



The Role of Parents and Manipulative Media in Introduction to Numbers in Early Childhood

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ABSTRACT

The concept of Numbers needs to be introduced in early childhood to help the growth and development of children in order to have readiness to enter further education. Introducing numbers in early childhood development through the role of parents and playing activities in everyday life and are natural. The purpose of this study was to analyze the influence of the role of parents and the use of manipulative media on the ability to recognize numbers in early childhood. This research was conducted in TK YKK 2 and TK Alfina and TK Al Ikhwan. The number of research samples was 109 children. The sampling technique used random sampling and cross-sectional research design. The independent variable in this study is the role of parents and the use of manipulative media, while the dependent variable is the ability to recognize the concept of numbers in early childhood. Statistical test using Rank Spearman and Logistic Regression Test. The results showed that the role of parents and the use of manipulative media together can improve the ability to recognize the concept of numbers in early childhood. The role of parents in guiding, motivating, and facilitating early childhood learning can improve children's ability to recognize numbers. The use of appropriate and interesting learning media can improve children's thinking patterns in the concept of numbers

Keywords: Role of Parents, Manipulative Media, Introduction to Numbers

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INTRODUCTION

Parents have a key role in the successful implementation of inclusive education at the school level¹. Parents as the first to be close to children know best about the child's development and condition, what the child likes and hates, what the children's strengths and needs are, the child's speaking style, children's hobbies, what the child's goals and dreams are, and so on². Active involvement and family support was identified as the key to the success of an inclusive education program from an early age. Even an important factor in the success of inclusive schools is the involvement of parents in their children's education, especially for students with special needs³ because parental involvement has proven to be very effective in improving children's development in terms of learning and modifying behavior. them³. Selection of teaching materials requires the use of certain guidelines or principles so that we do not choose the wrong teaching materials⁴. "Each type of teaching material has its own advantages and disadvantages. For that we need general principles in choosing teaching materials"⁵. Media selection must be in accordance with the objectives to be achieved, media selection must be based on clear concepts, media selection must be in accordance with the characteristics of learners or targets, media selection must be in accordance with student learning styles and teacher styles and abilities, media selection must be in accordance with environmental conditions, facilities and time available for learning needs⁵

Based on observations made in YKK Bangkalan Kindergarten for group B children in learning activities to recognize the concept of numbers 1-20, it was only limited to the ability of children who only knew the symbol of the number but did not know the concept of the amount. There are still children who have difficulty counting objects directly. When children are asked to count objects, the numbers mentioned by the children do not match the objects that the child points to. Some of the children are less interested in participating in the learning process, which can be seen from the child's inactivity and playing alone or lack of concentration.

This study aims to analyze the influence of the role of parents and the use of manipulative media on the ability to recognize numbers in early childhood.

METHOD

This research was conducted in TK YKK 2 and TK Alfina and TK Al Ikhwan. The number of research samples was 109 children. The sampling technique used random sampling and cross-sectional research design. The independent variable in this study is the role of parents and the use of manipulative media, while the dependent variable is the ability to recognize the concept of numbers in early childhood, statistical tests using Rank Spearman and Logistic Regression Test. The research instrument used an observation sheet and a questionnaire.

RESULTS

Table 1. Distribution of Characteristics of Child Respondents by Gender in Kindergarten in Bangkalan Region

Gender	Frequency	%
Boy	50	45,9
Girl	59	54,1
Total	109	100

Based on table 1, it is known that most of the gender of early childhood respondents are girl (54.1%).

Table 2. Frequency Distribution of Parents' Role

Parental roles	Frequency	%
Facilitate		
Less	23	21,1
Enough	45	41,3
Good	41	37,6
Motivate		
Less	46	42,2
Enough	39	35,8
Good	24	22
Guide		
Less	25	23
Enough	35	32,1
Good	49	44,9
Total	109	100

Based on table 2, it is known that the role of parents in guiding their children is in the good category (44.9).

Table 3. Frequency Distribution of Manipulative Media

Manipulative Media	Frequency	%
Buttons		
Big	60	55
Small	49	45
Balls		
Big	40	36,7
Small	69	63,3
Total	109	100

Based on table 3, children aged 5 years prefer to use small ball manipulative media (63.3%).

Table 4 The Relationship between the Role of Parents and the Ability to Recognize the Concept of Numbers in Early Childhood 2019

Variable	<i>r</i> counts	<i>p</i>
The Role of Parents and The Concept of Numbers	0,202	0,035

Based on statistical analysis with Rank Spearman in table 4, it shows that there is a relationship between the role of parents and the ability to recognize the concept of numbers, indicated by p value $0.035 < \alpha 0.05$.

Table 5 The relationship between manipulative media and the ability to recognize the concept of numbers in early childhood in 2019

Variabel	r counts	P
Manipulative Media and the Concept of Numbers	-0,024	0,803

Based on statistical analysis with Rank Spearman in table 5, it shows that there is no relationship between manipulative media and the ability to recognize the concept of numbers, with p value $0.803 > \alpha 0.05$.

Table 6 Overview of the feasibility of the model

	χ^2	Df	p
Pearson	9,18	6	0,163
Deviance	11,53	6	0,073

With a deviance value of $0.073 > 0.05$ in table 7 which shows that the logit model is feasible to see ordinal regression between the roles of people.

Table 7 Model meaningful table

Model	Model Fitting Criteria	Likelihood ratio Test		
	-2 Log Likelihood	χ^2	f	p
Intercept Only	51,405			
Final	37,578	13,827	4	0,008

Based on table 7, the significant value is $0.008 < 0.05$, which indicates that the model is fit enough for ordinal regression.

Table 8 Table of the Roles of Parents and Manipulative Media on the Ability to Recognize the Concept of Numbers

Coefficient	Value
Cox and Snell	0,0119
Nagelkerke	0,150
McFadden	0,080

Based on table 8, the Nagelkerke coefficient = 0.150, which means that 15% of the variables of the role of parents and manipulative media affect the ability to recognize the concept of numbers and the rest is influenced by other factors.

DISCUSSION

The Relationship between the Role of Parents and the Ability to Recognize the Concept of Numbers.

The results showed that parents in TK Alfina, Al Ikhwan and TK YKK Bangkalan played less role in facilitating children's learning. Meanwhile, the role in guiding is good. According to⁶, the role of parents in general includes the role of the father and the role of the mother. The role of the father, namely as the leader of the family, has the role of breadwinner, educator, protector or protector, giver of security for each family member and also as a member

of certain social groups. Meanwhile, the role of the mother is as a housekeeper, caregiver and educator of children, protector of the family and also as the breadwinner of the family and as a member of certain social groups. Based on state ⁷ that there is a positive relationship between the role and motivation of parents on children's math skills. The role of parents is very important in the success of their children's education because children are a gift from God, children get their first education from their parents, and parents know better about their children's character⁸.

In this study, the involvement of parents in children's education is influenced by educational factors and parents' work. The education of parents at Alfina Kindergarten, Al Ikhwan Kindergarten and YKK Bangkalan Kindergarten, which are mostly high school and entrepreneurial, influence the stimulation of children's learning in introducing the concept of numbers. The ability of parents to form appropriate beliefs and expectations based on the performance of their children is very important to support a conducive home and educational environment, so that they can do better outside their school environment. This indirect relationship influences through expectations of education, reading, playing and affective behavior of parents.

The Relationship between the Use of Manipulative Media and the Ability to Recognize the Concept of Numbers

The results showed that the use of manipulative media was not related to the ability to recognize the concept of numbers in early childhood (p value $0.803 > \alpha 0.05$). Based on the research results, it was found that children aged 5-6 years in YKK Kindergarten, Ikhwan Kindergarten and Alfina Kindergarten mostly like small ball manipulative media. According to ⁸, early childhood is at the stage of thinking towards concrete thinking, so that manipulative media in the form of balls and buttons are media that can be visualized according to real objects and are easily understood and liked by children. According to ⁵, ball manipulative media is an interesting play tool for children. So that learning while playing is one way to stimulate children's cognitive development ⁹. Manipulative media do not have to be expensive, but must be good¹⁰ and safe for children's learning and used in the right way so that children's development can be optimal and provide motivation for children to want to participate in learning activities properly.

How to learn while playing by counting and inserting balls and buttons into the basket according to the number instructed by the researcher is less attractive and does not visualize concrete thinking in children in Alfina, Al Ikhwan and YKK Kindergarten Bangkalan. This is because how to play with balls and buttons is not attractive to 5years old.

The Relationship between the Role of Parents and Manipulative Media on the Ability to Know the Concept of Numbers

In this research, the role of parents and the use of manipulative media together affects the ability to recognize the concept of numbers in early childhood. Factors The role of parents in facilitating, guiding and motivating children in learning can improve children's learning achievement. The family environment is the first educational environment for students, because it is in this family that students receive education and guidance for the first time. Parents are one of the factors that influence the development of student potential.¹¹ in his research revealed that parental involvement has a positive effect on academic achievement.

Selection of the right learning media can attract early childhood learning interest in arithmetic lessons. The role of parents and the selection of appropriate manipulative media can improve early childhood learning achievement, especially in arithmetic lessons.

CONCLUSIONS AND SUGGESTION

The role of good parents can improve the ability to recognize the concept of numbers in early childhood, the use of manipulative media cannot increase the ability to recognize the concept of numbers in early childhood, the role of parents and the use of manipulative media together can improve the ability to recognize the concept of numbers in children early age.

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