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The Improvement of Children 5-6 Years Gross Motoric Skill by Challenge Board Game in Mutiara Ibunda Islamic Kindergarten Semarang City

Ari Khusnul Khotimah ✉, **Lita Latiana**

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Department of Early Childhood Teacher Education, Universitas Negeri Semarang, Indonesia

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Abstract

This study aims to determine whether there is an improvement in gross motoric skills of children aged 5-6 years in Islamic Kindergarten Mutiara Ibunda Semarang through a challenge board game. This type of research uses experiments with one group pretest-posttest design. The population in this study is all kindergarten students in Dabin (fostered area) IV Bulu Lor Sub-District, North Semarang District with limited outdoor area of 230 students, while the sample is done by purposive sampling technique that is group B students of Islamic Kindergarten Mutiara Ibunda as many as 30 students. The data collection method uses questionnaires, documentation, while technical data analysis consists of descriptive analysis, hypothesis testing through paired sample t-test and percentage techniques. Based on statistical calculations using paired sample t-test obtained t count > t table (17,486 > 2,045) and p value < 0.05 (0.000 < 0.05), then H1 is accepted. The calculations result of the percentage of gross motoric skills of children increased by 15.74% between pretest and posttest. The results of the study stated that there was an increase in gross motor skills of children aged 5-6 years after being given treatment through a challenge board game. This research is expected to contribute knowledge in developing children's gross motor skills and for teachers to be able to create more creative games by utilizing indoor areas to optimize the gross motor skills of children aged 5-6 years.

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✉Correspondence Author:
E-mail: arikhusnul28@gmail.com

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INTRODUCTION

Early childhood is a child who has the age of 0-6 years or known as the golden age (golden age) where children experience growth, rapid, and irreplaceable development in the future. This is because all aspects of early childhood development will grow and develop optimally through stimulation provided by parents and teachers at that age and experience an increase in development in accordance with the increasing age of the child. Apart from these stimulations, things that need to be considered are nutritionally balanced and intensive foods that are needed for the growth and development of early childhood. Augusta's opinion (2012) child growth and development concerns all aspects, namely aspects of language, physical aspects (gross motoric and fine motoric), social-emotional aspects, cognitive aspects, and aspects of religious moral values. The five aspects must run in a balanced and good manner. One aspect that must develop well is the physical aspects of motor skills, especially in gross motor skills that play an important role in the physical movement of humans in everyday life.

Gross motoric is the ability of bodily movements that use most or all members of the body that are affected by the child's own maturity (Hasninda, 2014). Gross motor development is focused on skills commonly referred to as basic motor skills such as walking, running, jumping, jumping, and ball mastery skills such as throwing, kicking a ball, and others (Setyawan, 2018). In Permendikbud No. 137 of 2014 concerning Standards for Achieving Child Development (STPPA) mentions the gross motor skills of children aged 5-6 years that are able to make coordinated body movements to train flexibility, balance, agility, perform physical play by rules, skillfully using hands and feet and can mimic dance or gymnastic movements. Komputerisna (2016) states that gross motor skills play an important role in human physical movements in daily life. Gross motor skills are closely related to movement. Early childhood should also practice developing gross motor skills to be more coordinated and develop as expected. If children have good gross motor skills, they will be more flexible in hanging out with their friends. This of course will affect the child's confidence when socializing with friends. As a statement from Masykouri (in Mahmud, 2018), that children who have good gross motor skills will make it more nimble and alert. His movements become more coordinated and make children appear more confident so that children are able to be flexible in their relationships. Good movement coordination will help him display a good planning attitude so as to make the child more skilled in solving everyday problems that he faces.

The opinion from Mursid (2016) explains the development of gross motor children will be more optimal if the environment in which the child's growth and development support to move freely. Children who do motor movements well can support their daily activities. As stated by Judarwanto (2011) stimulation that can be given to optimize gross motoric development is to optimize the environment where growth and development so that children can move freely. Outdoor activities can be the best choice because it can stimulate muscle development. A kindergarten as good as possible can provide an atmosphere of adequate environment, adequate facilities, and infrastructure where children can grow and develop. The layout, safety, and size of the environment of outdoor infrastructure are also very important to pay attention to so that children get space to suit their development needs and children are freer to explore.

The minimum standard area of the outdoor play environment is 3 m^2 per child (Silmi and Widayati, 2014). Herlinda's opinion (2018) states that a large place is one of the characteristics of the outdoor environment to be good and perfect for children's play so that it can develop gross motor skills, especially in locomotor, manipulative motion that requires large areas in motion. But there are still kindergartens that have limited outdoor environments and some even do not have outdoor playgrounds. Like in Mutiara Ibunda Islamic Kindergarten Semarang, the area of outdoor playground is 64 m^2 with 30 children aged 5-6 years. If the number of students should have 30 children, then the actual area needed is 90 m^2, which is obtained from the number of students multiplied by the minimum standard area of the outdoor area per child. The area owned by Islamic Kindergarten Mutiara Ibunda is far from the required outdoor area. This causes children to move less freely which can inhibit the child's gross motor skills. In addition, there are only 2 outdoor games, swing, and seesaw, which are lacking to optimize gross motor skills.

Based on the researcher's observations at the Mutiara Ibunda Islamic Kindergarten Semarang there are 5 out of 30 children aged 5-6 years of difficulties in throwing the ball, catching the ball, inserting the ball, walking on tiptoe, walking using heels. That is because of the limitations of the outdoor environment, there are few outdoor games, there has been no attempt by teachers to

innovate games or play games that utilize indoor areas, and footwork is not maximized. Opinions from Stork and Sanders (2008) body movement activities are very important for overall developmental development in children. As stated by Burhaein (2017) optimizing the mastery of skills and attitudes can lead to healthier behavior in life and facilitate cognitive, physiological, social, and neurological development of children. At the Mutiara Ibunda Islamic Kindergarten in Semarang, the morning activities before learning, children do not line up or do singing activities while footwork. That is what hinders the development of especially the gross motor abilities of children, especially in locomotor and manipulative motion.

Efforts are made to improve gross motor skills in children through play activities. Characteristic of early childhood is playing, is a fun activity for children. Play is one of the main tools in practice for growth and development. When children are playing, many aspects of development that are directly involved are increasingly developing (Sofyan: 2016). Opinions of Azizah and Pranoto (2013) also state that play has the function of having a positive effect on children's development. Children who play are children who absorb new things around them. The game used to play children in optimizing gross motoric skills is a challenge board game.

Challenge board game is a game that is modified from the snake and ladder game as an innovation that utilizes an indoor play area. Opinions from Tedjasaputra (2011) snake and ladder games include indoor play. The benefits of the snakes and ladders game stated by Muthmainnah (2016) include developing physical motor, cognitive, social-emotional, and religious moral values. Useful challenge board games such as the snake and ladder game include increasing children's gross motor skills in locomotor motion, manipulative, introducing numbers, letters, and colors. How to play the challenge board game by passing obstacles including playing crank, jumping frog style, dribbling according to the line, walking on tiptoe, walking with heels, jumping in accordance with the pattern of the direction of the foot, and jumping across pictures A, B, C, D then catch-throw the ball into the basket. The purpose of the modification is to attract students' attention to new games to be motivated to learn.

Based on the description above, the researcher is interested in conducting a study entitled "The Improvement of Children Aged 5-6 Years Gross Motoric Ability through Challenge Board Games in Islamic Kindergarten Mutiara Ibunda Semarang". The purpose of this study is to find out through the challenge board game that can improve the gross motor skills of children aged 5-6 years. The advantage of this research is that the reader can know that in improving motor skills can use a modified game of the ladder snake called the challenge board game.

RESEARCH METHOD

This type of research uses experiments with one group pretest-posttest design. The dependent variable in this study is the gross motoric skills of children aged 5-6 years while the independent variable is the challenge board game. The population in this study is all kindergarten students in Dabin IV, Bulu Lor Sub-District, North Semarang District with limited outdoor area of 230 students. Sampling is done by purposive sampling technique, which is students of B group Mutiara Ibunda Islamic Kindergarten, as many as 30 students. The data collection method used a questionnaire with a gross motor ability scale of children aged 5-6 years totaling 33 valid items, while the data analysis technique consisted of descriptive analysis, normality test, hypothesis testing through paired sample t-test, and percentage techniques. All calculations use the SPSS version 24.0 for Windows.

RESEARCH RESULTS AND DISCUSSION

This section is an explanation of the results of research related to improving gross motor skills of children aged 5-6 years through the challenge board game. Based on the pretest data results can be seen as in table 1 as follows:

Table 1. Pretest Results Data

Score Interval	Criteria	Frequensi	Percentage
111 – 136	Very Good	0	0
85 – 110	Good	25	83.33%
59 – 84	Less	5	16.67%
33 – 58	Very Less	0	0
Total		30	100%

From the results of the pretest table above, it is obtained information that children who have gross motoric skills with less category as many as 5 children with a percentage of 16.67% and a good category of 25 children with a percentage of 83.33%. In general, the parameters of gross motor skills of children aged 5-6 years before being given treatment are included in the good category with a percentage index of 83.33% of the number

of children as many as 30.

While the posttest data results can be seen in Table 2 as follows:

Table 2. Posttest Results Data

Score Interval	Criteria	Frequensi	Percentage
111 – 136	Very Good	7	23.33%
85 – 110	Good	23	76.67%
59 – 84	Less	0	0
33 – 58	Very Less	0	0
Total		30	100%

The posttest results table above, it is obtained information that children who have gross motoric skills with a good category as many as 23 children with a percentage of 76.67% and very good category as many as 7 children with a percentage of 23.33%. In general, the parameters of increasing gross motoric skills of children aged 5-6 years after treatment are included in the good category with a percentage index of 76.67% of the total number of children of 30.

The recapitulation data of the pretest and posttest results can be seen as in table 3 as follows:

Table 3. Recapitulation of Pretest and Posttest Results

Score Interval	Pretest		Posttest	
	Frequency	Percentage	Frequency	Percentage
111 – 136 (Very Good)	0	0	7	23.33%
85 – 110 (Good)	25	83.33%	23	76.67%
59 – 84 (Less)	5	16.67%	0	0
33 – 58 (Very Less)	0	0	0	0

Based on the recapitulation table above, it is known before being given the treatment, the gross motoric skills of children aged 5-6 years on average in the good category with a percentage index of 83.33%. After being given treatment, the average gross motoric ability of children aged 5-6 years reached a percentage index of 76.67% in the good category. If seen on average, there is no increase, even the results from the good category from pretest to the posttest are decreased. However, if you see the results of the table shows that in the pretest there are results with less categories as many as 5 children with a percentage of 16.67% while in the posttest there are no results that show less categories and there is an increase in the very good category as many as 7 children with a percentage of 23.33%. This shows that there is an increase in the number of gross motoric skills scores before and after treatment or treatment is given through the challenge board game. In the data above, it can be concluded that the results of the challenge board game research can improve the gross motor skills of children aged 5-6 years. It is evidenced by the results of the calculation of Paired Sample T-test as in table 4 as follows:

Table 4. Paired Sample T-test Results

Paired Sample Test			
	T	df	Sig. (2-tailed)
Pair 1 Pretest-Posttest	-17.486	29	0.000

Based on the table above, it can be seen that the value of sig (2 tailed) or p value is 0,000 where < 0.05. Then the t value in the table above says -17,486. The hypothesis is accepted if t count > t table (Sugiyono, 2013), if t count is positive. If it is negative then it is converted mathematically so that the value of t count 17,486 > 2,045, because p value 0, 000 < 0.05 and t count 17,486 > 2,045, it can be concluded that H0 is rejected and H1 is accepted.

In this study, the mean of gross motor skills of children aged 5-6 years before and after being given treatment through a challenge board game is also obtained as in table 5 as follows:

Table 5. Results of Hypothesis Test Mean

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std.Error Mean
Pair 1	Pretest	91.93	30	5.971	1.090
	Posttest	106.40	30	7.837	1.431

The table above shows there is an increase in the mean value at the pretest stage of 91.93 to 106.40 at the posttest stage so that an increase in scores of 14.47. While based on the results of the percentage using a formula improvement according to Santoso (2015) as follows:

Improvement = $\frac{\text{mean of posttest} - \text{pretest}}{\text{Mean of pretest score}} \times 100\%$

$= \frac{(106.40 - 91.93)}{91.93} \times 100\%$

$= \frac{14.47}{91.93} \times 100\%$

$= 15.74\%$

The results of the improvement based on the percentage above show that there is an inc-

rease in gross motor skills of children aged 5-6 years before and after being given treatment through a challenge board game by 15.74%.

There are 3 types of gross motoric skills in early childhood, namely locomotor, non-locomotor, and manipulative motion. The instrument in this study is to assess the gross motoric skills of children using 2 types, which are locomotor and manipulative motion. Locomotor motion is the basic motion that becomes the foundation to be learned in kindergarten age such as walking, jumping, jumping. As stated by Mahendra (2007) locomotor motion is important for children because it is a skill that develops along with development and is more functional. The manipulative movement has a very important role in physical education learning, especially in sports which demands to do some form of movement from the limbs more skillfully such as soccer, baseball, and volleyball.

Data collection in this study is conducted in two ways, that is pretest and posttest by filling in the gross motor skills scale of children aged 5-6 years. Before treatment, the researcher conducted observations and approaches in children. It is intended that children are not awkward when researchers begin to provide treatment in class and learning activities run smoothly and children can be well-conditioned by the researcher.

Treatment is carried out 12 times with 2-3 times meetings a week. The researcher uses a challenge board game to optimize the gross motoric skills of children aged 5-6 years in the Mutiara Ibunda Islamic Kindergarten in Semarang. This challenge board game is a game that is modified from the snake and ladder game that aims to improve the children's gross motoric skills in locomotor movements such as jumping, jumping, tiptoeing, heel walking, and manipulative movements such as dribbling, throwing, catching, and entering the ball. The challenge board game design as shown in Figure 1 as follows:

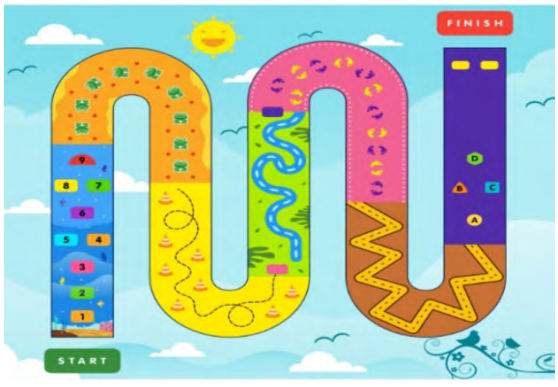

Figure 1. Challenge Board Game Design

Modifications to the board game challenge are in size, materials, and how to play. Snakes and ladders games are generally 30x30 cm in size with thick cardboard material (Chabib and Djatmika, 2017). While the researcher make a challenge board game measuring 4x4 m with German flexi type MMT material. Through this challenge board game, playing activities can increase the physical activity of children. As stated by Maxsim (in Sujiono, 2010) that physical activity through play can train the muscles of children and also increase their curiosity and make children pay attention, try it, take it, put it back into place. Opinions from Nur (2017) children's motor development will be clearly visible through the movements and games that they do. If a child moves a lot, the more benefits he will obtain as the child becomes more skilled at mastering motor movements.Based on the results of calculations using percentage techniques in this study, the gross motor skills of children aged 5-6 years increased by 15.74% between pretest and posttest. In addition, the mean results of the mean gross motor skills of children aged 5-6 years at the pretest stage were 91.93, while the posttest stage obtained a mean result of 106.40. This means that the increase in gross motor skills of children aged 5-6 years at the pretest stage is lower than the increase in gross motor skills of children aged 5-6 years at the posttest stage.

This means that the increase in children's gross motoric skills after being given a challenge board game is higher than before being given a challenge board game. This shows that the challenge board game has the benefit of optimizing the gross motor skills of children aged 5-6 years in locomotor and manipulative motion. Based on research conducted, it can be seen that the challenge board game can affect the increase in gross motor skills of children aged 5-6 years.

CONCLUSION

Based on the results of the analysis and discussion, the researcher concludes that the gross motoric skills of children aged 5-6 years after being treated through a challenge board game increase. The hypothesis test results using paired sample t-test obtained t count > t table (17,486 > 2,045) and p value < 0.05 (0.000 < 0.05), then H_1 is accepted. Calculation with the percentage of gross motoric skills of children aged 5-6 years has increased by 15.74% between pretest and posttest. So, it means there is a significant increase in gross motor skills especially in locomotor and manipulative motion.

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