



INNOVATIVE: Journal Of Social Science Research

Volume 4 Nomor 2 Tahun 2024 Page 453-461

E-ISSN 2807-4238 and P-ISSN 2807-4246

Website: <https://j-innovative.org/index.php/Innovative>

Application of Bowling Game Method to Introduce Numbers in PAUD Nurul Iman

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Abstrak

Bermain merupakan kegiatan yang penting bagi anak, karena bermain bagi anak mempunyai nilai yang sama dengan bekerja dan belajar bagi orang dewasa. Artinya bermain merupakan sarana untuk mengubah potensi kelebihan anak menjadi berbagai kemampuan dalam kehidupan anak kelak. Melalui bermain, anak memperoleh berbagai pengalaman untuk mengenal dunia sekitar. Dengan adanya rangsangan bermain, anak juga dapat melaksanakan tugas-tugas perkembangannya. Bermain bowling adalah cara yang bagus untuk membantu anak-anak berlatih berhitung dari satu sampai sepuluh. Tujuan penelitian ini adalah untuk mengetahui bagaimana aturan dan strategi permainan bowling mempengaruhi kemampuan pengenalan bilangan siswa PAUD Nurul Iman. Penelitian tindakan kelas (PTK) digunakan dalam dua siklus. Hasil penelitian menunjukkan bahwa anak PAUD Nurul Iman asal Desa Talang Baru Kecamatan Pajar Bulan Kabupaten Lahat mampu meningkatkan keterampilan pengenalan bilangan melalui latihan bola bowling yang dilaksanakan dalam dua siklus yang masing-masing terdiri dari tiga pertemuan. Fakta bahwa kapasitas untuk mengidentifikasi simbol numerik meningkat pada setiap Siklus adalah buktinya.

Kata Kunci: *Metode Permainan Bowling, Mengenal Angka, Pendidikan Anak Usia Dini*

Abstract

Play is an essential activity for children, because play for children has the same value as work and study for adults. This means that play is a means to change children's potential strengths into various abilities in children's lives later. Through play, children get multiple experiences to know the surrounding world. With the stimulation of play, children can also carry out developmental tasks. Playing bowling is a great way to help kids practice counting from one to ten. The goal of this research is to find out how the rules and strategies of bowling games affect the number recognition abilities of PAUD Nurul Iman students. Classroom action research (PTK) is used in two cycles. The findings indicate that the children of PAUD Nurul Iman from Talang Baru Village, Pajar Bulan District, Lahat Regency, were able to improve their number recognition skills through bowling ball training, which was carried out over the course of two cycles of three meetings each. The fact that the capacity to identify numerical symbols improves with each Cycle is evidence of this.

Keywords: *Bowling Game Methods, Recognizing Numbers, Early Childhood Education*

INTRODUCTION

Education is a basic need of everyone who will be an essential asset for a nation and country's future progress. Education needs to be well prepared so that the output produced can be helpful directly or indirectly for each individual and group. Early childhood education will be an inseparable part of a child's growth and development. The golden age is when children begin to be sensitive to various stimuli (Agustina et al., 2023; Alfianto, 2020; Awan & Hasibuan, 2020). The sensitive period in each child is different, along with the rate of growth and development of children individually. Child development consists of several developmental aspects that need improvement (Natsir et al., 2022).

A person's moral, intellectual, linguistic, motor, and social-emotional growth are all facets of their maturation. In Islam, the education of children takes place first and primarily in homes where there is an Islamic worldview (Kusrini, 2022). Islamic family education is a form of home education that is based on Islamic religious teachings and aims to mold children into believers and devotees of God Almighty with high moral standards and a spirituality that includes a knowledge and practice of religious values in daily life. Raising children in accordance with Islamic principles is an example of *Amar makruf nahi munkar* at home (Taubah, 2016).

Everyone knows that a child's home is the first and most important classroom. The child's parents play a key role as their first teachers during their formative years. In order to form connections, carry out numerous family objectives, ensure the continuation of children,

and establish love, parents do more than only these things. The primary responsibility of every family is to provide the groundwork for future generations by providing a nurturing environment conducive to learning so that they may continue the noble and enlightened tradition that has long served as a compass for humankind. Evidence from perspectives that place a premium on parental instruction as the cornerstone of a child's formal education provide credence to this fact (Hairullah, 2023).

One area that need improvement in preschool programs is cognitive development. According to Permendikbud No. 137 of 2014, when it comes to cognitive development in the realm of symbolic thinking, the development of early childhood ages 5-6 is defined as learning the symbols for numbers 1-10, using those symbols to calculate and match, and mentioning such symbols (Novitasari, 2018). So, it's crucial to start teaching the numbers 1-10 signs to kids while they're young. One area that need improvement in preschool programs is cognitive development. The cognitive development of early infancy, as outlined in Permendikbud No. 137 of 2014, falls within the area of symbolic thinking and includes the following skills: naming the numerals 1-10, counting with symbols, and making matching pictures of numbers. So, it's crucial to start teaching the numbers 1-10 signs to kids while they're young.

To characterize and explain the differences he saw in the development of adults' and children's logical reasoning, Piaget proposed a number of theories and concepts. As a person's cognitive abilities grow, they go from more concrete thought processes to more abstract and logical ones. According to Piaget, kids have an innate curiosity in the world and are always looking for ways to learn more about it. According to Piaget's hypothesis, which he developed after extensive study into the maturation of human intelligence, there are four distinct phases of cognitive development that occur between the ages of 0 and 18. Although there is a universally applicable set of stages and sequences, no two people's ages at which they begin to experience a certain stage are identical (Khotimah & Agustini, 2023). Cognitive development is a multi-stage process that begins in infancy and continues through the following years: pre-operative (ages 2-7), concrete operational (ages 7-11), and formal active (ages 11-15). The kid employs strategies such as absorption, equilibration, organization, accommodation, and schemes while actively experiencing the environment. The information that children encounter shapes their knowledge over time (Nua et al., 2023).

Based on observations at PAUD NURUL IMAN, Talang Baru Village, Pajar Bulan Kab. Lahat, on October 29, 2023, some children cannot recognize the concept of numbers 1-10 well. They can say the numbers 1-10 but not sequentially. When numbering 1-10, children

do not understand the numbers or number symbols. This can be seen when children are told to show one of the numbers on the blackboard. The teacher still assists some children, and in learning to connect objects with number symbols, many children still make mistakes (Haslana & Wirastania, 2017).

The low ability of children to recognize numbers 1-10 is due to the learning media used in introducing the concept of numbers 1-10 such as using poster media and whiteboard media, does not attract children's interest in recognizing the concept of numbers. The teacher's learning method is not appropriate for attracting children's attention to learning to recognize numbers. It can be seen from the lack of games in introducing the concept of numbers 1-10 to children. Teachers often use the question-and-answer method and assignments, and learning also only uses blackboards, markers, and posters as teaching resources to introduce the concept of numbers. The lack of learning activities carried out by this teacher makes children bored and bored so children do not concentrate when following the learning given by the teacher (Cahyati, 2018).

One way to develop this aspect can be through games. A game is an act that contains preoccupation and is done of one's own will, free without coercion to obtain pleasure while holding the activity. Games are pretty crucial for the development of the child's psyche. Therefore, children must be given opportunities and facilities in their game activities. In every child, especially young children, play is learning. Indeed, the child's world is play. By playing, children will learn various things about everyday life. With games, we as parents can include educational elements in it.

Bowling is one sport with many participants, knows no age limit, and anyone can enjoy it: children, teenagers, adults and even older people. Bowling is a sport that is favoured in almost every country in the world. From its development, this game can be made by yourself. The game of bowling, according to Strickland, is a game played by rolling the ball using your hands towards ten pins that have been arranged into a triangle shape when viewed from above, the pins are dropped in one roll or throw to determine the calculation of the number obtained from the number of pins that fall.

Bowling games can also be taught in early childhood, where in bowling games, children can improve cognitive development with concentration, fine motor and gross motor children, eye and hand coordination, and the ability to maintain body position. Besides that children can also increase patience and cooperation with friends. Based on the above background, researchers are interested in conducting a study entitled "Application of Bowling Game Method to Introduce Numbers in PAUD Nurul Iman".

RESEARCH METHOD

The research method used in this study is known as Classroom Action Research (CATR), which is an acronym for the English word for research that takes place in a classroom setting and is carried out by both teachers and researchers (Azizah, 2021). Because it is an action research project in the classroom, researchers and educators at PAUD Nurul Iman in Talang Baru Village, Pajar Bulan District, Lahat Regency, work together to carry it out. In this study, teachers and researchers work together to make plans (RKH), then the teacher is in charge of learning in the classroom. At the same time, the researcher observes the ongoing action process. Then, the researcher and teacher discuss to reflect on the shortcomings and advantages of the activities that have been carried out.

RESULT AND DISCUSSION

This study is part of a two-part class action research initiative. Preparation, execution, evaluation, and assessment make up each Cycle. Three meetings make up each cycle. Cycle II incorporates enhancements made in Cycle I. The findings of this research are based on observations about the capacity to identify the symbols of the numerals 1–10. Children at PAUD Nurul Iman still have a long way to go before they can confidently identify the symbols for the numerals 1–10. To be more specific, the capacity of the kid is not measured by the degree of maturational attainment outlined in Permendikbud No. 137 of 2013. Fifteen of the youngsters still struggle with counting a lot of things, according to the data collected on the first abilities of the researchers (specifically, from 21 children). The disparity between the amount of items enumerated and how they are pronounced makes enumerating children a mistake as well. The way youngsters learn to identify numbers is still based on rote repetition, therefore they still say numbers backwards. Additionally, kids still have a hard time telling the difference between the 6 and 9 numeral symbols.

The first cycle's findings suggest that the learning process went swimmingly. Bowling piqued the curiosity and enthusiasm of the kids at PAUD Nurul Iman. However, children's playtime transitions are quite gradual. Learning time efficiency is thus poor. Because their playtime has expired, some kids aren't able to concentrate on their games. After implementing Cycle I learning, we found that 74% of the kids had good number symbol recognition. A higher proportion of students have shown proficiency in recognizing numerical symbols, according to the outcomes of Cycle I learning. Furthermore, it seems that the percentage of pupils unable to recognize numerical symbols decreased in Cycle I.

We may infer that Cycle I learning did not achieve our expectations and will go to the next Cycle based on the success metrics. After reviewing and reflecting on Cycle I's learning outcomes, we identified the following factors as contributing to the subpar performance: 1) There are still some kids who get into fights over the image number card toys; 2) Kids are still sluggish to move around when it's time to switch games, so learning time isn't very efficient. The bowling ball game has ended, but some kids still haven't finished, and others have eaten lunch together, so they're not all paying attention at once.

In Cycle II, we need to address the following issues that led to the poor results in Cycle I: 1) Making learning activities as effective as possible so that all children can focus and play to the end; 2) Giving rewards to children who do a good job; 3) Using more varied and enjoyable activities to present learning; 4) Using an even more exciting bowling ball and an increasingly varied set of concrete objects to make it more fun to play.

Learning went swimmingly, according to Cycle II's findings. The kids at PAUD Nurul Iman were enthralled by the bowling ball game. During the implementation of Cycle II learning, it was discovered that 90.67 percent of the students demonstrated good number symbol recognition. A higher proportion of students have shown proficiency in recognizing numerical symbols, according to the outcomes of Cycle II learning. Another interesting finding is that the percentage of pupils who struggle to recognize number symbols seems to go down in Cycle II.

Indicators of success point to Cycle II learning being effective. A child's aptitude for recognizing the symbols of the numbers 1–10 might flourish when they master the usage of bowling balls. Check out Table 1 down below for a rundown of the data from the pre-action observations, I Cycle, and II:

Table 1. Results of Pre-Cycle Recapitulation, Cycle I and Cycle II

No	Criterion	Pre Cycle		Cycle I		Cycle II	
		Jml Children	%	Jml Children	%	Jml Children	%
1	BB	0.0	0.0	0	0	0.0	0
2	MB	18.0	85.7	2	9.5	0.0	0.0
3	BSH	3.0	14.3	18	86	2.0	9.5
4	BSB	0.0	0.0	1	4.8	19.0	90

Table 1 demonstrates that children's capacity to identify number symbols increased from pre-action to Cycle II, based on the recapitulation data from the observation of the ability to recognize number symbols. Figure 1 below provides further details:

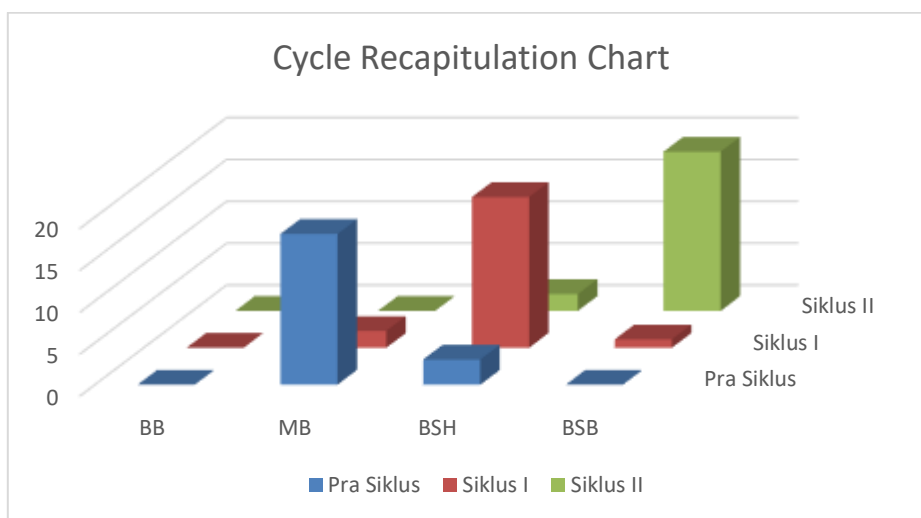


Figure 1. Pre-Cycle Recapitulation, Cycle I and Cycle II Recapitulation Charts

The graph above displays the data findings on children's ability to identify the symbols of numbers 1-10 in PAUD Nurul Iman. It is evident that bowling may enhance children's number symbol recognition skills. The fact that more kids are able to recognize number symbols after using bowling balls as a teaching tool is evidence of this. The pupils at PAUD Nurul Iman have shown improvement in their recognition of the numerals 1–10. There has been a rise of 52.38%, 74.60%, and 90.67% in the percentage of children who can correctly recognize the symbols of the numerals 1-10 at the stage before the action. In this manner, kids may hone their number recognition skills while having fun bowling.

The findings from Cycle II's observations suggest that bowling ball might help kids become better at recognizing numbers. Researchers in this research found that playing a bowling ball game improved kids' recognition of number symbols. Bowling ball games encourage kids to be more engaged in their study. For the most part, kids are glad to join in on learning activities as long as they have a chance to stay alive from start to finish. Bowling ball also requires youngsters to focus intently, which helps them comprehend numbers more easily.

Learning number symbols via bowling ball games is a fun and engaging way for kids to learn. Children are more engaged and eager while learning when it is fun, and they readily accept what is already learned. Kids at PAUD Nurul Iman may hone their skills in number recognition by taking up bowling.

CONCLUSION

The findings of this research show that children's proficiency in recognizing the numerals 1–10 in each Cycle has improved. At the end of Cycle II, 90.62 percent of the 21 children tested were able to correctly recognize the numerals 1–10. The results demonstrate that the pupils of PAUD Nurul Iman in Talang Baru Village, Pajar Bulan District, Lahat Regency, were able to improve their number symbol recognition skills via playing bowling.

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