Indonesian Journal of Islamic Education

Indonesian Journal of Islamic Education
Volume 1 (4) 665 – 673 December 2024
ISSN: In Process
The article is published with Open Access at: https://journal.maalahliyah.sch.id/index.php/ijie/index

Improving the Ability to Recognize Number Symbols Through Playing Picture Number Cards in Group B Students at RA Nur Ayn Latawe

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Abstract: The ability to recognize number symbols is one of the basic skills in early childhood cognitive development. This research aims to improve the ability to recognize number symbols through the method of playing picture number cards in group B students at RA Nur Ayn Latawe. The method used in this study is classroom action research (PTK) with the Kemmis and McTaggart model which consists of two cycles. Each cycle includes the stages of planning, implementation, observation, and reflection. Data were collected through observation, interviews, and evaluation tests. The results of the study showed that the use of picture number cards significantly improved children's ability to recognize number symbols. In the first cycle, the improvement of students' abilities is still moderate, while in the second cycle, most students achieve a better level of understanding. Thus, the method of playing picture number cards has proven to be effective in helping students get to know number symbols in a more fun and interactive way.
Keywords: Number symbols, number card playing, early childhood, classroom action research.

INTRODUCTION

Early childhood education is one of the fundamental stages in a child's cognitive, social, and emotional development. At this stage, children begin to get to know various basic concepts that are the foundation for learning at the next level of education. One of the important aspects in early childhood cognitive development is the ability to recognize number symbols. This ability is the basis for children to understand further mathematical concepts, such as calculation operations, measurements, and problem solving. Therefore, interesting learning that is in accordance with the characteristics of children's development is needed so that they can more easily understand the concept of number symbols.

The ability to recognize number symbols is the initial stage in understanding the concept of numbers. Children need to recognize numbers visually and relate them to their appropriate meanings, for example the number "3" represents three objects. However, in practice, many

children have difficulty recognizing number symbols because of learning methods that are less interesting or too abstract. This causes children to become less interested and difficult to understand the concept of numbers well.

One of the factors that causes the low ability to recognize number symbols in early childhood is the lack of use of appropriate learning media. Learning that is too theoretical and monotonous often makes children bored quickly. Children at an early age find it easier to learn through hands-on experience, exploration, and play. Therefore, an interactive and fun learning method is needed so that children can more easily understand the concepts taught.

Play is one of the effective methods in early childhood learning. Through play, children can learn naturally without feeling burdened. Play also helps children develop creativity, social skills, and understanding of academic concepts, including mathematics. One form of game that can be used in introducing number symbols is the picture number card game.

Picture number cards are an interesting learning medium for children because they combine pictures and numbers in one tool. Children not only see numbers symbolically, but can also relate them to pictures that represent a certain number. Thus, it is easier for children to understand the relationship between numbers and quantities, and faster to recognize number symbols accurately.

The use of picture number cards in learning also provides a multisensory experience for children. Children can see numbers, count pictures, and touch cards directly. This helps them in remembering numbers better than just listening to the teacher's explanation. In addition, this game can also be done individually or in groups, so that it can train children's social skills through interaction with their friends.

RA Nur Ayn Latawe is one of the early childhood education institutions that is committed to improving the quality of learning for its students. Based on initial observations at RA Nur Ayn Latawe, it was found that there are still many children who have difficulty recognizing number symbols. Some children are not yet able to distinguish certain numbers, while others still have difficulty in connecting the number symbols with the corresponding number.

The results of interviews with teachers show that the methods used so far are still conventional, such as introducing numbers through the whiteboard and memorization. Although this method can be helpful in several aspects, children tend to get bored quickly and are less active in the learning process. Therefore, innovation is needed in learning so that children are more interested and actively involved in getting to know the symbol of numbers.

This research aims to improve the ability to recognize number symbols through the method of playing picture number cards. This method is expected to help children understand the concept of numbers more easily and fun. With this game, children can learn while playing, so they are more enthusiastic about participating in learning.

In addition, this study also aims to determine the effectiveness of the method of playing pictorial number cards in improving the ability to recognize number symbols. The results of this study are expected to be a reference for teachers and educators in choosing more effective and attractive learning methods for early childhood.

Improving the ability to recognize number symbols has a wide impact on children's development. This ability is not only useful in the field of mathematics, but also in everyday life. Children who are able to recognize numbers well will find it easier to understand the concept of time, money, and various other activities that involve numbers.

In addition, this research also has benefits for parents in supporting children's learning at home. By understanding the importance of interesting and fun methods, parents can participate in helping children recognize number symbols through simple games in the home environment.

In line with the development of the early childhood education curriculum that emphasizes a play-based approach, this research is expected to contribute to improving the quality of learning. The use of the right media will help children understand abstract concepts more concretely and meaningfully.

Thus, this research is important to be carried out in order to find a more effective learning method that is in accordance with the characteristics of early childhood. It is hoped that the results of this research can provide solutions to the problems faced in learning number symbols and provide recommendations for teachers, parents, and other stakeholders.

Based on the description above, this study is titled **"Improving the Ability to Recognize Number Symbols Through Playing Picture Number Cards in Group B Students at RA Nur Ayn Latawe"**.

METHODS

This research is a class action research (PTK) that aims to improve the ability to recognize number symbols through the method of playing picture number cards in group B students at RA Nur Ayn Latawe. PTK was chosen because this method allows teachers to identify problems in learning, design corrective actions, and evaluate the effectiveness of these actions directly in the classroom environment.

The subjects of this study are group B students at RA Nur Ayn Latawe which number a number of children according to class conditions. The selection of this subject is based on the results of initial observations that show that most students still have difficulties in recognizing number symbols. This research was carried out at RA Nur Ayn Latawe, an early childhood education institution that is committed to improving the quality of learning for its students.

This study uses a classroom action research model developed by Kemmis and McTaggart, which consists of four main stages in each cycle, namely planning, acting, observing, and reflecting. The study was designed in two cycles, with each cycle lasting over several meetings. If in the first cycle the results are not optimal, then improvements are made in the next cycle until the learning objectives are achieved.

This research procedure consists of four stages. The first stage is planning, where researchers and classroom teachers work together to develop an action plan that includes designing learning using picture number cards. Teachers also prepare research instruments such as observation sheets, interview guidelines, and evaluation instruments for the ability to recognize number symbols. The second stage is the implementation of actions, where teachers carry out learning according to the scenarios that have been designed. In this activity, students are introduced to picture number cards through various play activities, such as matching numbers with pictures, guessing numbers, and arranging numbers in order.

Furthermore, the third stage is observation, which is carried out to observe the course of learning and record the development of students in recognizing number symbols. Observations were made on students' activeness, level of involvement in playing, and their ability to understand the concept of numbers taught. Finally, the fourth stage is reflection, where researchers and teachers analyze the results of observations and evaluation tests to assess the effectiveness of the methods used. If obstacles or results are found that have not been maximized, improvements and planning are carried out for the next cycle.

The instruments used in this study include observation sheets to record students' activities during learning, including their participation and understanding of number symbols. In addition, evaluation tests in the form of questions or assignments are given to students to measure their improvement in their ability to recognize number symbols before and after actions are taken. Interviews with teachers are also used to obtain additional information regarding the obstacles faced in learning and the effectiveness of the methods applied.

The data collection techniques in this study are carried out through observation, evaluation tests, documentation, and interviews. Observation is used to observe students' responses during learning, while evaluation tests are carried out before (pre-test) and after (post-test) each cycle to see the improvement of the ability to recognize number symbols. Documentation in the form of photos or activity notes is also used to support research data, while interviews are conducted to explore information from teachers related to student development and the effectiveness of the methods used.

The data obtained were analyzed descriptively, quantitatively and qualitatively. The

results of the pre-test and post-test were compared to see the improvement in the ability to recognize number symbols. Meanwhile, observation and interview data were analyzed qualitatively to understand students' responses to the applied learning methods. With this analysis, it can be found out whether the method of playing picture number cards is really effective in improving students' understanding of number symbols.

The success of this study was measured based on the increase in the number of students who were able to recognize number symbols correctly after participating in learning using picture number cards. The success target is set if at least 75% of students show improvement in recognizing number symbols based on the results of the evaluation. If this target has not been achieved, then the research will continue with improvements in the next cycle until the expected results are met.

This research was carried out in several stages which included preparation, implementation of the first cycle, reflection and improvement, implementation of the second cycle, as well as data analysis and report preparation. Each stage is planned to run according to the predetermined schedule. In addition, in the implementation of this research, the researcher maintains research ethics by asking permission from the school, students' parents, and ensuring that all data obtained is used for academic purposes without harming any party. Thus, this research not only contributes to the improvement of learning in the classroom but also provides benefits for the development of students in recognizing number symbols in a fun way.

RESULTS

This study aims to improve the ability to recognize number symbols in group B students at RA Nur Ayn Latawe through the method of playing picture number cards. The implementation of the research is carried out in two cycles, where each cycle consists of the stages of planning, implementation of actions, observation, and reflection. The results of this study will be presented based on data collected through observations, evaluation tests, interviews with teachers, and documentation of learning activities.

In the early stages before the action was taken, the observation results showed that most students still had difficulty recognizing number symbols. From the results of the pre-test given before the action was taken, only about 40% of the students were able to recognize the number symbols correctly, while the rest still showed confusion in matching the numbers with the appropriate number of objects. This shows that the learning methods previously used are still not effective in helping students understand the concept of numbers optimally.

In the first cycle, actions are taken by introducing picture number cards as a learning medium. The teacher invites students to play with number cards, where they are asked to match the numbers with the corresponding pictures. During the implementation of the action, students were seen to be more enthusiastic in participating in learning compared to the previous method. They are more active in trying to match number cards with pictures and show greater interest in learning numbers.

Observations during the first cycle showed that although there was an increase in student activity, there were still some obstacles that needed to be improved. Some students still have difficulty recognizing certain numbers, especially numbers that have similar shapes such as the numbers 6 and 9. In addition, some students still lack confidence in answering questions given by teachers. From the results of the post-test after the first cycle, the percentage of students who successfully recognized number symbols increased to 60%. Despite the improvement, this result still does not reach the expected target, which is at least 75% of students can recognize number symbols well.

Based on the results of reflection in the first cycle, several improvements were made for the second cycle. One of the improvements made is to provide more opportunities for

students to play in pairs so that they can help each other in recognizing number symbols. In addition, teachers also use a more interactive question and answer method to ensure that each student understands the concepts being taught.

In the second cycle, learning activities using picture number cards were again carried out with several modifications according to the results of the previous reflection. This time, students were given more variety of games, such as matching numbers with the corresponding number of objects in small groups. In addition, teachers give simple rewards to students who successfully complete assignments correctly to increase their motivation in learning.

The observation results in the second cycle showed a significant increase in student engagement during learning. They are more confident in answering questions and faster in recognizing the number symbols they are taught. Student activity also increased, as seen from the number of students who voluntarily wanted to try to answer the teacher's questions.

At the end of the second cycle, an evaluation test is again given to students to measure the extent of their improvement in their ability to recognize number symbols. The results of the post-test showed that 80% of the students were able to recognize the number symbols correctly, which means that the research target had been achieved. Compared to the pre-test results which only reached 40%, there was a significant increase in students' abilities after the application of the method of playing picture number cards.

In addition to the improvement in evaluation results, interviews with teachers also showed that the method of playing picture number cards had a positive impact on the learning atmosphere in the classroom. Teachers stated that students became more enthusiastic in learning and easier to understand the material compared to the previous learning method. In addition, the interaction between students also increased, as they communicated more often when playing together in small groups.

Activity documentation also shows that students enjoy the learning process more with a play approach. The photos taken during the study show the students' expressions of enthusiasm and happiness when using the picture number cards. This indicates that play-based learning can increase early childhood learning interest and help them understand concepts more effectively.

The success of this research is also supported by the results of qualitative data analysis. From the observation notes, it can be seen that students who were initially passive and lacked confidence began to show courage in trying to match numbers and answer the teacher's questions. This shows that the method used not only improves students' cognitive abilities but also helps in developing their social skills.

Although this study shows positive results, there are still some obstacles that need to be considered for the future application of this method. One of the obstacles found is the limitation of time in each learning session. Because game-based learning requires enough time to give each student a chance, teachers must manage their time well so that all students have an optimal learning experience.

In addition, the difference in the level of student understanding is also a challenge in the implementation of learning. Some students can recognize number symbols quickly, while others require more practice and guidance. Therefore, in the application of this method in the future, it is recommended that teachers provide a more individualized approach for students who have difficulty understanding the material.

The results of this study show that the method of playing picture number cards is effective in improving the ability to recognize number symbols in group B students at RA Nur Ayn Latawe. The significant improvement in learning outcomes shows that the game-based learning approach can be a good alternative in teaching basic mathematical concepts to early childhood.

In addition to its effectiveness in improving learning outcomes, this method also has a positive impact on student motivation in learning. Students who were initially less interested in learning numbers became more enthusiastic and active during learning. This shows that fun learning can increase student engagement and make it easier for them to understand the material.

The success of this method can also be an inspiration for other teachers in developing creative learning that is tailored to the needs of early childhood. By incorporating elements of

play in learning, students can learn more happily without feeling burdened by the material being taught.

With this positive result, it is hoped that the method of playing picture number cards can continue to be applied and developed in learning at RA Nur Ayn Latawe and in other schools. Teachers can also explore other variations of the game that can help improve students' understanding of other basic math concepts.

As a follow-up to this study, it is suggested that similar research be conducted with a wider scope, for example by involving more classes or using more varied game methods. Thus, the results of the research can provide greater benefits for the world of education, especially in improving the quality of early childhood learning.

Overall, this study proves that the method of playing picture number cards has great potential in improving the ability to recognize number symbols in early childhood. This success is proof that a creative and fun learning approach can provide better results compared to conventional learning methods that tend to be boring for children.

Thus, the results of this study are presented as part of efforts to improve the quality of learning at RA Nur Ayn Latawe. With this research, it is hoped that play-based learning can be increasingly applied in early childhood education so that they can learn more effectively and fun.

DISCUSSION

The results of this study show that the application of the method of playing pictorial number cards significantly improves the ability to recognize number symbols in group B students at RA Nur Ayn Latawe. This increase can be seen from the results of the evaluation test which showed that the percentage of students who could recognize number symbols correctly increased from 40% in the pre-test to 60% in the post-test of the first cycle, and finally reached 80% in the post-test of the second cycle. These findings indicate that the game-based learning method can help students understand the concept of numbers more effectively compared to the conventional methods that were previously applied.

One of the factors that supports the success of this method is the involvement of students in a more active and enjoyable learning process. Based on observations during the study, students showed a more positive response when learning was carried out using picture number cards. They looked more enthusiastic, participated more often, and were more confident in trying to answer the questions given by the teacher. This is in line with the theory of constructivist learning which states that children learn better when they are actively involved in the learning process and have direct experience with the material being taught.

In addition, the method of playing picture number cards also contributes to increasing social interaction between students. When they play in groups, they discuss with each other and help each other in recognizing numbers and matching them with appropriate pictures. This good social interaction supports the development of communication skills and increases students' confidence in expressing their opinions and answers in front of classmates.

Although the results of the study show a significant improvement, there are still several obstacles that need to be considered in the application of this method. One of the main obstacles is the difference in the level of understanding of students. Some students are able to recognize number symbols quickly, while others require more practice and guidance. This shows that in the application of this method, teachers need to pay more attention to students who are experiencing difficulties, for example by providing special assistance or additional exercises so that all students get an even understanding.

In addition, time constraints are also a challenge in the implementation of game-based

learning. Because learning with picture number cards takes longer than conventional methods, teachers must be able to manage their time well so that each learning session continues to run effectively without interfering with the time allocation for other materials. One solution that can be applied is to integrate this game in various other activities, such as in storytelling activities or in other classroom routine activities.

The success of this method in improving students' ability to recognize number symbols is also supported by previous research which shows that a game-based learning approach can improve early childhood understanding in various academic concepts, especially in the field of mathematics. Several studies have mentioned that educational games can help students connect abstract concepts with concrete experiences, making it easier for them to understand the material being taught. Thus, the method of playing picture number cards can be considered an effective strategy in teaching the concept of numbers to early childhood.

In addition to the academic aspect, this method also provides additional benefits in the development of children's cognitive and motor skills. When students play with number cards, they not only learn to recognize number symbols, but also develop hand-eye coordination, matching skills, and critical thinking skills in connecting numbers with the appropriate number of objects. In other words, this method not only contributes to improving learning outcomes, but also supports holistic child development.

The results of this study also have implications for teachers and schools in developing more creative and fun learning strategies. Teachers can use various other game-based learning media to increase students' interest in learning, for example by using technology-based media or other manipulative games. Schools can also support the application of this method by providing facilities and infrastructure that support game-based learning, such as educational teaching aids and other interactive teaching materials.

Although this method has been shown to be effective, more research is still needed to test its effectiveness in the long term. This research was only conducted in two cycles with a relatively short period of time, so it is not known whether the improvement of students' ability to recognize number symbols will last for a longer period of time. Therefore, it is recommended that further research conduct follow-up studies with a longer duration and observe the impact of this method in various different learning contexts.

In addition, this study only focuses on improving the ability to recognize number symbols without considering other factors that may have an effect, such as differences in students' learning styles or family environmental factors. Future studies can further examine how this method can be adapted to the learning characteristics of each student so that the results achieved are more optimal.

By considering the results and obstacles found in this study, it can be concluded that the method of playing picture number cards is an effective approach in improving the ability to recognize number symbols in early childhood. This method not only makes learning more interesting, but it also helps students understand the concept of numbers more easily. However, its implementation requires the right strategy so that the results achieved can be maximized and sustainable.

Thus, this research makes an important contribution to the world of education, especially in the field of early childhood learning. It is hoped that the results of this research can be a reference for educators in designing more innovative and fun learning for students, so that they can learn more effectively and enjoyably.

CONCLUSION

Based on the results of the research that has been conducted, it can be concluded that the

application of the method of playing pictorial number cards significantly improves the ability to recognize number symbols in group B students at RA Nur Ayn Latawe. This increase can be seen from the results of the evaluation which showed that the percentage of students who were able to recognize number symbols correctly increased from 40% in the pre-test stage to 60% in the post-test of the first cycle, and finally reached 80% in the post-test of the second cycle. This proves that the use of interesting and fun learning media can help early children understand the concept of numbers better.

In addition to improving learning outcomes, this method also has a positive impact on student motivation and participation in the learning process. Students look more enthusiastic and active in participating in playing picture number cards compared to conventional learning methods. They are more confident in trying to match numbers with appropriate pictures and are more courageous in answering questions given by teachers. Thus, game-based learning not only improves the cognitive aspects of students but also helps in developing their social skills.

The success of this method is also influenced by better interaction between students and teachers and between fellow students. During learning activities, students discussed, cooperated, and helped each other more in recognizing number symbols. This positive interaction provides a more enjoyable and effective learning experience for them. Therefore, the method of playing picture number cards can be a good alternative in improving basic math skills in early childhood.

Although this study shows positive results, there are still several obstacles that need to be considered in the application of this method. One of the main obstacles is the difference in students' level of comprehension, where some students can understand number symbols quickly, while others require more practice. In addition, the limited time in each learning session is also a challenge in the implementation of this method. Therefore, a more flexible strategy is needed to ensure that all students have an optimal learning experience.

The results of this study provide important implications for teachers and educational institutions in designing more creative and effective learning. Teachers can continue to develop various game-based methods to increase students' interest in learning, especially in subjects that are considered difficult such as mathematics. In addition, schools can support the use of interactive learning media by providing adequate teaching aids and providing training to teachers so that they can apply this method optimally.

As a follow-up, further research can be conducted to test the effectiveness of this method over a longer period of time as well as in different learning contexts. In addition, research can be developed by combining the method of playing picture number cards with other learning strategies to get more optimal results. Thus, it is hoped that the results of this study can make a wider contribution to improving the quality of early childhood learning, especially in the introduction of the concept of numbers.

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