah to end the lesson.

4) Evaluation

The teacher gave the first cycle test questions at the second meeting to be done by students as many as 20 questions.

b. Second Meeting

In the second cycle action planning activity, the second meeting is made and compiles science lesson teaching modules about human needs, prepares learning media, compiles student observation sheets, and prepares evaluation sheets, namely making questions consisting of 20 questions. The implementation of the second cycle of the second meeting of learning activities at the implementation stage are:

1) Introduction

The teacher opens with greetings, asks how they are doing, and checks students' attendance. Furthermore, the teacher provides a motivational perception and then delivers the material to be learned.

2) Core

First of all, the teacher conveys the competencies to be achieved to students. Then, the teacher presents the material as an introduction regarding the topic of discussion to identify problems in the learning process. After that, the teacher explained the material about me and my needs. After the explanation, the teacher allowed the students to ask questions about the material they did not understand. After that, the teacher conducts the class so that the learning process is fun so that the teacher is motivated to follow the learning material. After the teacher conducts the class, the teacher then assigns the students to recall the material that has been learned.

Then, the teacher uses the application of game-based learning by dividing students into four groups using a random system and distributing picture cards about human needs to students for each group. The teacher provides boxes about human needs, including picture cards that have been distributed. Students take turns in each group to include picture cards about human needs that have been distributed. Afterward, the

teacher reads each group that correctly inserts its picture cards into the boxes provided. The teacher rewards the group with the most correct presentation. Students explain ahead of the board to obtain the information they have found in the learning activity.

3) Cover

In the closing activity, students make conclusions about learning outcomes together. The teacher allows students to express opinions about the learning that has been followed, ask questions, and answer the material that has been discovered. Then, the teacher will conduct an assessment of learning outcomes. Afterward, the teacher invites students to pray and say lafaz hamdalah to end the lesson.

4) Evaluation

The teacher gave the second cycle test questions at the second meeting to be done by students as many as 20 questions.

4. Inhibiting Factors and Drivers of Games-Based Learning Application

a. Inhibiting Factors

One of the inhibiting factors is the noise and noise from outside the classroom because it is close to settlements, highways, and the next class. After all, the floor plan of class IVA is close to class V, which no longer has lessons. This causes a less conducive classroom atmosphere. This atmosphere makes it difficult for students to hear directions and discuss with their friends. Besides that, noise and noise make students less concentrated while studying. In addition, the condition of students who are not healthy will also be an inhibiting factor in using the Game-Based Learning application, but this can be overcome by providing guidance and motivation as well as more intensive transfer to students.

b. Driving Factors

This study also aims to find factors that encourage learning by applying *Game-Based Learning*, accompanied by field notes where teachers play an essential role. So that the teacher's activity directs the class to support learning well. In addition, the teacher's attitude towards students significantly impacts learning. The teacher's attitude that comforts students while studying and calms students while studying increases students' enthusiasm for learning. In addition to teacher factors, learning is also supported by media factors used by teachers. The media is in the form of boxes about needs and some picture cards about human needs to attract students' attention and concentration on the material presented to excite students in learning. Then, there is learning using the application of game-based learning, which involves experiments with exciting and fun activities to

encourage students to learn. When students have passion and attract their attention to learning, it affects the achievement of learning objectives.

Discussion of Research Results

This class action research was carried out starting from planning, observation, and action activities in cycle I and continued with cycle II actions. Before the study was carried out, the teacher made observations on problems that occurred in class IVA SDN 29 Pagar Alam, and observations were carried out by homeroom interviews and observations of habits or learning that had been done before. From the observations, information was obtained, including students easily bored and inactive in the learning process, monotonous teachers using the lecture method, there is only one direction, the use of learning models and media also rarely used. For this reason, researchers plan to take action to improve learning in class IVA SDN 29 Pagar Alam by implementing the application of *Game-Based Learning*.

Learning activities are carried out directly through planning and then applied in learning activities in cycle I, which is then analyzed, and data on student learning outcomes that still do not meet the criteria for learning success are then continued in cycle II. The average results of learning outcomes, average scores, and observation scores of teachers and students between the first and second cycles were obtained.

As for the percentage of achievement of learning outcomes, average scores, and observation scores of teachers and students between the first cycle and the second cycle:

Table 1. Percentage of learning completeness, average score of students, and average student observation between cycles I and II

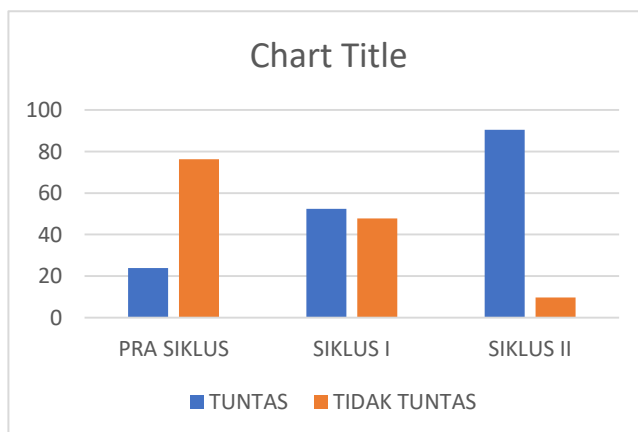
| Cycle | Student Grade Point Average | Performance Percentage | Observation Score | |
|-------|-----------------------------|------------------------|-------------------|--------------|
| | | | Student | Category |
| Pra | 56,9 | 23,8 % | - | - |
| I | 69,7 | 52,3 % | 30 | Satisfactory |
| II | 82,14 | 90,4 % | 40 | Satisfactory |

Source: Data Processing

Based on the table above shows an increase in the percentage of student achievement in learning, the average student score from cycles I and II, namely the rate of student achievement in cycle I of 69% with an average score of 69.7 and an increase in cycle II 84% with an average value of 82.14 as well as an increase in the percentage of student achievement in line with the improvement of the learning process. Students from

the first cycle of first cycle student activities obtained a score of 30 and the second cycle 40 with satisfactory categories.

The following is a comparison of student learning outcomes data in cycles I and II so that it is concluded that the application uses the application of *Game-Based Learning* in addition to the learning outcomes of grade IVA students of SDN 29 Pagar Alam seen from the following graph:



Graph 1. Comparison of Completeness of Pre-Cycle, Cycle I, and Cycle II Learning Outcomes

The graph above shows increased student learning outcomes in successive learning according to the comparison of pre-cycle, cycle I, and cycle II. Pre-cycle by 23.8%, then increased in cycle I by 52.3%, then increased again in cycle II by 90.4%, so using *Game Based Learning* can improve student learning outcomes.

The driving factor of this research is the ability of teachers to manage classrooms well and the effective use of learning media to increase student focus on learning. At the same time, the inhibiting factors include noise from outside the school. However, this can be overcome by providing guidance and motivation and more intensive diversion to students.

CONCLUSION

Based on the results of classroom action research carried out in two cycles by applying Game-Based Learning in Science chapter 7 with material about human needs, grade IV A students at SDN 29 Pagar Alam can improve student learning outcomes. The data obtained shows an increase in student learning outcomes in successive learning according to the comparison of pre-cycle, cycle I, and cycle II. Pre-cycle by 23.8%, then increased in cycle I by 52.3%, then cycle II by 90.4% so that using the application of Game-Based Learning can improve student learning outcomes. The driving factor of this research

is the ability of teachers to manage classrooms well and the effective use of learning media to increase student focus on learning. At the same time, the inhibiting factors include noise from outside the school. However, this can be overcome by providing guidance and motivation and more intensive diversion to students. It can be concluded that applying Game-Based Learning can improve student learning outcomes.

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