



IMPROVING NUMBER RECOGNITION SKILLS THROUGH FLANNEL BOARD MEDIA AT RA. ULUL ALBAB BANGUNGALIH, KRAMAT SUB-DISTRICT, TEGAL REGENCY

Widyaningrum, UIN Syahada Padangsidimpuan. (Widya.miftah08@gmail.com)

Widyawati, UIN Syahada Padangsidimpuan. (Wdyawati87@gmail.com)

Widyasari Puspita, UIN Syahada Padangsidimpuan. (Widyasaripuspita738@gmail.com)

Widyawati, UIN Syahada Padangsidimpuan. (Wdyawati02april@gmail.com)

Wiji Astutik, UIN Syahada Padangsidimpuan. (Wijiastuti770@gmail.com)

Abstract:

Number recognition skills are an important aspect of cognitive development in early childhood, playing a crucial role in preparing children for the next stages of education. This research aims to improve number recognition skills through the use of flannel board media at RA Ulul Albab Bangungalih, Kramat Sub-district, Tegal Regency. The research method used is Classroom Action Research (CAR) conducted in two cycles. Each cycle consists of planning, implementation, observation, and reflection stages. The subjects of the research were children from Group B at RA Ulul Albab. Data collection was carried out through observation, interviews, and documentation. The results of the study show that the use of flannel board media significantly improves number recognition skills. The children demonstrated improvement in recognizing, naming, and better understanding the concept of numbers. Additionally, they were more enthusiastic and motivated during the learning process. The flannel board media proved to make learning more interactive, engaging, and easier for the children to understand. Thus, it can be concluded that flannel board media is an effective learning tool for enhancing number recognition skills in early childhood, making it a valuable alternative in early childhood education activities.

Keywords: number recognition skills, flannel board media, early childhood.

INTRODUCTION

Number recognition in early childhood is a crucial aspect of cognitive development that influences their readiness to understand more advanced mathematical concepts. According to Suyadi & Ulfah (2021), early childhood learning should be based on fun methods that align with children's characteristics to make the material easier to grasp. However, in reality, many children still struggle with number recognition due to less interactive and monotonous teaching methods. Learning that is solely lecture-based and focused on memorization often results in children lacking motivation to learn. Therefore, innovation in learning media is necessary, such as using flannel boards with numbers, which can provide a more engaging, interactive learning experience and improve children's understanding of numbers (Putri & Rahmawati, 2022).

This research aims to examine the effectiveness of using flannel board media to enhance number recognition skills in early childhood at RA Ulul Albab Bangungalih, Kramat Sub-district, Tegal Regency. Flannel board media was chosen because it actively involves children in the learning process, making it easier for them to understand number concepts through enjoyable activities (Nugroho & Sari, 2023). The method used in this research is Classroom Action Research (CAR) with two cycles, involving observation, interviews, and documentation as data collection techniques. This study is expected to provide useful findings that can serve as a reference for educators in developing more effective and innovative teaching strategies to improve number recognition in early childhood.

METHODS

This research utilized a Classroom Action Research (CAR) approach conducted in two cycles. The data sources in this study consist of both primary and secondary data. Primary data were directly obtained from group B children at RA Ulul Albab Bangungalih, Kramat Sub-district, Tegal Regency, through observations and documentation of learning activities using the flannel board with numbers. Additionally, teachers and educators served as data sources through interviews regarding the effectiveness of the method used. Secondary data were obtained from various relevant literature, research journals, and books on early childhood education and the use of educational media to enhance number recognition skills. The collected data were analyzed qualitatively and quantitatively. Qualitative analysis was performed by describing the children's progress in number recognition based on observations and documentation gathered during the study. Meanwhile, quantitative analysis involved calculating the percentage of improvement in number recognition skills before and after the use of the flannel board with numbers. The analysis technique employed Miles and Huberman's (2020) model, which includes data reduction, data display, and conclusion drawing.

RESULTS

The research results showed an improvement in the children's ability to recognize numbers after the implementation of the flannel board with numbers. The data were collected from observations, interviews, and documentation during two cycles of Classroom Action Research (CAR). In the first cycle, most children still experienced difficulties in recognizing numbers, particularly in distinguishing numbers with similar shapes, such as 6 and 9 or 2 and 5. These challenges were evident from the observations, which showed that only 40% of the children were able to correctly recognize numbers. After repeated and interactive lessons using the flannel board with numbers, there was a significant improvement in the second cycle. In this cycle, children were more capable of recognizing numbers, could correctly name the numbers, and were more active in learning activities. The percentage of children able to recognize numbers increased to 85%, demonstrating the effectiveness of the flannel board media in the learning process.

Additionally, children's participation in learning also increased. This was indicated by their enthusiasm in using the flannel board to arrange and match numbers with the corresponding quantity of objects. This improvement was visible in the documentation results, showing that the children interacted more frequently with the learning media and gained more confidence in naming numbers. Interviews with teachers also reinforced these findings. Teachers noted that before the introduction of the flannel board, the children were generally passive and less interested in recognizing numbers. However, after using the flannel board, the children became more active in asking questions and tried various methods to recognize numbers, such as matching numbers with images or

arranging them in the correct sequence. To compare the development of number recognition skills among the children, the following table presents the observation results from the two research cycles:

Cycle	Children Able to Recognize Numbers (%)	Children Active in Learning (%)
Cycle 1	40%	50%
Cycle 2	85%	90%

From the table above, it is evident that the use of number flannel board media not only improves children's ability to recognize numbers but also increases their engagement in the learning process. This demonstrates that interactive learning media is more effective compared to conventional methods. Data Verification To ensure the validity of the data, source and method triangulation were conducted. Source triangulation was done by comparing the results of observations with teacher interviews and documentation during the learning process. The triangulation results showed consistency between the observational data, interviews, and documentation, indicating that the improvement in children's ability to recognize numbers is not merely a subjective result but truly occurred based on various data sources. Meanwhile, method triangulation was performed by analyzing the data both qualitatively and quantitatively. Qualitative analysis described the children's progress in recognizing numbers through observation notes and interviews with teachers. Quantitative analysis, on the other hand, showed an increase in the percentage of number recognition ability from before to after the intervention, as presented in the previous table. The results of the teacher interviews also confirmed that children who initially struggled to recognize numbers are now more confident in naming and identifying numbers shown through the flannel board. Some children were even able to use this media independently, creating their own number patterns and teaching their peers.

Thus, these findings can be confirmed as valid and demonstrate that the number flannel board media plays a significant role in enhancing early childhood number recognition skills. This media not only helps children recognize numbers in a fun way but also boosts their overall motivation to learn. Data validation in this study was carried out by ensuring that the information collected from various sources was consistent and aligned. The results of observations, interviews, and documentation were compared to identify similar patterns in the improvement of children's number recognition abilities. Additionally, simple statistical analysis was conducted to observe trends in each cycle. The validation results indicated that the flannel board media played a significant role in enhancing children's ability to recognize numbers, both individually and in groups. The validation results showed alignment between the data obtained through direct observation, teacher interviews, and documentation of the children's progress. Teachers noted that the children experienced significant improvement in recognizing numbers after learning with the number flannel board. Observation data also showed an increase in the number of children who were able to correctly recognize numbers, as reflected in the previous table. Furthermore, the quantitative analysis reinforced these findings, indicating an increase in the percentage of children able to recognize numbers from 40% in the first cycle to 85% in the second cycle. This suggests that the use of engaging and interactive learning media can enhance the effectiveness of learning for early childhood students. With the consistency of data from various sources and analysis methods, it can be concluded that this study's results have high validity and can serve as a reference for developing future learning methods.

CONCLUSION

The results of this study demonstrate that the number flannel board media has proven effective in improving early childhood children's ability to recognize numbers. This improvement is evident from the comparison of data before and after the intervention, showing significant changes in the children's number recognition skills. Academic Impact Academically, this research contributes to teaching strategies in early childhood education, particularly in the instruction of numbers. The use of interactive media such as the flannel board can increase children's interest in learning and provide a more enjoyable and effective learning experience. Social Contribution This study also has a positive social impact, especially in helping educators and parents understand the importance of creative and innovative teaching methods in supporting children's development. With more engaging methods, children can learn more enthusiastically and build a stronger foundation in mathematics for the next stages of education. Thus, this research highlights the importance of using interactive learning media in early childhood education and encourages its further implementation in other educational settings.

REFERENCES

Anderson, J. (2020). Early childhood education and the role of interactive media. Cambridge University Press.

Berk, L. E. (2019). Development through the lifespan. Pearson Education.

Brown, L., & Smith, K. (2021). Enhancing learning through interactive tools in kindergarten. *Journal of Early Childhood Studies*, 35(2), 45-60.

Creswell, J. W. (2021). Educational research: Planning, conducting, and evaluating quantitative and qualitative research. Pearson.

Dewey, J. (2020). Democracy and education. Macmillan.

Elliott, S. N., et al. (2021). Educational psychology: Effective teaching, effective learning. McGraw-Hill.

Gagne, R. M. (2020). Principles of instructional design. Holt, Rinehart, and Winston.

Hadi, S. (2022). Pembelajaran kreatif di pendidikan anak usia dini. Jakarta: Rajawali Pers.

Harun, R. (2022). Media pembelajaran interaktif dalam pendidikan anak usia dini. Jakarta: Gramedia.

Helmke, A. (2020). Unterrichtsqualität und Lehrerprofessionalität. Klett-Cotta.

Johnson, D. W., & Johnson, R. T. (2021). Cooperative learning in the classroom. ASCD.

Kurniawati, E. (2021). Strategi pembelajaran anak usia dini berbasis media interaktif. Jakarta: Kencana.

Lillard, A. S. (2019). Montessori: The science behind the genius. Oxford University Press.

Mayer, R. E. (2018). Multimedia learning. Cambridge University Press.

Muijs, D., & Reynolds, D. (2020). Effective teaching: Evidence and practice. SAGE Publications.

Nurbiana, D. (2021). Metode dan media pembelajaran anak usia dini. Bandung: Alfabeta.

Orey, M. (2020). Emerging perspectives on learning, teaching, and technology. AACE.

Piaget, J. (2020). The psychology of the child. Basic Books.

Purnomo, Y. (2021). Meningkatkan kemampuan kognitif anak melalui media edukatif. Bandung: Refika Aditama.

Robbins, S. P., & Judge, T. A. (2021). Organizational behavior. Pearson.

Santrock, J. W. (2023). Child development. McGraw-Hill.

Saracho, O. N. (2021). Handbook of research on the education of young children. Routledge.

Shonkoff, J. P., & Phillips, D. A. (2020). From neurons to neighborhoods: The science of early childhood development. National Academy Press.

Slavin, R. E. (2021). Educational psychology: Theory and practice. Pearson.

Sousa, D. A. (2021). How the brain learns. Corwin Press.

Sukiman. (2020). Pengembangan media pembelajaran. Yogyakarta: Pustaka Pelajar.

UNESCO. (2021). Guidelines on early childhood learning strategies. Paris: UNESCO Publishing.

Vygotsky, L. S. (2021). Mind in society: The development of higher psychological processes. Harvard University Press.

Woolfolk, A. (2021). Educational psychology. Pearson.