

APPLICATION OF DOMINO CARD MEDIA TO INCREASE LEARNING ACTIVITY AT ELEMENTARY SCHOOL

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Abstract. This research is motivated of low activity students in learning . To overcome the problem of low activity, it is necessary to take action to increase the learning activity of Class VB SDN Gadang 4 Malang 2023/2024 using Domino Card media. The research subjects to the action students. Class VB with 28 students, the subject of the action is the student. The data collection method uses observation. The data analysis technique used classroom action research . The results of the siklus research showed that the average result of student activity in siklus I was 43.39%, while in siklus II the percentage was 61.61% and increased again to 80.18% in siklus III. And then, it can be concluded that the use of Card media can increase students' learning activeness, material about the parts of the eye and their functions for Class VB students at SDN Gadang 4 Malang.

Keywords: Learning media, domino card, study activities

I. INTRODUCTION

Education is an effort to carry out a learning process related to knowledge, attitudes, and skills through training, teaching or research [1]. Education aims to increase the potential of each individual [2]. It can be interpreted and concluded that, education has the aim of making students ready to face all conditions in the future armed with knowledge, skills and good attitudes.

Learning in education is essentially a process of interaction between students and the learning environment, so that changes in behavior occur for the better. The obligation of educators in learning is to coordinate the environment to support changes in behavior for students [3]. The teacher's task in the educational business is to serve, which provides encouragement and shows the way for students in the teaching and learning process. It is important to develop an interesting, motivating, creative learning environment, encouraging students to actively participate in learning. Active learning is a learning approach that involves several student activities [4]. The ability to invite students to participate in the learning process is another skill that an educator needs to have [5]. Therefore, as educators you must be able to create active and interesting learning.

In learning, there is a very important role, namely teaching methods, teaching materials, learning media, all three of which are closely related to supporting successful learning. Learning success is also influenced by students' learning motivation and activeness. Student activeness in the learning process is a student's effort to gain learning experience, where student active learning can be achieved through group learning activities or individual learning so that learning in class must be made as interesting as possible [6].

Factors that influence students' learning activity can be classified into three types, namely internal factors (factors from within the students), external factors (factors from outside the students), and learning approach factors. [7]. If students have high motivation or active learning, they are likely to be successful in the learning process and thus get high grades [8]. It can be interpreted that the higher the level of motivation and learning activeness of students, the greater the effort they make in achieving learning success.

The learning process in educational units must be interactive, inspiring, fun, challenging and motivate students to participate actively, this is necessary in the learning process [9], like learning media, learning media can be used by teachers to convey learning [10], Learning media that is packaged well can attract students' attention and motivate them to be more diligent in the learning process, making it more enjoyable [11], so that it can inspire them to absorb and remember the information and skills they have learned. The availability of learning media acts as a tool, and educational media can help students absorb the material and understand it [12]. Thus, through interactive learning media, the teaching and learning process can be made more effective and efficient and good relationships can be established between educators and students. With the existence of learning media in the teaching and learning process in the classroom, it can help teachers to deliver learning material effectively, and students can also receive the material delivered by the teacher completely and efficiently. So that learning objectives can be achieved optimally with the help of learning media effectively interactive for all student in the class. The output from establishing a good relationship between students and teachers will be able to achieve learning goals in accordance with existing learning outcomes.

One of the interactive media is the use of domino cards as a learning medium which can increase learning motivation for students. One of the benefits of learning media is that it can arouse students' motivation and interest in learning [13]. The domino card media has a special feature, namely that the domino card game is usually negative in nature and is used for gambling, while the domino card media in learning is used to convey positive learning material which can make it easier for teachers to teach subject matter to students [14], domino card-based games are played by students for fun [15]. The use of card media is more varied in the high class [16]. Domino card media is widely used in elementary school lessons. In addition, learning that uses media will provide optimal results for students' understanding of the material they are studying, and can increase active participation by students in receiving learning responses [17].

Implementing learning using domino cards has been widely used by several researchers to increase students' interest in taking lessons. Tutu Handayani said [18] in his research stated that domino card media is a media development that is practically used in the learning process. Santi Octavia in her research explained that the "Domino Smart Card" media had a positive effect on students' learning motivation. Learning motivation is encouragement from within and outside students to achieve a desired goal, learning motivation can give someone the strength to carry out learning activities [19]. With high learning motivation, the results obtained by students will be maximized according to the learning objectives achieved. From previous research statements, it can be concluded that the use of domino cards can increase motivation, active learning, and student learning achievement results.

During teaching and learning activities, class teachers face many problems regarding the implementation of learning, one of which is the activeness and participation of students in receiving learning. Based on the author's observations, the learning carried out by the VB class teacher at SDN Gadang 4 Malang has so far used the lecture method and only used concrete learning media. So students feel bored and are not active in participating in learning. This gap between expectations and reality arises as a problem in this research. Researchers want to know more about the application of learning media to measure student activity. Based on the description above, the problems revealed in this classroom action research are to increase students' active learning, it is hoped that students can be more active when learning with the Domino Card game. Based on the background above, the researcher conducted classroom action research with the title "Application of Domino Card Media to Increase VB Class Students' Learning Activeness on Eye Parts and Their Functions at SDN Gadang 4 Malang".

So that the causes of problems that exist in the learning process will be known, so by knowing the causes it is hoped that learning media can be applied to solve these problems. So this research will focus on discussing the application of learning media to solve problems in the class. It is hoped that in the future, the sophisticated learning media can be applied by other teachers out there.

II. RESEARCH METHOD

This research is collaborative action research (PTKK), because the research was conducted to solve learning problems in the classroom with the teacher. This research also includes descriptive research, because it describes how a learning technique is applied and how the desired results can be achieved. PTKK is carried out with the aim of improving the quality of learning, PTKK focuses on the class or the learning process that occurs in the classroom. This PTKK uses a model from Stephen Kemmis and Robyn McTaggart [20]. In general, the steps of Classroom Action Research consist of four stages, namely Planning, Acting, Observing, Reflecting, and so on until the expected improvements or improvements are achieved (success criteria). The criterion for the success of this learning is the interactive level of students which is the main aim of the research which will later be achieved in classroom learning and evaluated together with this research.

At the planning stage, plan the learning that will be implemented in the teaching and learning process, design learning strategies and scenarios that will be implemented using Domino Card media, and determine indicators of achieving success in learning. Action implementation stage, 1.) Provide an explanation of the learning objectives that will be given to students Especially why study this science, and what benefits will be obtained from studying this science. 2.) Carrying out learning activities using Domino Card media. 3.) Provide evaluation questions and observe the results of students' active learning. Observation stage, recording all data and information in the learning process during the action research, to determine whether the learning process is in accordance with the design. This evaluation aims to find out the extent of students' understanding after applying learning media. Reflection stage, thoroughly reviewing the actions that have been taken, analyzing the results of students' active learning. If there are weaknesses in observations, they will be corrected with further learning actions according to evaluation.

A. Research Subject

The subjects of this research were all students in class VB at SDN Gadang 4 Malang totaling 28 students consisting of 14 men and 14 women. VB class students have the characteristics of being at the concrete operational development stage. This research will be carried out in Class VB at SDN Gadang 4, Malang City, East Java, studying Natural and Social Sciences (IPAS) regarding the parts of the eye and their functions in the even semester of the 2023/2024 academic year during August 2023.

B. Data Analysis Technique

The data obtained in this research came from observation sheets. The indicators used to determine student learning motivation are 1.) Interaction with the teacher. 2.) Collaborate with groups. 3.) Doing assignments. 4.) Express your opinion. 5.) Answer the quiz and evaluation.

Table 1. Indicators of Student Learning Activeness

Score	Precentage	Qualifying
17-20	82%-100%	Very active
13-16	63%-81%	Active
9-12	44%-62%	Quite active
5-8	25%-43%	Less active

Indicator of success in carrying out this research is considered successful if it has fulfilled the success of the action, namely the active learning of students through the application of Class VB Domino Card media at SDN Gadang 4 Malang with a percentage reaching 81% (active criteria) from 28 students. The assessment of student learning activity observation sheets in this research can be calculated using a formula along with symbolic descriptions which have been presented as follows:

$$LA = \frac{TS}{MS} \times 100$$

Where (LA) is learning activity of student, (TS) is total score obtained, (MS) is total maximum score.

$$PPA = \frac{\sum fx}{NoQ \times NoS} \times 100$$

Where (PPA) is the percentage per aspect, ($\sum fx$) is the number of students active in each aspect, (NoF) is the number of qualifications, and (NoS) is the number of students.

III. RESULT AND DISCUSSION

A. Application of Domino Card Media: Parts of the Eye and Their Functions

1. Siklus I

Learning in the first siklus begins with planning, namely compiling learning tools in the form of a Science Teaching Module with material "Parts of the Eye and Their Functions". Apart from that, researchers prepared Student Worksheets (LKPD), evaluation questions.

In the implementation stage, the researcher conducted learning in class without using domino cards, in this siklus using concrete media, namely replicas of the parts of the eye.

At the observation stage, the researcher as the implementer of the learning plan and the class teacher as the observer, observe aspects of students' active learning through observation sheets that have been prepared previously. From the implementation of siklus 1, the activity aspect is still classified as less active based on the activity achievement indicators. Meanwhile, the research target is on a scale of 63% -81%, namely the active category scale. So, researchers together with teachers carried out evaluations and reflections to find out deficiencies during learning.

From the reflection results, it was found that classroom conditioning was still not optimal, so things still happened that made the class ineffective, such as students being busy themselves. So, it is necessary to improve methods and models in the learning process as well as the use of interactive media so that it is used more effectively.

2. Siklus II

In the second siklus, using learning media in the form of Domino Cards which were designed using the Canva graphic design platform and had a card size of 9 cm. Then, there are questions and answers on the left and right sides of the card. In its implementation, learning is carried out according to the syntax of the TGT (Teams Games Tournament) model, namely; (1) class presentation; (2) play in groups (teams); (3) games; competition (tournament); awards (recognition/reward).

At the implementation stage, learning uses the TGT model with syntax adapted to the Domino Card media, namely; (1) the teacher presents the material and explains the concept of the game (class presentation); (2) students are divided into groups according to their abilities (teams); (3) All groups play with their members (games); each group discusses the cards they got, then arranges them according to the right pair of cards (tournament); (4) The group that finishes first and arranges it correctly is the winner (team recognition/reward); and (5) reinforcement from the teacher.

At the observation stage, it was found that the domino card game was effective enough to be applied to learning, considering that students were quite active in carrying out learning activities, however, it was still less effective, as there were still some students who did not help their group friends to play domino cards and difficult to answer, match the cards.

From the results of the reflection, it is necessary to improve the learning process and media so that they are used more effectively.

3. Siklus III

In the third siklus, the TGT model used is supported by Domino Card media which has undergone improvements, namely the types of questions and answers on the cards, the addition of a domino board so that it can help students to arrange cards neatly and creatively. Then, the number of cards is smaller so that playing time is more efficient.

At the implementation stage, learning uses the TGT model with syntax adapted to the Domino Card media through changes in the way of playing, namely; (1) the teacher presents the material and explains the concept of the game, the game is carried out outside the classroom (class presentation); (2) students are divided into groups according to their abilities (teams); (3) All groups play together with their respective members by lining up backwards (games); each group member takes turns arranging the cards on the domino board, then arranging them according to the correct pair of cards (tournament);

(4) The group that finishes first and arranges correctly will be the winner, giving a reward to the winning group (team recognition); and (5) Then reinforcement from the teacher.

At the observation stage, it was found that the domino card game was efficient and effective to apply to learning, considering that students were already active in carrying out domino card game activities regarding the parts of the eye and their functions.

From the results of the reflection, the researcher acts as a learning plan implementer and model teacher, as well as an observer to observe aspects of students' active learning through observation sheets that have been prepared previously. From the implementation of siklus III, the active learning aspect of students is classified in the active category based on indicators of active achievement. The following is Domino Card media which has gone through the stages of improvement and refinement from the previous siklus.

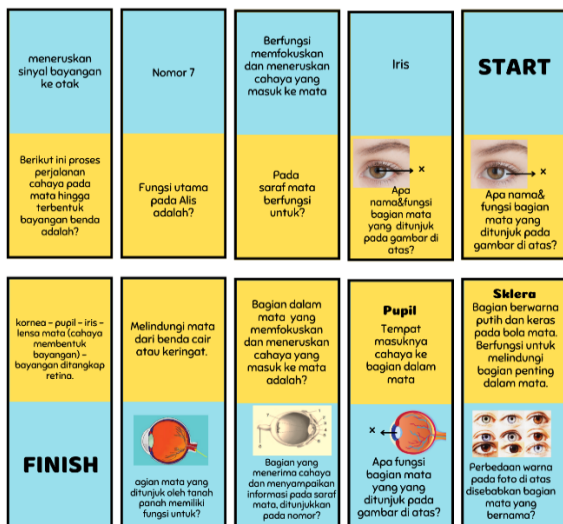


Figure 1. Domino Card Media (High Ability Questions)

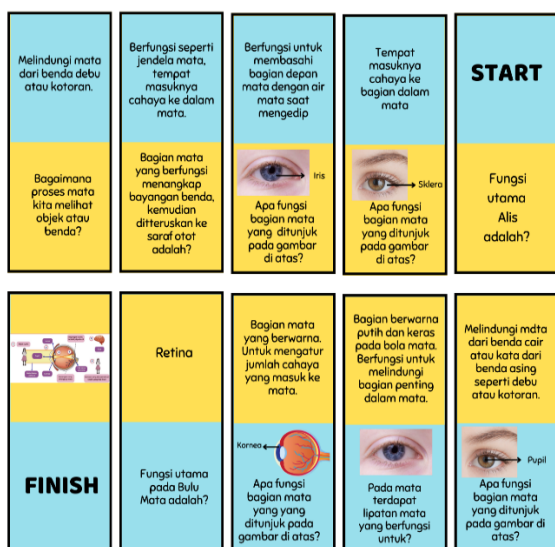


Figure 2. Domino Card Media (Medium Ability Questions)

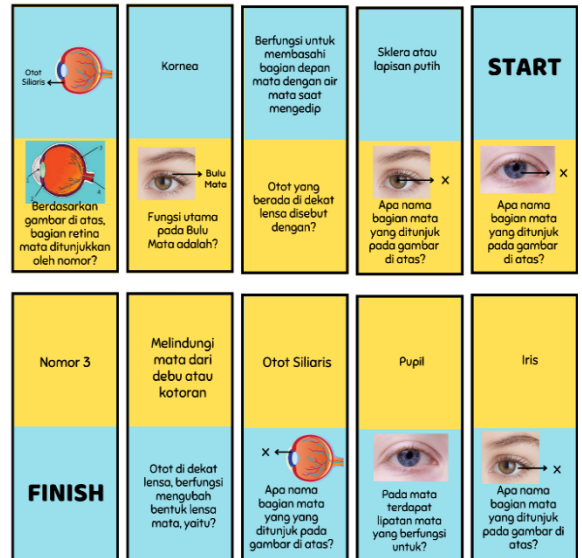


Figure 3. Domino Card Media (Low Ability Problem)

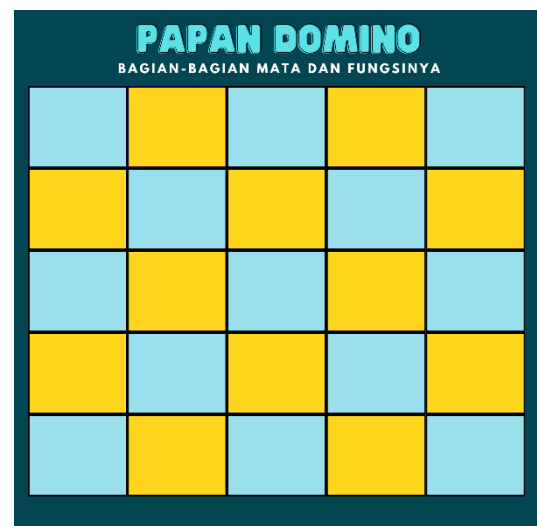


Figure 4. Domino board

B. Result

This research was conducted in three siklus, based on the learning that had been carried out, students' learning activeness experienced a significant increase.

1. Siklus I

Results of observations of students' learning activeness at Siklus I stage. Classically, the percentage per Aspect of the students' learning activeness indicator is obtained, namely the percentage in Aspect A; Interaction with teachers has an average of 50.00%, Aspect B; Collaboration with groups has an average of 47.32%, Aspect C; Carrying out assignments has an average of 32.14%, Aspect D; Expressing an opinion has an average of 33.04%, Aspect E; Answering the quiz had an average of 54.46%, and the overall average percentage was 43.39% with the qualification **Less Active**.

Table 2. Percentage Results of Observations on Learning Activeness of Siklus I Students

No.	Aspect	Very Active		Active		Quite Active		Less Active	
		f	%	f	%	f	%	f	%
1.	A	5	18%	2	7.14%	9	32.14%	12	42.86%
2.	B	2	7%	2	7.14%	15	53.57%	9	32.14%
3.	C	0	0%	0	0.00%	8	28.57%	20	71.43%
4.	D	1	4%	0	0.00%	6	21.43%	21	75.00%
5.	E	0	0%	13	46.43%	7	25.00%	8	28.57%
Average		1.6	6%	3.4	12.14%	9	32.14%	14	50.00%

Table 3. Total Average Observation of Learning Activeness of Siklus I Students

No.	Aspect	Classical Per Aspect
1.	A	50.00%
2.	B	47.32%
3.	C	32.14%
4.	D	33.04%
5.	E	54.46%
Total average		43.39%
Qualification		LESSS ACTIVE

2. Siklus II

Results of observations of students' active learning in Siklus II stage. Classically, the percentage obtained per Aspect Indicator of student learning activity is the percentage in Aspect A; Interaction with teachers has an average of 71.43%, Aspect B; Collaboration with groups has an average of 74.11%, Aspect C; Carrying out assignments has an average of 50.89%, Aspect D; Expressing an opinion has an average of 60.71%, Aspect E; Answering the quiz had an average of 50.89%, and the overall average result was a percentage of 61.61% with the Quite Active qualification.

At the observation stage, it was found that the domino card game was effective enough to be applied to learning, considering that students were quite active in carrying out learning activities, however, it was still less effective, as there were still some students who did not help their group friends to play domino cards and difficult to answer, match the cards.

Table 4. Percentage Results of Observations on Learning Activeness of Siklus II Students

No.	Aspect	Very Active		Active		Quite Active		Less Active	
		f	%	f	%	f	%	f	%
1.	A	14	50%	8	28.57%	6	21.43%	0	0.00%
2.	B	14	50%	11	39.29%	3	10.71%	0	0.00%
3.	C	12	43%	12	42.86%	4	14.29%	0	0.00%
4.	D	10	36%	10	35.71%	5	17.86%	3	10.71%
5.	E	11	39%	9	32.14%	8	28.57%	0	0.00%
Average		12.2	44%	10	35.71%	5.2	18.57%	0.6	2.14%

Table 5. Total Average Observation of Learning Activeness of Siklus II Students

No.	Aspect	Classical Per Aspect
1.	A	71.43%
2.	B	74.11%
3.	C	50.89%
4.	D	60.71%
5.	E	50.89%
Total average		61.61%
Qualification		QUITE ACTIVE

3. Siklus III

Results of observations of students' active learning in Siklus III stage. Classically, the percentage obtained per aspect of the indicator of student learning activity is the percentage in Aspect A; Interaction with teachers has an average of 84.82%, Aspect B; Collaboration with groups has an average of 82.14%, Aspect C; Carrying out assignments has an average of 82.14%, Aspect D; Expressing an opinion has an average of 74.11%, Aspect E; Answering the quiz had an average of 77.68%, and the overall average percentage was 80.18% with the Active qualification.

At the observation stage, it was found that the domino card game was efficient and effective to apply to learning considering that students were already active in carrying out domino card game.

Table 6. Percentage Results of Observations on Learning Activeness of Siklus III Students

No.	Aspect	Very Active		Active		Quite Active		Less Active	
		f	%	f	%	f	%	f	%
1.	A	8	29%	8	28.57%	12	42.86%	0	0.00%
2.	B	10	36%	10	35.71%	5	17.86%	3	10.71%
3.	C	3	11%	5	17.86%	10	35.71%	10	35.71%
4.	D	5	18%	12	42.86%	1	3.57%	10	35.71%
5.	E	3	11%	5	17.86%	10	35.71%	10	35.71%
Average		5.8	21%	8	28.57%	7.6	27.14%	6.6	23.57%

Table 7. Total Average Observation of Learning Activeness of Siklus II Students

No.	Aspect	Classical Per Aspect
1.	A	82.14%
2.	B	84.82%
3.	C	82.14%
4.	D	74.11%
5.	E	77.68%
Total average		80.18%
Qualification		ACTIVE

C. Discussion

From the results of the observations that have been presented, it shows that results have increased in students' learning activity by using the learning media of the domino card game.

The percentage of students' active learning increased from Siklus I to an average of 43.39% with the qualification Not Active, then through the action of playing domino cards to an average of 61.61% with the qualification Quite Active, then Siklus III through improving actions from Siklus II of the game Domino cards that have been modified increase to an average of 80.18% with the Active qualification. Thus, from the results of observations in siklus III, the criteria for success in increasing student activity have been achieved, because an increase of more than 62% has been obtained.

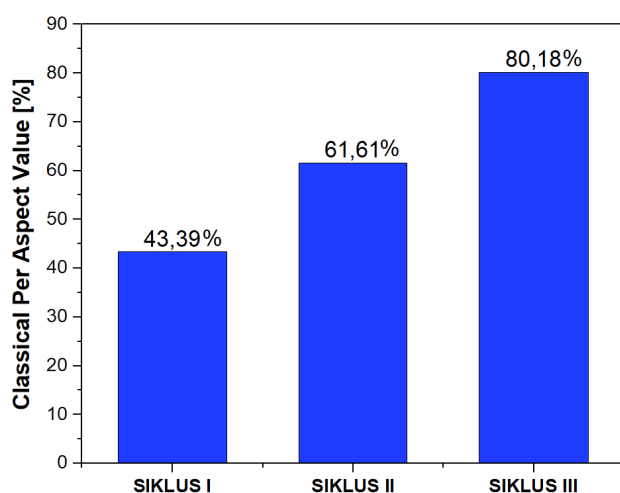


Figure 5. Comparison graph of the percentage of learning activity achievement of students in siklus I, siklus II, and siklus III

Based on this diagram, it can be seen that there is an increase in the achievement of students' learning activity, which was initially inactive until the students' learning activity became high. It can be clearly seen that the criteria for student learning activeness have experienced significant changes, namely reaching 80.18%. This is in accordance with previous research conducted by Nabila Luthfi, which stated that domino media can increase student activity and is effective in improving student learning outcomes [21].

These results are in accordance with research Aji, 2021 [22] The results of the research show that the application of domino card learning media increases students' vocabulary mastery, students' enthusiasm in the learning process and fluency in writing descriptive texts. However, there are several difficulties faced by students, such as, students have limited vocabulary and tenses, students are not used to it and have never used domino cards before, students have difficulty understanding the instructions given.

Other results are also in accordance with research conducted by Fatikh & Kuswanti, 2021 [23] which explains that the use of learning media using domino cards for science learning, especially on human student movement system material, and the results show that domino card learning media is very effective with advantages can be used for broader and easier to understand learning themes, evaluation questions can be more varied.

Regarding the domino card learning media, Halim, 2020 [24] concluded that domino cards as a learning media can be used to stimulate students who are active and pay more attention to the learning provided by the teacher effectively and optimally.

Regarding domino card learning media, Bulan & Idhar, 2021 [25] concluded that domino card learning media can be applied effectively for students in understanding learning material, and the media created has been developed suitable for use as learning media for students. The use of media in learning has also been researched by Novita, et al. [26-27], that learning media can provide motivation and increase students' interest in learning,

IV. CONCLUSION

Based on the results of this classroom action research, it can be concluded that learning science and technology about the parts of the eye and their functions in the VB class at SDN Gadang 4 Malang using the Domino Card game media can increase students' active learning. Student activity in siklus I was in the less active category (43.39%), siklus II was in the quite active category (61.61%) and in siklus III was in the active category (80.18%), an increase was obtained of 18.57%.

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