



Teachers' Efforts in Introducing Numbers to Children Aged 5-6 Years through Number Trees

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Abstract

This study examines the teacher's efforts in introducing numbers to children aged 5-6 years using number trees to early childhood. This research is interesting to discuss because the teacher's efforts are important in developing early childhood abilities with the challenges of children's different abilities. This study aims to see the teacher's efforts in introducing numbers to children aged 5-6 years using a number tree at RA Miftahul Jannah Bandar Mataram. The benefit of this research is to add insight and knowledge about the teacher's efforts in introducing numbers to children aged 5-6 years using a number tree. This research is a type of qualitative research using 3 data collection techniques, namely, observation, interviews and documentation. This research data was taken from class teachers and children aged 5-6 years at RA Miftahul Jannah. The results of this study are that the teacher has tried to introduce numbers to children aged 5-6 years as an implementer of learning at RA Miftahul Jannah using number tree media. The results of the development of the ability to recognize numbers in children aged 5-6 years, namely children aged 5-6 years at RA Miftahul Jannah are developing as expected.

Keywords: Teacher Efforts, Number Tree, Cognitive Development

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INTRODUCTION

One of the challenges faced by the Indonesian nation in this modern era is the issue of low quality human resources, and one of the efforts to improve these human resources is through education (Percy-Smith, Thomas, O'Kane, & Imoh, 2023). This effort is inseparable from the endeavors of teachers to educate the nation's successors (Habe & Ahiruddin, 2017). The role of teachers is not only limited to being educators who convey knowledge, but also as guides, developers, and managers of learning activities that can facilitate students in achieving predetermined goals (Gautama, 2022). Therefore, the efforts of teachers are crucial for the future life of the nation, especially in educating young children, which means efforts to stimulate, guide, nurture, and provide learning activities that will result in the abilities and skills of children (Sholeh, 2018).

Children are likened to growing plants, so the role of educators or parents is akin to gardeners, and schools are like greenhouses where children grow and mature according to their natural growth patterns (E. P. Ferdian Utama, 2020). As gardeners, it is their duty to water, fertilize, care for, and nurture the plants in the garden (S. Ferdian Utama, 2017). It can be said that what will happen to children depends on their natural growth and the

environment that provides care (Kartikawati, Roni, & Purwanti, 2022). The role and efforts of teachers are therefore crucial for young children (Schachter, Gerde, & Hatton-Bowers, 2019). In reality, at RA Miftahul Jannah, teachers have made efforts according to the implementation plans of teaching. However, these efforts are not always sufficient because fundamentally, each child has their own abilities.

All children cannot be equated because each has their own inherent characteristics and uniqueness (Pujawardani, 2019). Thus, not all education for children can be applied universally (Ramli, 2022). However, at least, the general traits and habits of children have many similarities (Wahyuni Abstrak, 2019). This poses a challenge in the developmental process of young children in educational institutions, as the abilities of each young child vary (Utama & Tanfidiyah, 2019). Early childhood is the most appropriate time to stimulate individual development (Tulasih, Yussof, & Kristiawan, 2022). In order to provide various developmental efforts, it is necessary to understand the developments that occur in young children (Wardhani & Krisnani, 2020). Knowledge about the development of young children will serve as a foundation for adults to prepare various stimulations, approaches, strategies, methods, plans, media, or educational play tools needed to help children develop in all aspects of their development according to their needs at each stage of their age (Maftutah, Jannah, & Utama, 2021). This can be done through the use of instructional media, which is fundamentally important for the implementation of early childhood education (Muhammad Yusuf, 2022). In reality, RA Miftahul Jannah only has instructional media such as wooden blocks, posters, storybooks, number and letter puzzles, as well as large and small balls.

Instructional media are important for teachers to develop children's abilities. Because media is an integral part of the teaching and learning process, everything that can be used to convey messages from sender to receiver, thereby stimulating the minds, feelings, attention, and interests of students in such a way that the learning process occurs. One important aspect for young children is their cognitive ability. Cognitive ability can be defined as broad knowledge, reasoning ability, creativity or inventiveness, language skills, and memory. The combination of a child's maturity with environmental influences is referred to as cognition. The cognitive ability referred to in this research is the ability to recognize numbers.

The ability to recognize numbers in 5-6 year old children at RA Miftahul Jannah has not yet reached the desired level of development. This was observed by researchers during their teaching practicum at RA Miftahul Jannah. The data from the pre-survey on number recognition abilities in 5-6 year old children at RA Miftahul Jannah can be seen in the table below. The data from the pre-survey on number recognition abilities in 5-6 year old children in Group B at RA Miftahul Jannah shows indicators of children's abilities categorized as "Not Yet Developed" (NYD) for those who have not developed and "Starting to Develop" (STD) for those who are beginning to develop. These indicators include the ability to name numbers 1-10, use number symbols for counting, match numbers with number symbols, and represent various objects through pictures or writing. The data shows that out of the observed children, four were classified as "Not Yet Developed," while the rest were classified as "Starting to Develop." This indicates that the number recognition abilities of 5-6 year old children at RA Miftahul Jannah have not yet reached the expected developmental criteria.

Several studies related to this topic have been conducted previously. First, Abdul Syukur and Yulianty Thabita Fallo researched the use of nature-based instructional media to improve children's ability to understand number concepts. They concluded that the use of such media can improve children's abilities, recommending its use in every early childhood learning activity. Second, Eli Suriyana researched the use of a number tree media to improve number recognition abilities in 5-6 year old children at TK Negeri Dharma Wanita Teunom Aceh Jaya. This study showed that the use of number tree media

is effective in improving children's abilities. Third, Natalia Rosalina Rawa, Marsianus Meka, and Virginia Nai researched the influence of number tree instructional media on the ability to understand number concepts in 5-6 year old children at TKK Satap St. Theresia Wolomeli, Ngada District. Data analysis showed the influence of this instructional media on children's abilities. Fourth, Jerfudz Toto researched efforts to improve number recognition abilities through the use of number tree media in 5-6 year old children at TK Tunas Bhakti, Sidorejo Subdistrict, Salatiga City. This research successfully improved children's number recognition abilities. Fifth, Isabella Hasiana researched the influence of cardboard number media on the ability to understand number concepts 1-10 in a group of children. This research showed a positive influence of the media on children's abilities. Although there are similarities in developing number recognition abilities in young children, these studies differ in the use of media, teaching methods, and the age groups of children.

Given the issues with media and cognitive ability of 5-6 year old children at RA Miftahul Jannah, the researcher will endeavor to introduce numbers to 5-6 year old children using a number tree media that can be made from styrofoam materials, which is expected to develop number recognition abilities at RA Miftahul Jannah. Furthermore, teaching using a number tree media has never been implemented at RA Miftahul Jannah. Identification of the problems from the background above leads to two main issues: first, the lack of implementation of instructional media using number trees at RA Miftahul Jannah in Bandar Mataram, Central Lampung. Second, the number recognition abilities of 5-6 year old children at that institution have not reached the expected level of development. To avoid misunderstandings, the researcher establishes a concrete research focus: the efforts of teachers in developing number recognition abilities in 5-6 year old children at RA Miftahul Jannah in Bandar Mataram. Thus, the problem statement becomes "What are the efforts of teachers in developing number recognition abilities in 5-6 year old children at RA Miftahul Jannah in Bandar Mataram." The research objective is to determine the efforts of teachers in developing number recognition abilities in 5-6 year old children through the use of number tree media at RA Miftahul Jannah in Bandar Mataram, Central Lampung. The benefits of this research include providing input for teachers in developing children's abilities, providing reflection for students on the importance of number recognition, and serving as a reference for other researchers.

METHOD

The research method used in this study is qualitative research. This type of research is chosen because it is based on the philosophy of post-positivism and has the characteristics of artistic and interpretative methods (Arias, Arias, & Rodríguez-Medina, 2021). Its goal is to develop number recognition abilities in 5-6 year old children at RA Miftahul Jannah in Bandar Mataram through the use of a number tree media as part of the teachers' efforts in the teaching and learning process. This research was conducted at RA Miftahul Jannah, located on Jl. Lintas Pantai Timur Sumatera, Terbanggi Ilir Village, Bandar Mataram District, Central Lampung Regency. The research subjects consist of one teacher and eight 5-6 year old children in Group B at RA Miftahul Jannah in Bandar Mataram. The data sources used include observation results, interviews with the teacher of the 5-6 year old children's group, documentary data, and relevant literature studies. Data collection methods include observation, interviews, and documentation. The validity of the data in this research is tested through triangulation, which includes source triangulation, data collection technique triangulation, and time triangulation. Data validity testing is conducted to ensure that this research is a valid and reliable scientific work (Firmansyah & Dede, 2022). The data analysis technique used is the Miles and Huberman model, which consists of data reduction, data presentation, and conclusion drawing. Data reduction aims to summarize important information, data presentation is done through various visual

forms such as tables and graphs, while conclusion drawing is the final stage that produces credible conclusions based on existing evidence.

RESULT AND DISCUSSION

RA Miftahul Jannah Bandar Mataram

This study was conducted at RA Miftahul Jannah in Bandar Mataram, an educational institution established in 2016. Its location is on Jl. Lintas Pantai Timur Sumatra, Terbanggi Ilir Village, Bandar Mataram District, Central Lampung Regency. Based on interviews with Mrs. Erna Budiarti, S.Pd (Principal) and Mrs. Dewi Purwanti (Teacher of 5-6 Year Old Children's Group), RA Miftahul Jannah has a vision to prepare generations that are faithful, knowledgeable, moral, and righteous. The institution's mission includes training children's independence and social attitudes, developing children's talents and interests, instilling a love of worship from an early age, and creating a conducive and enjoyable learning environment. The educational facilities at RA Miftahul Jannah include office rooms, classrooms, playgrounds, fields, health and counseling rooms, and bathrooms. Additionally, there are teacher desks, teacher chairs, office cabinets, student desks, student chairs, bookshelves, whiteboards, and educational aids (APE) both indoors and outdoors. Although they do not have many instructional media yet, RA Miftahul Jannah has collected several types of media such as wooden blocks, letter and number puzzles, storybooks, picture posters, thematic books, and large balls.

The educators at RA Miftahul Jannah consist of the Principal and two teachers. The Principal holds a Bachelor's degree and has been in office for 7 years, while the other two teachers have equivalent education to high school and have been in office for 5 years and 2 years respectively. The teacher of the 5-6 year old children's group, Mrs. Dewi Purwanti, has 2 years of teaching experience and has not yet pursued a Bachelor's degree in Early Childhood Education. In the teaching process, the teachers at RA Miftahul Jannah have followed their own curriculum and Lesson Implementation Plans (RPP). They use various methods such as singing, questioning, and assigning tasks. The subjects of this study are 8 children aged 5-6 years old at RA Miftahul Jannah, consisting of 5 boys and 3 girls. The cognitive development of 5-6 year old children at RA Miftahul Jannah varies, and this study records observational results and pre-survey data to evaluate their abilities.

Number Tree Media for Introducing Numbers

Teacher efforts are crucial in developing their students' abilities. The diverse abilities of students pose a challenge for teachers. It requires more effort to develop students' abilities, such as using engaging media and appropriate methods so that students become more enthusiastic and influential in their development. Therefore, teachers are required to be creative in developing their students' abilities. This research reveals how teachers make efforts to introduce numbers to 5-6 year old children using a number tree at RA Miftahul Jannah in Bandar Mataram. Through the use of the number tree instructional media, teachers aim to develop the cognitive abilities of 5-6 year old children at RA Miftahul Jannah in Bandar Mataram. Here are the efforts made by teachers in introducing numbers to 5-6 year old children:

1. Teachers prepare the number tree media

Based on observations at RA Miftahul Jannah on September 14, 2023, the researcher prepared teaching and learning activities using the number tree media. This is based on an interview with Mrs. Dewi Purwanti who stated that "the researcher prepared to use the number tree media by placing the number tree on

the table in front of the class, and preparing number cards to be used for playing." This activity can stimulate the curiosity of young children.



Figure 1. Teacher Preparing the Number Tree Media

2. Teacher explains about the number tree

Based on observations at RA Miftahul Jannah on September 14, 2023, the researcher explained about the number tree media before using it. This is based on an interview with *Mrs. Dewi Purwanti* who said, "the researcher explained to the children how to use the number tree media. First, the teacher explained that the children would be divided into 2 groups, and then each group would be invited to play guessing numbers and arranging numbers on the number tree media." This activity aims to train children to listen to others' words.



Figure 2. Teacher Explaining the Number Tree Media to 5-6 Year Old Children

3. The teacher invites the children to mention numbers 1-10.

Based on observations at RA Miftahul Jannah on September 14, 2023, the researcher invites the children to mention numbers 1-10 first. This was stated by Mrs. Dewi Purwanti, who said, *"Mrs. Yulianti invites the children to mention numbers 1-10 by singing and invites the children to mention the numbers on the number tree, but not by singing (just mentioning the numbers)."* This activity can develop number recognition skills.



Figure 3. Teacher Encouraging Children to Mention Numbers

4. The teacher divides the children into several groups.

Based on observations at RA Miftahul Jannah on September 14, 2023, the researcher divides the children into several groups. This was stated by Mrs. Dewi Purwanti, who said, *"Mrs. Yulianti divides the children into 2 groups for learning, to facilitate taking turns in playing with the number tree media."* This core activity can facilitate children in understanding what the teacher says.

5. The teacher invites the children to play number guessing games.

Based on observations at RA Miftahul Jannah on September 14, 2023, the researcher invites the children to play number guessing games. This was stated in an interview with Mrs. Dewi Purwanti, who said, *"Mrs. Yulianti invites the children to play number guessing games in each group."* This activity can develop children's ability to recognize numbers 1-10.



Figure 4. Teacher Inviting Children to Play Number Guessing Game Using the Number Tree Media

6. The teacher directs the children to arrange numbers in sequence in turns in each group.

Based on observations at RA Miftahul Jannah on September 14, 2023, the researcher directs the children to arrange numbers in sequence in turns. This was stated in an interview with Mrs. Dewi Purwanti, who said, "Mrs. Yulianti directs the children to arrange numbers in sequence according to the order of numbers 1-10." This activity can develop children's ability to recognize numbers 1-10.



Gambar 5. Children Sorting Numbers Using the Number Tree

The use of the number tree media with 5-6 year old children at RA Miftahul Jannah, conducted on September 14, 2023, yielded the following data.

Table 1. Data of Progress in Number Recognition Ability in 5-6 Year Old Children at RA Miftahul Jannah

No	Child's Name	Indicator of 5-6 Year Old Children's Ability				Description
		1	2	3		
1	Idris Saputra	BSH	BSH	MB		BSH
2	Vino Bastian	BSH	MB	MB		MB
3	Aji Susanto	BSH	BSH	BSH		BSH
4	Naswa Aulia	BSH	BSH	MB		BSH
5	Alvin Gunawan	BSH	BSH	MB		BSH
6	Diki Saputra	BSH	BSH	MB		BSH
7	Suci Rahmawati	BSH	BSH	MB		BSH
8	Cika	BSH	BSH	MB		BSH

Explanation:

MB: Mulai Berkembang (Starting to Develop)

BSH: Berkembang Sesuai Harapan (Developing as Expected)

Indicators of Number Recognition Ability in 5-6 Year Old Children:

1. Naming number symbols from 1 to 10
2. Using number symbols for counting
3. Matching numbers with number symbols

Based on table 4.5, it is shown that the ability to recognize numbers in 5-6 year old children at RA Miftahul Jannah after using the number tree media, 7 children met the criteria of Developing as Expected (BSH) and 1 child met the criteria of Starting to Develop (MB). The use of the number tree media demonstrates its benefits in helping to develop the number recognition ability of 5-6 year old children at RA Miftahul Jannah.

The contribution of this research is expected to provide information as a basis for consideration, support, and contribution to the thoughts of RA Miftahul Jannah and future research to improve the abilities of early childhood and enhance the role of teachers. The shortcomings or weaknesses in this research are expected to be considered for future research. One of the shortcomings of this research is the perceived lack of time in conducting the research to complete the academic writing, resulting in suboptimal research process.

CONCLUSION

Based on the research results and discussion on the efforts of teachers in introducing numbers to 5-6 year old children using the number tree media at RA Miftahul Jannah, it can be concluded that the teachers have carried out their duties as learning facilitators in developing the abilities of these children in number recognition. The efforts of the teachers involved several steps, such as making Daily Lesson Plans (RPPH), preparing the number tree media, explaining to the children about the use of the media, playing number guessing games, arranging number sequences, and assessing the cognitive development of the children. All of these activities demonstrate the teachers' commitment to developing the cognitive abilities of 5-6 year old children at RA Miftahul Jannah, with satisfactory results from the use of the number tree media. In improving the quality of learning, several suggestions can be given. First, for the Principal, it is recommended to pay more attention to teachers and students, and provide the necessary facilities for teaching and learning activities. In addition, providing encouragement and support to teachers and students is also important. Second, for the teachers, it is better to be more creative and innovative in optimizing early childhood learning activities, especially by utilizing existing learning media or even creating new learning media from easily obtainable materials. Because learning media plays an important role in improving the development of early childhood. Thus, collaboration between the principal, teachers, and students is expected to improve the effectiveness and efficiency of the learning process at RA Miftahul Jannah.

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