Improving The Ability To Recognize Number Symbols Using *Flashcard* In Group A Children At Islahul Ummah Kindergarten In The 2024/2025 Academic Year

Hilyani[1], Rauhun Jannah[2], Muhammad Muhajirin[3]
[1,3] Pendidikan Anak Usia Dini (PAUD) STKIP HAMZAR
[2]Pendidikan Guru Sekolah Dasar (PGSD) STKIP HAMZAR
Email: hilyani95@gmail.com[1], rauhunj20@gmail.com[2], muhammadmuhajirin65@gmail.com[3]

Abstract

This reserach aims to improve the ability to recognize numerical symbols using flashcard in group A children at TK Islahul Ummah. The research was conducted at TK Islahul Ummah, located in Dusun Cupek, Sigar Penjalin Village, Tanjung Subdistrict, North Lombok Regency. The study focused on 23 group A children who were in the process of learning to recognize numerical symbols. This research is a classroom action study using the model developed by Kemmis & Mc.Taggart. Data collection methods included observation, documentation, and testing. The data analysis technique used was descriptive quantitative analysis.The results of the study showed an improvement in the ability to recognize numerical symbols through the use of flashcard among group A children. In the pre-cycle stage, 10 children (43.47%) achieved mastery. This increased in the first cycle, with 15 children (65.21%) achieving mastery. In the second cycle, the results showed a further improvement in the children's ability to recognize numerical symbols. This was evidenced by 20 children achieving the "developing as expected" and "developing very well" categories, with a classical completeness score of 86.95%. The use of flashcard proved effective in enhancing children's ability to recognize numerical symbols.

Keywords: *Number Symbol Recognition, Flashcard Media*

INTRODUCTION

Early childhood education is a comprehensive process of growth and development of children aged birth to six years, which includes all physical and non-physical aspects, by providing stimulation for the development of physical, spiritual, motor, emotional and social thinking that is appropriate and correct so that children can grow and develop optimally (Suryana, 2016). Early childhood education is the provision of stimulus or so-called stimulation, care, guidance, coaching carried out by parents and teachers towards the abilities possessed by children.

Based on Law Number 20 of 2003 on the National Education System, early childhood education is a development effort aimed at children from birth to the age of six years which is carried out through providing educational stimulation to help physical and spiritual growth and development so that children are ready to enter further education (Helmawati, 2015: 5).

Early childhood refers to children aged 0-6 years. According to Susanto (2011), early childhood is essentially a unique individual with a specific growth and development pattern in physical, cognitive, socio-emotional, creative, language, and communication aspects that are appropriate to the stage the child is going through.

Education is very important that we give to children from an early age which is called *golden age* time. The golden age experienced by children is when children easily absorb and are sensitive to receiving all stimuli (Suyanto, 2005). Therefore, we can provide various educational supports that are best for children because this golden age will determine the child's readiness to pursue further education.

The learning process for early childhood should be carried out with the aim of providing basic concepts that have meaning for children through real experiences that enable children to show activity and curiosity (*curiosity*) optimally (Latif, M., Zubaidah, R., Zukhairina, & Afandi, 2013). Early childhood education is also organized with the aim of providing facilities for comprehensive growth and development, especially in the development of all aspects of the child's personality. One aspect that needs to be developed is the child's cognitive aspect in recognizing number symbols.

Recognizing number symbols is important for children because of the various things around them that are related to these symbols. Recognizing number symbols is very necessary for children, because around them there are various things that are related to numerical values (Lestari, 2014).

According to Wortham *"Mathematics experiences prepared for preschool children should take into account the child cognitive limitations and present a minimum of perceptual difficulties".* Mathematical experiences need to be tailored to the child's cognitive developmental stage to reduce difficulties in perception (Sumardi et al., 2017: 191). Introducing number symbols to children needs to be tailored to the child's current developmental stage. So that children's cognitive development develops according to the predetermined level of achievement. The first introduction to basic mathematical concepts based on children's cognitive development is introducing number symbols or recognizing numbers from 1-10.

According to Jean Piaget, the Preoperational Stage (2-7 Years) At this stage, children begin to be able to symbolic thinking and intuitive thinking. Symbolic thinking is the ability to recognize, name, and use number concepts, recognize letters, and describe objects in pictures. Meanwhile, intuitive thinking is the ability to understand something without going through rational and intellectual reasoning (Gilar et al., 2017: 95).

The theory states that in the preoperational stage, children begin to develop symbolic thinking, including numbers and their symbols. Children's ability to recognize number symbols provides the foundation for understanding more complex mathematical concepts at subsequent levels of education.

In the kindergarten curriculum, indicators for recognizing number symbols for children aged 4-5 years include the ability to point to the number symbols 1-10, imitate the number symbols 1-10, and connect and match number symbols with objects. Group A children at this age are at a stage in their development where they begin to show interest and the ability to recognize numbers and their symbols (Mulyaningsih & Tono, 2021: 46).

Based on the results of observations conducted by researchers at Islahul Ummah Kindergarten, children in group A still have or lack and difficulty in recognizing number symbols and most of the children have not been able to recognize and mention number symbols correctly because in learning to recognize number symbols there, researchers did not see teachers using APE media as a learning support in introducing numbers to children.

Therefore, the learning method used must be appropriate to the characteristics of early childhood, namely fun, interactive, and concrete. In learning activities to recognize number symbols in early childhood, especially in children in group A, an APE media or effective learning media is needed to facilitate the teaching and learning process so that children can see or understand the shape of the number symbol of the number (Rahmah et al., 2022). With the presence of APE media, it can help children remember and understand the shape of number symbols easily. One media that can be used is *flashcard*.

Flashcard is a learning medium in the form of picture cards measuring 25 x 30 cm. The pictures on *flashcard* are a series of messages presented with captions on each image (Fitriani et al., 2022: 33).

Flashcard an effective learning tool in the form of cards containing certain images, writing, or symbols, which function to help students remember and associate information with the contents of the card, while also stimulating their thinking and interest in learning so that the learning process can take place (Rofi'ah, 2016).

Instructional Media *flashcard* namely, pictorial learning media which is effective for use in the learning process of early childhood because the media of *flashcard is easy* to use, concrete and attractive. Usage *flashcard* can support the learning process by presenting something realistic and interactive, making it easier for children to understand the concept of number symbols of *flashcard* appeal lies in its ability to capture children's attention through the use of attractive images, colors and shapes.

Based on the problems found by the researcher in accordance with the results of the observation, namely the lack of ability of group A children in recognizing number symbols, the researcher was interested in raising the title "efforts to improve the ability to recognize number symbols using...*flashcard* in group A at Islahul Umah Kindergarten".

METHOD

A research method is a scientific strategy used to gather information with a clear objective and specific purpose. Four important factors need to be considered: the scientific approach, data, objectives, and specific benefits (Sugiyono, 2021: 2).

Research in English can be equated with the words *research.* Research comes from the word *re* and *to search* means to look again, or according to Latin terms it is equivalent to the word *unlock* which means to reveal or open (Sutikno, 2020: 1). So, research, *research* or research is basically interpreted as searching or revealing again.

According to Suyanto, classroom action research is a type of research that is rethinking, where certain efforts are made to optimize classroom learning practices with more competent standards. Classroom action research action research carried out by a teacher in the classroom to solve existing problems (Mahmud, 2008: 19-20).

Looking at the explanation, it can be concluded that the approach used is classroom action research (CAR), because this research will focus on improving the ability to recognize number symbols using...flashcard in group A at TK Islahul Ummah in Dusun Cupek.

Data collection techniques are the most strategic step in research because the primary objective is to obtain data (Fahmi, 2021). Therefore, the techniques used are observation, interviews, and documentation. Meanwhile, classroom action research procedures are carried out in a continuous cycle, consisting of two cycles, each consisting of four main activities: planning, acting, observing, and reflecting. (Susilowati, 2018:41)

Data regarding student learning outcomes is taken from children's ability to recognize number symbols using media of Falsh Card. Analysis of student learning outcome data is carried out by calculating student learning completion individually and as a class.

a. Individual Learning Completion

Individual learning completion is calculated using the following descriptive data analysis:

$$NA = \frac{SP}{SM} \times 100$$

Information

NA: Final Score
SP: Score
SM: Maximum Score

b. Classical learning completion

Classical learning completion is calculated using descriptive percentage analysis, namely:

$$KK = \frac{NS}{JS} \times 100\%$$

Information:
KK: Classical Completion / Group Learning Completion
NS: Complete Score
JS: Number of Students

This study was deemed successful individually if the child's score reached 75%, while the class-based score reached 80% with 10 children participating in storytelling activities at Islahul Ummah Kindergarten. (Sugiyono, 2021:4-5)

RESULTS AND DISCUSSION

To improve the ability to recognize number symbols in children aged 4-5 years, a method appropriate to their developmental stage is required. As applied in this study, learning activities using media are used *flashcard.* This research was conducted in two cycles of action, where each cycle consisted of two meetings. Before the implementation of the action, the researcher conducted an initial test on the children's ability to recognize number symbols in group A. The ability indicators observed

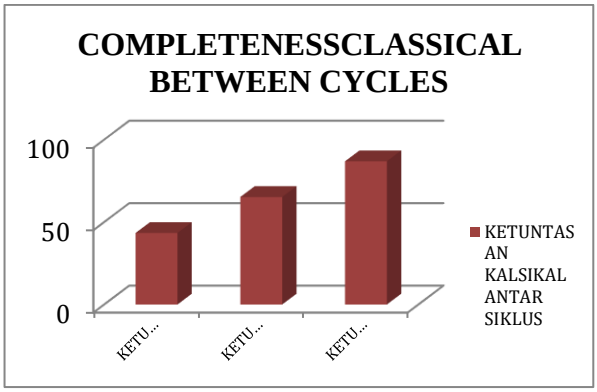
included: the ability to recognize number symbols 1–10 through *flashcard* media, the ability to count and say the sequence of numbers 1-10, connect the number of objects with numbers, the child is able to count 1-10 differently or with the fingers of the hand and the child is able to order the numbers 1-10 using *flashcard.*

The table and graph of the increase in the ability to recognize number symbols in group A children at Islahul Ummah Kindergarten can be seen as follows:

Table 4.5: Total Data on Research Results Between Cycles on the Ability to Recognize Number Symbols of Group A Children Between Cycles

NO	CHILD'S NAME	PRE-CYCLE	WITH CYCLE I	KI SIKLUS II	IS
1	Alif Rahmatullah	40	60	80	BSH
2	Cahya Afifa Watani	80	100	100	BSB
3	Shakila Annastasya Putri	40	80	100	BSB
4	Mulya Antika	80	100	100	BSB
5	Zaira Nakhla Pratami	100	100	100	BSB
6	Arrohma	80	100	100	BSB
7	Tia Amanda	40	40	60	MB
8	Zayyan Fatarandana	100	100	100	BSB
9	Najwa Apriliyono	40	40	80	BSH
10	Naina Mutia Bilqis	40	80	100	BSB
11	M. Izzan Imanullah	60	100	100	BSB
12	Arumi Fasya	80	100	100	BSB
13	Muhammad Abidzar	60	80	100	BSB
14	Farendra Prana	100	100	100	BSB
15	Arsyad Al-Habib	100	100	100	BSB
16	Olivia Derin Suhendra	40	40	80	BSH
17	M. Thoriq	20	20	60	MB
18	Ziadatul Ilmi	60	100	100	BSB
19	Bq. Assyfa Zayyana	40	80	100	BSB
20	Sazila	20	60	80	BSH
21	Akbar Maulana	80	80	100	BSB
22	M. Gibran Al- Fhansori	100	100	100	BSB
23	Juna Arkiano Anggar Jati	20	40	60	MB
Average		61,73	78,26	91, 30	
KALSIKAL COMPLETENESS		43,4%	65,2%	86,9%	

Graph 4.4: Research Data on Number Symbol Recognition in Group A Children Between Cycles



The results of implementing actions in cycle I showed an increase in children's cognitive abilities in recognizing number symbols through *flashcard* media compared to before the action was taken. Before the action, only 10 children achieved completeness with a classical completeness score (43.47%). After the first cycle of action, it can be concluded that there are still 5 children (21.7%) who obtained a BB score (Not yet developed), and 3 children (13%) who obtained a MB score (Starting to develop), 5 children (21.7%) obtained a BSH score (Developing According to Expectations), and as many as 10 children (43.4%) obtained a BSB score (Developing Very Well) with a classical score (65.2%) and an average score of 78.26.

However, based on the researcher's observations during the implementation of Cycle I, several shortcomings were still found in the implementation of the actions, resulting in the results not meeting the classical completion target of 80%, as they only reached 65.2%. Several obstacles that emerged during the implementation of Cycle I included:

1. There are some children who are not yet focused and participating in learning activities to recognize number symbols.
2. There are some children who still cannot name and differentiate number symbols.

Therefore, improvements are needed in the actions in cycle II so that the ability to recognize number symbols of children in group A of Islahul Ummah Kindergarten can achieve the desired target or results. In cycle II, the researcher improved the implementation of activities based on the evaluation results in cycle I by providing more interesting variations of activities. In this cycle, the researcher continued to use flashcard.

The evaluation results in cycle II showed an increase in the ability to recognize number symbols. This can be seen from the number of children who obtained an individual completion score of 70% in cycle I using *flashcard* media as many as 15 children achieved classical mastery (65.2%) with an average score of 78.26. After the actions were carried out in cycle II, the number of children who achieved an individual mastery score of 70% increased to 20 children who achieved classical mastery (86.9%) with an average score of 91.30. This increase occurred gradually and went according to plan and the development indicators for recognizing number symbols that had been determined.

The results of the study show that the use of flashcard media *effective* in improving the ability of group A children at Islahul Ummah Kindergarten to recognize number symbols. This media encourages active participation and children's thinking processes through activities such as showing, naming, and ordering numbers according to the learning theme. The classroom atmosphere becomes more conducive, and children's learning outcomes improve. Based on achievements that have met the success indicators, the research was declared successful and was not continued to the next cycle.

This finding is supported by Jean Piaget's cognitive theory. Preoperational Stage (2-7 Years). At this stage, children begin to be able to symbolic thinking and intuitive thinking. Symbolic thinking is the ability to recognize, name, and use the concept of numbers, recognize letters, and be able to describe things in the form of pictures. At this preoperational stage, children have begun to develop symbolic thinking including numbers and symbols of numbers (Gilar, et al. 2017). Children's ability to recognize number symbols becomes the basis for them in basic mathematical concepts.

In addition, this research is strengthened by research from action research conducted to improve children's cognitive development through the media of number cards from used cardboard in Paud Ceria, Pagar Agung Village, West Seluma District, Seluma Regency and success. The following is the average percentage of children's cognitive development from the implementation of cycle I and cycle II. It can be seen that there is an increase from the data obtained after the action in cycle I and cycle II. The percentage of children's cognitive development through the media of number cards from used cardboard in Paud Ceria, Pagar Agung Village, West Seluma District, Seluma Regency experienced an increase in the implementation of cycle I actions of 75% Developing According to Expectations (BHS) and a significant increase occurred in the implementation of cycle II actions to 88.75% meaning developing Very Well (BSB) Based on the analysis conducted by researchers, children's cognitive development has increased after the implementation of activities carried out using the media of number cards from used cardboard in Paud Ceria, Pagar Agung Village, West Seluma District, Seluma Regency, thus causing high enthusiasm from children and the stimulation given to children can be done optimally because the stimulation given uses several variations. The implementation of activities using number cards from used cardboard at PAUD Ceria, Pagar Agung Village, West Seluma District, Seluma Regency is very appropriate for developing the cognitive abilities of group B children because through this activity children can name the number symbols 1-10, can use number symbols to count, can name number symbols, can match numbers with number symbols. The success indicators have been achieved well as

evidenced by the percentage obtained through 2 cycles, namely cycles I and II. Therefore, implementing activities to develop children's cognitive abilities by using number card learning media from used cardboard in group B is very appropriate. This is in line with what is mandated in the Permendikbud Number. 137 of 2014 concerning Standards for Achievement Levels of Child Development Aged 5-6 Years as a reference for students and teachers who are conducting research (Gusniarti et al., 2020)

CONCLUSION

Based on the data and learning improvements, it can be concluded that the research on group A children aged 4-5 years at Islahul Ummah Kindergarten was successfully implemented. The use of flashcard media *has* been proven to improve children's ability to recognize number symbols. This classroom action research (CAR) aims to improve the ability to recognize these number symbols in group A children at Islahul Ummah Kindergarten in the 2024/2025 academic year.

The results of implementing actions in cycle I showed an increase in children's cognitive abilities in recognizing number symbols through flashcard media. A total of 5 children (21.7%) were in the BB category, 3 children (13%) in the MB category, 5 children (21.7%) in the BSH category, and 10 children (43.4%) in the BSB category. The number of children who achieved 70% individual mastery reached 15 children in the classical score (65.21%) with an average score of 78.26. This achievement reflects quite significant development. Meanwhile, the results in cycle II showed further improvement compared to the conditions before the action. This can be seen from the data of children in the MB category as many as 3 children (13%), 4 children (17.4%) in the BSH category, and 16 children (69.5%) in the BSB category, and no children who got the BB category. Thus, the number of children who achieved 70% individual mastery reached 20 children in the classical score (86.9%) with an average score of 91.30.

SUGGESTION

Based on the results of the research that has been carried out, the author makes several suggestions as follows:

1) For teachers, flashcard media *can* be used as an alternative learning tool to improve children's cognitive abilities in recognizing number symbols. This media should be designed to be as engaging as possible to capture children's attention, encourage active participation, and prevent boredom during learning activities.
2) For schools, it is recommended to provide facilities that support the use of flashcard mediain learning. Furthermore, it is important to provide space for teachers to develop ideas and creativity in the use of learning methods or media, as well as to conduct regular evaluations of their implementation.
3) For future researchers, this study still has limitations so it is hoped that it can be a motivation to conduct further, more in-depth research to minimize deficiencies and further optimize the improvement of the ability to recognize number symbols in early childhood.

ACKNOWLEDGEMENT

Special thanks go to Islahul Ummah Kindergarten for providing the space and opportunity for this research. The researchers also extend their gratitude to STKIP Hamzar for their support throughout the research.

BIBLIOGRAPHY

Gusniarti, G., Pura, D. N., & Haryono, M. (2020). Meningkatkan Perkembangan Kognitif Anak Melalui Media Kartu Angka Dari Kardus Bekas Di Paud Ceria Desa Pagar Agung Kecamatan Seluma Barat Kabupaten Seluma. *Early Childhood Research and Practice, 1*(01), 28–33. https://doi.org/10.33258/ecrp.v1i01.1071

Latif, M., Zubaidah, R., Zukhairina, & Afandi, M. (2013). *Orientasi Baru Pendidikan Anak Usia Dini*. Prenada Media Group.

Lestari, R. P. (2014). *Peningkatan Kemampuan Mengenal Lambang Bilangan Melalui Penggunaan Media Kartu Angka Dan*

Kartu Bergambar Pada Anak Kelompok A2 TK Masyithoh Ngasem Sewon Bantul Yogyakarta. Universitas Negeri Yogyakarta.

Rahmah, N., Nursyamsi, & Subhan. (2022). Pendampingan pembuatan alat permainan edukatif (APE) matematika bagi guru PAUD di Kelurahan Balandai Kota Palopo. *Transformasi: Jurnal Pengabdian Masyarakat*, *18*(1), 137–153. https://doi.org/10.20414/transformasi.v18i1.4345

Rofi'ah, S. H. (2016). *Efektivitas Media Flash Card Dalam Meningkatkan Kosakata Bahasa Arab Anak Usia 5-6 Tahun Di Raudhatul Athfal Tahfidz Al-Qur'an Jamilurrohman Yogyakarta*.

Suryana, D. (2016). *Pendidikan Anak Usia Dini: Stimulasi Dan Aspek Perkembangan Anak*. Kencana.

Susanto, A. (2011). *Perkembangan Anak Usia Dini*. Universitas Terbuka.

Suyanto, S. (2005). *Dasar-Dasar Pendidikan Anak Usia Dini*. Hikayat Publishing.

Fitriani, E., Waspodo, M & Gatot, M. (2022). Monograf Media Flash Card Baca Digital Untuk Anak Usia Dini. Bandung : CV. Widhina Media Utama.

Gandana, Gilar. (2017). Peningkatan Kemampuan Mengenal Lambang Bilangan 1-10 Melalui Media Balok Cuise Naire Pada Anak Usia 4-5 Tahun Di TK At-Toybah. PAUD Agepedia.

Helmawati. (2015). *Mengenal Dan Memahami Paud*. Bandung: PT.Remaja Rosdakarya.

Mahmud, & Priatna, T. (2008). Penelitian Tindakan Kelas Teori Dan Praktek. Bandung: Tsabita.

Mulyaningsih, E., Sukmawati, & Palangngan, T. (2021). Pengaruh Permainan Puzzle Terhadap Kemampuan Mengenal Lambang Bilangan Pada Anak Usia Dini. Jurnal Of Primary Education.

Sugiyono. (2021). Metode Penelitian Kuantitatif Kualitatif Dan R& D. Bandung: Alpabeta Bandung.

Sumardi,Dkk. (2017). Peningkatan Kemampuan Anak Usia Dini Mengenal Lambang Bilangan Melalui Media Play Dough. *PAUD Agepedia*.

Susilowati, D. (2018). Penelitian Tindakan Kelas (PTK) Solusi Alternatif Problematika Pembelajaran. Edunomika.

Sutikno, S. (2020). Penelitian Kualitatif. Lombok: Hous Tice.