Implementation of the Bomb Snakes and Ladders Game Based on the ECOLA Learning Model to Improve Reading Skills in Elementary Schools

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ABSTRACT

In PISA in 2018, Indonesia was ranked 74th out of 80 countries. In the reading ability category, Indonesia obtained an average score of 371, which is below the OECD average score of 489. In fact, literacy is an initial ability that every individual must have to live life in the future. Schools are responsible for creating a reading culture for students. This is a challenge for teachers to help increase students’ reading motivation. This classroom action research aims to improve the reading skills of grade 5 elementary school students by implementing the ECOLA learning model based on the bomb snakes and ladders game. This research is a type of classroom action research (PTK) using two cycles. The design used in the research is the Kemmis and Mc Spiral model. Taggart was developed by Stephen Kemmis and Robin Mc Taggart in 1988. In one cycle there are four components including planning, action, observation and reflection in a spiral that are interconnected with each other. The subjects of this research were 24 grade 5 elementary school students consisting of 15 boys and 9 girls. Based on research that has been conducted, the use of the ECOLA learning model based on the bomb snakes and ladders game media can improve students' ability in reading skills. This is proven by an increase in the percentage of completeness of student learning outcomes from cycle I and cycle II learning.
1. INTRODUCTION

Literacy is the ability to read and write. Literacy is an initial ability that must be owned by every individual to live life in the future. Literacy culture must be instilled early on in students and the solution is in Indonesian language subjects. Indonesian language subjects have a very important role in developing students' literacy culture (Hakim et al., 2023; Williams et al., 2009). In Indonesian subjects students are taught to be critical and analytical readers, students learn to recognize the structure and style of writing, understand the meaning of text in depth and make conclusions based on mature understanding. However, in learning Indonesian subjects it is a challenge for a teacher, because the teacher tends to hold the text in the form of paper and other writing instruments. Teaching materials in Indonesian include four components, namely listening skills, speaking skills, writing skills, and reading skills (N. Hayati, 2021; Lampropoulos et al., 2019). Reading skill is a skill that is very much needed and is the main thing that is highly encouraged for improvement by the teacher. Reading is an activity of pronouncing words and acquisition of words from various printed materials or online media. Reading activity is the organization of complex skills that involve analysis including thinking, learning, combining, considering and solving problems which means giving rise to explanations of information for the reader (Harrianto, 2020; Nurani et al., 2021).

In elementary school reading skills are divided into two stages, namely initial reading for low grades and reading comprehension for high grades. At the beginning of reading, the main focus of learning is students who are literate. Beginning reading ability is the ability to pronounce letters, syllables, words, and sentences presented in spoken form. Meanwhile, reading comprehension skills according to previous study suggest that reading comprehension skills can be interpreted as a process of reading seriously to get the meaning or essence of a text (Warsilah, 2020). Reading comprehension is an interactive process that is carried out between the reader and the text being read. During the reading process, the translate the meaning of the text being read by utilizing prior knowledge using effective comprehension strategies. According to previous study suggests that reading comprehension aims to gain a deeper understanding of the ideas contained in a reading material (Monika & Afni, 2020). In the learning process reading comprehension skills make a major contribution to the smooth learning process in other subjects. Therefore, reading comprehension skills need to get special attention from the teacher in order to achieve a smooth learning process in the classroom. People who have a high reading culture will be able to achieve high civilization (Birgisidottir et al., 2020; Nahdi & Yunitasari, 2019).

The results of this study are in line with the facts that occur in the field. Based on the results of observations and initial interviews that have been conducted by researchers at SDN Dinoyo 3, Lowokwaru District, Malang City, East Java, students in grade 5 at SDN Dinoyo 3 admit that they are not interested in reading activities so that students experience difficulties if there is an assignment to understand information in a text, especially if the information contained implied. This was reinforced by an explanation from the teacher in grade 5 at SDN Dinoyo 3 where during Indonesian language learning, especially during reading activities, the students could not understand the information contained implicitly so that students had difficulty answering questions, this was because the students were lazy to read the text which exists. Coupled with the learning model that is carried out is less varied so that students feel bored in participating in learning. This is a gap that must be addressed immediately because grade 5 learning outcomes have a relatively high level of difficulty. On the other hand the grade 5 teacher at SDN Dinoyo 3 has made efforts to carry out literacy habits such as holding literacy corners in the classroom and carrying out reading activities in the library which are carried out for 1 (one) day a week.

Based on the problems that occur, it is important for teachers to find and implement other alternatives. The alternative that is highly recommended by researchers is to apply a learning model that is appropriate to the material by paying attention to the developmental stages of students. The learning model is a design that is prepared using systematic steps to then be applied and carried out in the learning process in the classroom (Elendiana, 2020; Hadi et al., 2023; Mirdad, 2020). The functions of the learning model are: 1) As a guide for teachers in planning learning activities, 2) As a guide for teachers in carrying out learning so that teachers can determine the appropriate steps in learning, 3) Facilitate teachers in teaching students to achieve goals to be achieved, 4) Help students obtain information, ideas, skills, values, ways of thinking, and learn how to learn to achieve learning goals (Asyafah, 2019; Ruslan, 2019; Salma, 2019). The selection of the right learning model must be based on the needs and learning materials. The ECOLA (Extending Concept Through Language Activities) learning model is suitable for use in Indonesian language learning because it integrates reading, writing, speaking and listening skills (Nurhidayati & Pardimin, 2021; Rohim & Rahmawati, 2020). In addition, the selection of the ECOLA learning model is in accordance with the needs of students where students feel lazy when faced with Indonesian material which requires them to read reading material that contains implied information and is in accordance with the learning material, namely Indonesian material for reading skills. The ECOLA model (Extending Concept Through Language Activities) is a learning model that teachers can use during learning, especially
in reading skills. This learning model is a teacher's effort to integrate all language skills with the aim of developing readers' skills in translating and reviewing their own understanding (Anabella, 2022; Nurhidayati & Pardimin, 2021). The application of the ECOLA model to learning can be integrated with simple games that can make students more motivated to take part in a series of learning activities. One of the game media that can be used by the teacher is snakes and ladders. Using snakes and ladders media can make learning in the classroom active, fun and not boring (Lestari, 2021; Wahyuni & Azizah, 2020). The advantages of the snakes and ladders game learning media are, (1) students can learn while playing, (2) students can study with friends or in groups, (3) it makes it easier for students to learn because it is assisted by the pictures in the snakes and ladders game, and (4) does not require expensive costs in making learning media snakes and ladders game (Wati, 2021; Wulanjani, 2019). The researcher chose to use the bomb snakes and ladders game because the researcher could adjust the learning context with the game. There are many positive sides to the game of snakes and ladders which can train psychomotor, cognitive, communicative balance so that it can be beneficial for the mental development of children (Djo, 2021; Haryati, 2019). Snakes and ladders game which is generally square and there are even smaller squares in it as many as 100 as well as pictures of snakes and ladders. This game of snakes and ladders which is generally also known by elementary school children so that it can be modified into learning media that can be used by students in learning in class (Lumbantobing et al., 2022; Rosarian & Dirgantoro, 2020). The findings of previous research conducted by previous study showing the results that the application of snakes and ladders game media can improve student learning outcomes starting from the lowest 1.7% to the highest result of 61.24% with an average score of 30.21% of the 10 journals that have been analysed (Lestari, 2021). Base on the explanation and result from previous study this study aims to improve the reading comprehension skills of grade 5 students at SDN Dinoyo 3 so that they are able to understand implied information by using the ECOLA (Extending Concept Through Language Activity) learning model based on the Snake and Ladder Bomb game.

2. METHODS

This research is a type of classroom action research (CAR) using two cycles. According to Arifkunto, class action research (CAR) is a series of three words, namely research, action, and class (Nurhidayati & Pardimin, 2021). Classroom action research (CAR) is research that describes the causes and effects of a treatment as well as describes things that happen when given treatment and describes the entire process from the beginning of giving treatment to the impact of the treatment that has been given. The research was conducted at SDN Dinoyo 3, Lowokwaru District, Malang City, East Java. The subjects of this study were 5th grade students at SDN Dinoyo 3 who were enrolled in the even semester of the 2022/2023 academic year, with a total of 24 students consisting of 15 male students and 9 female students. The design used in this research is the Kemmis and Mc Spiral model. Taggart which was developed by Stephen Kemmis and Robin Mc Taggart in 1988. According to Syamsuddin & Damianti (2006) both use the same four components in classroom action research including planning, action, observation, and reflection in a spiral that are interrelated between step one and another (Nurhidayati & Pardimin, 2021). Kemmis and MC Spiral Models. The taggart in question can be observed in Figure 1.

![Figure 1. The flow of PTK model Kemmis & Mc. Taggart](image)
This classroom action research was carried out in two cycles with the same flow of stages. In the first cycle, the research phase starts from the planning stage, at this stage the problems found will be resolved by carrying out action planning steps, namely compiling research instruments in the form of lesson plans, observation sheets, and student activity sheets. Next is the implementation stage, from the planning stage the researcher implements it directly to the subject. The third stage is observation, the researcher observes students during the learning process, then the researcher reflects on the student learning outcomes that have been obtained. The research data used instruments in the form of observation sheets for students, lists of questions for initial interviews, field notes and assessment instruments. Observation sheets are used to obtain observational data during class learning. The list of questions was used to conduct initial interviews with grade 5 teachers in order to obtain detailed information regarding the difficulties experienced by students. Field notes are used to write down facts that occur in the field so that researchers get valid data. Assessment instruments are used to obtain data on student learning outcomes related to understanding information in a text before and after learning using the ECOLA (Extending Concept Through Language Activities) model, as shown in Table 1.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-reading Stage</td>
<td>Set communicative goals for reading</td>
</tr>
<tr>
<td>Reading Stage</td>
<td>Reading activity</td>
</tr>
<tr>
<td>Post-Reading Stage</td>
<td>Realizing understanding with writing activities</td>
</tr>
</tbody>
</table>

3. RESULT AND DISCUSSION

Results

Schools are responsible for creating a reading culture for students. Schools must facilitate students in increasing interest in reading. Reading is the activity of obtaining information conveyed by the author in the form of written language (Wuwur, 2022). However, the low interest in reading experienced by grade 5 students at SDN Dinoyo 3 hindered the process of realizing this reading culture. This is caused by many factors both external factors and internal factors. External factors that influence students’ interest in reading include family and the outside environment (Putri Pradana, 2020; Rahmawati et al., 2021). While the internal factors that hinder the cultivation of a reading culture in schools are students’ reading interest and students’ reading awareness. The low reading culture of students also has an impact on hampering teaching and learning activities in class, especially learning Indonesian. Because students are not motivated in reading, students have difficulty determining the information contained in a text. To understand the reading text students should read carefully and repeatedly in order to better understand (Daguay-James & Bulusan, 2020; Tusfiana & Tryanasari, 2020). This classroom action research is intended to improve the reading skills of grade 5 students at SDN Dinoyo 3 by applying a learning model ECOLA (Extending Concept Through Language Activities) based on bomb snakes and ladders game. This action was carried out at SDN Dinoyo 3 Lowokwaru District, Malang City, East Java, grade 5 using 2 (two) cycles. Observations were made by researchers with the aim of obtaining data on problems that occur in class using planning in cycle 1.

Cycle I

Stage this plan discusses the time of research. The discussion at this stage is about teachers and researchers jointly discussing the preparation of lesson plans, determining, and choosing media that are appropriate for the learning that will be carried out next. Implementation the action was carried out during one lesson with a total of 21 students. The learning process is carried out face to face. The learning process is divided into three activities, namely initial activities, core activities and closing activities. The learning activities in cycle I is shown in Table 2.

<table>
<thead>
<tr>
<th>Initial activity (15 minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The teacher opened the lesson by greeting. (Orientation) (1 minute)</td>
</tr>
<tr>
<td>2. Students pray under the leadership of the class leader. (P5) (2 minutes)</td>
</tr>
<tr>
<td>3. Learners are present by the teacher. (2 minutes)</td>
</tr>
<tr>
<td>4. Students answer the trigger questions posed by the teacher. (Communication/4C, P5) (3 minutes)</td>
</tr>
</tbody>
</table>
| 5. Students listen to the information conveyed by the teacher regarding the activities to be
Initial activity (15 minutes)

1. Students perform initial activities, learning objectives, and their benefits in everyday life (2 minutes).
2. Students ask and answer questions with the teacher about the previous learning material. (Communication/4C) (2 minutes)

Core activities (40 minutes)

1. Pre-reading Stage (10 minutes)
   a. Students are coordinated by the teacher to form 4 groups (Collaboration) (3 minutes)
   b. Students understand the instructions given by the teacher (3 minutes)
   c. Students understand the purpose of reading conveyed by the teacher (2 minutes)
   d. Students are given the opportunity to ask questions (communication) (2 minutes)

2. Reading Stage (20 minutes)
   a. Students determine the group leader (collaboration, mutual cooperation/P5) (2 minutes)
   b. Students are given LKPD by the teacher (1 minute)
   c. Students learn while playing bomb snakes and ladders in accordance with the provisions in the LKPD (Critical thinking and problem solving, P5) (17 minutes)

3. Post-reading Stage (10 minutes)
   a. Students present their work in front of the class (creativity and innovation, P5) (5 minutes)
   b. Learners compare the results of their work with other groups (communication) (3 minutes)
   c. Students carry out evaluations guided by the teacher (critical thinking and problem solving, P5) (2 minutes)

Final Activity (15 minutes)

1. Students work on evaluation questions.
2. Students reflect with the guidance of the teacher.
3. Students listen to the motivation conveyed by the teacher.
4. Students pray under the leadership of the class leader.

In the initial activity, it was started by praying together and the students answered the questions asked by the teacher. Followed by understanding the purpose of reading to be carried out. Next, the teacher gives Student Worksheets (LKPD) which have been integrated with the bombs snakes and ladders game. The teacher explains the rules during the game. In the final activity students work on evaluation questions, and reflect during learning with the teacher. The results of observations from cycle I were that there were students who disturbed other groups who were working on LKPD, thus preventing other students from working on LKPD. After processing When the LKPD is finished, group representatives make presentations regarding the results of discussions with their friends followed by evaluating the results of the evaluation during the learning activities. In closing activities, students and teachers together provide conclusions. Teachers also provide motivation to students to always be enthusiastic in studying. From the results of observations, it was found that students’ ability to understand information in a paragraph was below average. Students have not been able to analyze the information implied in a text so they feel confused in concluding what information is contained in a text that has been read. Based on the results of the evaluation questions that have been carried out by students in the first cycle of learning is show in Table 3.

Table 3. Acquisition of Student Learning Outcomes Cycle I

<table>
<thead>
<tr>
<th>No</th>
<th>Information</th>
<th>Acquisition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The highest score</td>
<td>90</td>
</tr>
<tr>
<td>2</td>
<td>Lowest Value</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>The number of students who took the evaluation test</td>
<td>21</td>
</tr>
<tr>
<td>3</td>
<td>The number of students who have not finished learning</td>
<td>18</td>
</tr>
<tr>
<td>4</td>
<td>Percentage of learning completeness</td>
<td>14.2%</td>
</tr>
</tbody>
</table>

Based on Table 3 show student learning outcomes in cycle I, the number of students who took part in learning was 21 students with the number of students who completed learning was 3 students with the highest score of 90 while the number of students who had not completed learning was 18 students with the lowest score of 20. Percentage of completeness learning obtained in the learning cycle I was 14.2%. After carrying out the first cycle of action on grade 5 students at SDN Dinoyo 3, Lowokwaru District, Malang City, East Java, the teacher and researcher reflected on the results of the observations, namely that students were enthusiastic when using learning media in the form of bomb snakes and ladders games.
Cycle II

Objective in cycle II to improve reading skills of grade 5 students SDN Dinoyo 3, Lowokwaru District, Malang City, East Java in order to correctly understand the information contained in one paragraph. At the planning stage, namely discussing the results of reflection on cycle I, preparing lesson plans, preparing media and preparing data collection tools. During the implementation of the second cycle of action, 21 students attended. The sequence of learning steps in cycle II is the same as the implementation of learning in cycle I which consists of three main activities, namely initial activities, core activities, and closing activities. The results of observations in cycle II during the learning process were that students were calmer than cycle I, play activities carried out in groups were more organized and students listened to the teacher well and did not disturb other groups while playing and students were enthusiastic. About presenting the results of their discussion in front of the class. The results of observing students’ ability to understand information in a paragraph is shown in Table 4.

Table 4. Obtaining Cycle II Student Learning Outcomes

<table>
<thead>
<tr>
<th>NO</th>
<th>Information</th>
<th>Acquisition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The highest score</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Lowest Value</td>
<td>30</td>
</tr>
<tr>
<td>4</td>
<td>The number of students who take the evaluation test</td>
<td>21</td>
</tr>
<tr>
<td>5</td>
<td>The number of students who have not finished studying</td>
<td>11</td>
</tr>
<tr>
<td>6</td>
<td>Percentage of learning completeness</td>
<td>47.6%</td>
</tr>
</tbody>
</table>

Based on Table 4 student learning outcomes in Cycle II, it can be seen that the number of students who have completed learning is 10 students with the highest score obtained is 100, while the number of students who have not completed learning is 11 students with the lowest score obtained by students is 30, the percentage students declared complete learning by 47.6%. In cycle II, there was a very significant increase in student learning outcomes, where the results of the evaluation that students had completed obtained much better scores than cycle I. In addition, students began to understand the rules of the snake and ladder bomb game when directed by the teacher.

The students looked excited because the rules of the game contained a bomb, meaning that the student who got the picture of the bomb had to answer the questions in the LKPD. Therefore, students are increasingly challenged not to get bomb images while playing. Reflection was carried out after observing the results of the actions in cycle II at SDN Dinoyo 3, Lowokwaru District, Malang City, East Java, grade 5. Based on the results of the reflections carried out by the teacher and researcher, it can be concluded that there were advantages during the implementation of cycle II, namely students were more confident when presenting the results of their answers, students able to work well together in groups without disturbing other group mates and students are able to understand important information in well-presented paragraphs. implicitly. While the shortcomings that existed during the implementation of cycle II were that there were still students who needed to be reminded to keep working on their worksheets in a conducive manner so that other groups would not feel disturbed. Based on the results of classroom action
research in cycle I and cycle II which was carried out in SDN Dinoyo 3, Lowokwaru District, Malang City, East Java, grade 5. It can be concluded that the use of the ECOLA (Expanding Concept Through Language Activity) learning model based on the snake and ladder bomb game media can improve students' reading skills. This is evidenced by the results of the percentage of student completeness which has increased. The percentage of completeness achieved by students in cycle I was 14.2%, while the percentage of completeness achieved by students in cycle II was 47.6%. The results of observations in the form of diagrams is show in Figure 1.

**Discussion**

Based on the results obtained during learning through cycle I and cycle II after being given action in the form of implementing ECOLA (Expanding Concepts Through Language Activities) learning model based on the game Bomb Snakes and Ladders to improve reading skills in grade 5 at SDN Dinoyo 3, Lowokwaru District, Malang City, East Java, there was an increase in students' reading skills. When given actions in cycle I and cycle II, students looked enthusiastic in learning. With the snake and ladder bomb game, it can increase student motivation. This can be seen when, before using this action, students are lazy about reading, which hinders their learning process because they are unable to understand the information contained in a text. However, after carrying out these actions, students became enthusiastic about learning, especially reading. This is in line with the results of previous research conducted entitled application of the snakes and ladders game media to increase the interest and learning outcomes of elementary school students in border areas with the research results showing an increase in interest in learning and student learning outcomes with the application of the snakes and ladders game media (Djo, 2021). This can be seen from the increase in the percentage of students' interest in learning where before the treatment the percentage was 61.4% in the good category and experienced an increase after receiving the treatment reaching 87% which was in the very good category (Lumbantobing et al., 2022). Strengthened by the results of other research that shows the results that the application of the snakes and ladders game media can improve student learning outcomes ranging from the lowest 1.7% to the highest 61.24% (Lestari, 2021).

This is reinforced by various theories put forward by experts, one of which is Piaget’s cognitive development theory which states that humans have a cognitive pattern structure both physically and mentally so that it becomes the basis for a person’s activities and behavior which are closely related to life stages of child development. This theory examines play activities in relation to the intellectual development of each individual (Nurhayati & Zarkash Putro, 2021). So it can be concluded that elementary school age children are very enthusiastic in playing activities so teachers need to apply game innovations in every lesson so that students are motivated to participate in learning. In addition, the procurement of media in the learning process in the classroom is very necessary to build students' understanding of the material presented. Previous study argue that the media is a factor that also determines the success of teaching because it helps students and teachers in conveying subject matter in relation to teaching objectives (Oktafiani et al., 2020). In addition, elementary school age students have a preference for games or activities that move a lot. Therefore, teachers must be able to organize and manage learning seriously with learning that contains game elements. Learning success is also strongly influenced by the interests of the students themselves. This interest in learning must be raised by the teacher in every lesson, especially in learning Indonesian. Learning Indonesian is closely related to empowering a reading culture. Interest is something that is very important for a person to be able to carry out an activity well, as a psychological aspect, interest can not only color a person’s behavior, but more than that, interest encourages a person to carry out an activity and causes a person to pay attention and volunteer himself to carry out the interested in an activity (Astuti et al., 2019; F. Hayati et al., 2021). An alternative that teachers can use to arouse students' interest in learning is to combine learning with games so that students can learn while playing. The use of games for children's learning media is quite effective in increasing their interest in learning (Wulandari et al., 2020; Yu et al., 2021). From the description above, it can be concluded that learning using the ECOLA (Expanding Concept Through Language Activity) learning model based on the snake and ladder bomb game is suitable for application to elementary school age students, especially in Indonesian language subjects. reading aspect, because the activity of playing snakes and ladders bombs can increase students' motivation in participating in the learning process, especially if students are faced with reading activities that are considered boring. The implications of this research are expected to improve students' reading skills so as to be able to understand the information contained implicitly.
4. CONCLUSION

Based on the results of research and discussion from classroom action research by applying the ECOLA (Extending Concept Through Language Activity) learning model based on the snakes and ladders game media, it can help students improve the reading comprehension skills of grade 5 students at SDN Dinoyo 3. The benefits felt by teachers are being able to carry out effective learning, different from before and make learning more fun. For students, students can increase their imagination and cooperation in playing snake and ladder bomb. Apart from that, the application of this game can foster the interest of grade 5 students at SDN Dinoyo 3 in reading so that students are able to understand the information contained in a paragraph, both implied and explicit information.

5. REFERENCES


