THE INFLUENCE OF TIC TAC TOE GAME MODEL ON LEARNING OUTCOMES OF BASIC LOCOMOTOR MOVEMENTS IN PRIMARY SCHOOL STUDENTS

Putri Aulia[1], Bayu Thomi Rizal[2]

[1234]Pendidikan Guru Sekolah Dasar, Universitas Muhammadiyah Prof Dr Hamka

Jl. Tanah Merdeka No.20, RT.11/RW.2, Rambutan, Kec. Ciracas, Kota Jakarta Timur, Daerah Khusus Ibukota Jakarta 13830

Corresponding author. Email **:** putriauliaa922@gmail.com

Abstract This study aims to find out the influence of the Tic Tac Toe game model on the learning results of the basic movement of the locomotive students of Class III SDN Jelambar Baru 03. This research uses quantitative approaches and experimental methods with Pre-Experimental design, this research project utilizes One Group Pretest- Post Test Design. A sample of 30 Class III A students using purposive sampling. In a validity test using a product moment correlation with 20 issues with 10 valid questions and 10 drop questions, while in a reliability test using the Alfa Cronbach formula of 0.635 it was concluded that the issue was declared reliable. Further data normality using the Saphiro Wilk formula known data learning results pretest obtained Sig $0.659 > 0.05$ and class posttest students obtaining Sig $0.30 > 0.05$. Based on the results and the research data it is said to be distributed normally. In the homogeneity test, it can be concluded that the significance value obtained is 0.379. This means the value of significance count > 0.05. It can then be concluded that the results of the pretest and posttest have the same level of variance. On the hypothesis test used Paired Sample Test showed based on the results of the analysis of the test t on the data pretest and posttest learning results students of class III SDN Jelambar Baru 03 obtained a p value value $(0,000) <$ of 0.05. The conclusion of this study is that the model Tic Tac Toe game can improve the learning results of the basic movement of the locomotive students of class III SDN Jelambar Baru 03.

Keywords: tic tac toe; basic lokomotor movement; pjok, learning results; class III

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INTRODUCTION

Physical Education, Sports and Health (PJOK) is the use of physical activity in learning which is carried out to develop and improve individual abilities in a natural, neuromascular, perceptual, cognitive and emotional structure (Prabowo et al., 2022). Physical Education, Sports and Health (PJOK) in elementary schools is the first step in equipping students with the basic movement skills they need to do daily work. Many children have not developed basic movements well, therefore learning movements by PJOK teachers has a very important role in teaching basic movements so that students can carry them out correctly (Widiarti et al., 2021). The basic movements that children must master are basic locomotor movements, basic non-locomotor movements and basic manipulative movements.

Basic locomotor movements are basic movements that are often carried out in everyday life. According to (Hanief, 2017) Basic locomotor movements are movements that require moving the body from one place to another. Various types of locomotor movements, namely: walking, running, jumping, skipping, hopscotch, climbing, crawling. According to (Suryono et al., 2022) Movement which is the transfer of movement from location A to location B or C using several basic movements such as walking, running and jumping is called locomotor movement. Meanwhile, according to (Dwijayanti & Supriyoko, 2020) Locomotor movements refer to body movements in horizontal or vertical movements, such as while walking, jogging, jumping, hopping, climbing, and so on.

But in reality, when the learning process is carried out, student activities do not support producing optimal final results. According to opinion (Sceisarriya, 2018) In current conditions, many teachers only stretch or run around the field when warming up. Learning in the field is still not appropriate for the characteristics of students. Or the games played are less exciting and do not match students' understanding.

In essence, PJOK learning consists of material that combines physical activity, emotional exercise, and also thought exercise, where these activities must have supporting facilities and infrastructure for carrying out physical activity. Lack of facilities and infrastructure in schools, teachers have to rack their brains to present learning that is in line with predetermined educational goals.

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Good learning will produce satisfactory learning results. Learning outcomes can be seen from changes in a person. According to (Saragih, 2021) The learning outcome is an increase in students' written and oral abilities that can be obtained when the learning process is complete. This level of proficiency can be observed in three areas, namely cognitive, attitude and psychomotor. In line with opinions (Hamidah et al., 2023) that learning outcomes are skills or results obtained by children from participation in educational activities.

Based on the description of learning outcomes above, it can be concluded that learning outcomes are a person's final results in a learning process that is carried out repeatedly. Learning outcomes also have an influence in shaping a person's personality, because learning outcomes can be seen from changes in the way of thinking and behavior of each individual.

Learning outcomes have a function in knowing a person's learning abilities. According to (Iskandar., et al., 2023) Function Learning outcomes must be known in order to measure the extent of success of a teaching. According to (Ahmad, Zulkifli., et al., 2022) The function of learning outcomes can be used as evaluation material in the teaching and learning process and to determine student achievement which can be measured through progress and increase in grades and abilities.

There are various methods that can be used to improve learning outcomes. Accoridng to (Sukur, 2021) In improving learning outcomes, teachers can use methods by presenting various interesting teaching techniques in front of the class, praising and appreciating students for their achievements, providing good assessments of all the positive things students do so that effective learning can be created which can help students improve. participation in following the learning process that leads to successful student learning outcomes.

According to (Alfrid Sentosa & Norsandi 2022), Teachers can modify the learning model during the learning process so that the material in the curriculum can be adapted to the student's developmental stages. According to (Irvan N, 2021) the aim of modifying this learning model is expected to create an active, effective and creative learning atmosphere in supporting children's development in elementary school.

The learning model through games is a suitable and effective model implemented by PJOK teachers in the

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learning process (Cocca et al., 2020). Play means carrying out an activity to please yourself, whether using tools as a medium or not. A game-based approach can be recommended in implementing learning to improve students' basic movement skills in elementary schools (Mudzakir, 2020).

The Tic Tac Toe game model can be an inspiration for teachers in PJOK learning activities. This game is a simple game played by two groups. This game requires pawns to fill the game columns on the board. In theory, the winner means the fastest player who arranges three balls or objects in a diagonal, horizontal and vertical line. This Tic Tac Toe game can teach children characters such as independence (working hard or enthusiasm), integrity (abiding by the rules or sportsmanship), and mutual cooperation (working together) in addition to the expected learning outcomes (Sakti Adji et al., 2023).

In accordance with research conducted by (Sakti Adji et al., 2023) with the title "Improving Learning Outcomes of Basic Locomotor Movements in Elementary School Students Through Modifying the Tic Tac Toe Game". This research obtained good results but was not suitable for use with class II students. So the researcher took the opportunity to carry out research using the same game as a higher class

Based on observations obtained at SDN Jelambar Baru 03 on Thursday, November 2 2023, it was found that basic locomotor movement learning activities were carried out by carrying out movements repeatedly without any sense of competition and students' strategic thinking which is basically needed in learning.

Apart from that, locomotor movement problems were also discovered when the researchers carried out pre-action that the students' locomotor movement skills were still not good. This incident was proven by the unsatisfactory results of students learning basic locomotor movements, because there were still some students who walked on their tiptoes and had their backs bent and went too far in running so they easily fell. And when jumping and jumping, students cannot coordinate their bodies well so they fall when they land.

This is a common mistake. Therefore, it is necessary for the teacher to teach walking, running and jumping techniques and these must be adapted to the characteristics and needs of the child. In accordance with the explanation of the

important background for implementing the research entitled "The Influence of the Tic Tac Toe Game Model on the Learning Outcomes of Basic Locomotor Movements for Class III Students at SDN Jelambar Baru 03".

METHOD

Research Methods A scientific way of obtaining data from a problem, taking into account scientific characteristics, namely, rational (all research activities must make sense), Empirical (research activities must be based on facts and visible to humans), Systematic (research activities that use steps -logical steps) (Sugiyono, 2022).

This type of research is quantitative with pre-experimental, namely experiments carried out on one group only without a comparison group. The research design utilizes a One-Group Pretest-Posttest design, namely giving a pretest before the treatment is carried out and then comparing it with the results of the posttest carried out after the treatment is given (Wenly, Pelana, & Wasan, 2021).

Sampling in this research was carried out using purposive sampling. Sugiyono (2022) purposive sampling is a technique for determining samples with certain considerations. The criteria for

determining this sample include: (1) class III students (2) PJOK attendance list of at least 75% (3) willing to take part in treatment until the end and (4) not sick. So a sample of 30 students was obtained.

In this research, the instrument used is an assessment of the completeness of learning outcomes which contains an assessment table of learning outcome indicators in the form of cognitive, psychomotor and affective assessment aspects. The knowledge instrument is in the form of 10 multiple choice questions and a psychomotor instrument using assessment indicators in basic locomotor movement skills with a score of 1–4 (walking, running, jumping and jumping). And the affective instrument is in the form of observing student behavior during learning which includes working together, responsibility, honesty, and discipline.

Based on the research instrument, to analyze the data that has been collected, 6 types of calculations are used, namely (1) Validity test to determine the validity of the question instrument given. This validity measurement is tested using the Pearson Product Moment formula. (2) The reliability test for an instrument is

reliable enough to be used as a data collection tool. In this research, the reliability test was used using the Cronbach's Alpha Formula technique. (3) Carry out data descriptions to determine the standard deviation, mean, median, mode, maximum and minimum of the obtained values. (4) The normality test is used to see whether this research has a normal distribution or not. (5) Homogeneity test is used to determine whether the data results come from the same population (6) Calculate the t test, to analyze whether there is a difference or difference between the pretest and posttest results.

Based on the results of the validity test, there are 10 valid questions from the 20 questions. After validation testing, a reliability test was carried out. Reliability testing on all valid items had a Cronbach's Alpha correlation value of 0.635. It was concluded that the items were declared reliable.

Table 1

Reliability Statistics

Cronbach's Alpha	N of Items
.635	20

RESULTS AND DISCUSSION

This research is intended to determine the effect of the tic tac toe game model on the learning outcomes of basic locomotor movements for class III students at SDN Jelambar Baru 03 for the 2023/2024 academic year whose address is Jelambar Baru Village, Grogol Petamburan District, West Jakarta.

The pretest data collection was carried out on May 14 2024, followed by the Tic Tac Toe game treatment which was carried out on May 14-May 28 and the posttest data collection was carried out on May 28 2024 after being given the final treatment.

The Tic Tac Toe game is a board game that involves strategy to achieve victory. Playing on 3 columns and 3 rows of the board, at the start of the game, the game board is empty. After that, the players take turns placing ball-shaped paper rolls on the game board boxes. The final conditions of the game are win, draw and lose (*Emanuel* et al., 2019). Like the following example:
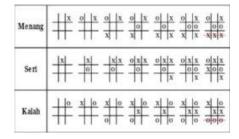

Figure 1 Tic Tac Toe Game

But in the Tic Tac Toe game in sports, when researchers look at several game models on digital platforms, the

game is implemented by the players only making movements simultaneously between Group A and Group B and there are no other innovations and who is the fastest to fill the game pieces horizontally , vertical and diagonal) is considered the winner.
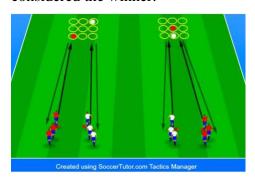

Figure 2 Tic Tac Toe Game
(Source:https://www.soccercoachingpro.com/u10-soccer-drills/)

This game model is one way to create a learning atmosphere so that it runs well and does not make students bored. Apart from the equipment that is easy to obtain, this game is synonymous with competitive elements which are expected to increase students' sense of cooperation, competitiveness and problem solving in completing the game.

The application of games in learning is carried out in 4 models which include the basic locomotor movements of walking, running, jumping and jumping. One of the game models used covers all the basic locomotor

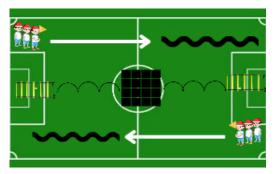movements, as shown in the following picture:

Figure 3 Modification of Tic Tac Toe game

Number of players: In one class divided into 2. Implementation: (a) 4 leading players hold each cone to place on the Tic Tac Toe board (b) The front player performs a sprint movement, then performs a zigzag running movement, and performs jumping movements and movements the end jumps according to a predetermined pattern. and put the ball on the Tic Tac Toe board and sprint back towards the line to high-five the next player. (c) The group that successfully fills the Tic Tac Toe board (vertically, horizontally, diagonally) is considered the winner. (d) The game is played until all players have had a turn.

The results of the research on pretest and posttest data on the learning outcomes of basic locomotor movements for class III students at SDN Jelambar Baru 03 for the 2023/2024 academic year are described as follows:

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1. Distribution of Pretest and posttest data.

 Table 2

Statistics		
	Nilai Pretest Hasil Belajar PJOK	Nilai Posttest Hasil Belajar PJOK
N Valid	30	30
Missing	0	0
Mean	62.40	84.87
Median	63.00	86.50
Mode	65	90
Std. Deviation	10.040	7.267
Minimum	43	72
Maximum	83	93

The results of research on basic locomotor movements of class III students at SDN Jelambar Baru 03 in the assessment of learning outcomes during the pretest, obtained: mean result = 62.40; median = 63.00; mode= 65; maximum= 83; min=43; and standard deviation = 10.040. Meanwhile, in the assessment of learning outcomes during the posttest, it was obtained: mean result = 81.27; median = 83.00; mode = 75; maximum= 93; min=70; and standard deviation = 7.634.

2. Uji Normalitas

Testing the normality of learning outcomes was carried out using the Shapiro Wilk test because there were no more than 30 samples calculated using SPSS 26, data was said to be normal if p > 0.05.

Table 3

Variabel	Df	P	Sig	Keterangan
Pretest	30	0,659	0,05	Normal
Posttest	30	0,30	0,05	Normal

Based on the results of statistical calculations with SPSS, it is known that the pretest learning outcomes data obtained Sig 0.659 > 0.05 and the student posttest obtained Sig 0.30 > 0.05. Based on the results, it can be concluded that the research data is normally distributed.

3. Uji Homogenitas

Table 4

Test of Homogeneity of Variances

Hasil Gerak			
Levene Statistic	df1	df2	Sig.
.900	1	58	.347

From the SPSS version 26.0 output results, it can be concluded that the significance value obtained is 0.347. This means that the calculated significance level is > 0.05. So it can be concluded that the pretest and posttest results have the same level of variance.

4. Uji T

From the results of testing the prerequisites for analysis, we can test the research hypothesis using the t-test with

the criteria that H0 is accepted if the Sig (2-tailed) value is > 0.05, H1 is accepted if the Sig (2-tailed) value is < 0.05. Based on this, it means that H0 has no influence and H1 has an influence.

Table 5

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Nilai Pretest	62.40	30	10.040	1.833
	Nilai Posttest	81.27	30	7.634	1.394

Based on the results of statistical calculations with SPSS, the average pretest result is 62.40 and the standard deviation is 10,040, while the average posttest result is 81.27 and the standard deviation is 7,634. This shows that there is an increase and difference in the average results of the pretest and posttest.

Table 6

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Nilai Pretest Hasil Belajar PJOK & Nilai Posttest Hasil Belajar PJOK	30	.754	.000

Based on the results of the table above, the output paired samples correlation obtained is 0.754 with a sig of 0.000 so the data is correlated.

Table 7

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	Nilai Pretest -Nilai Postest	-18.867	6.590	1.203	-21.327	-16.406	-15.681	29	.000

Based on the table above, it shows that between the average pretest and posttest learning outcomes for class III students in the PJOK subject on basic locomotor movements, the average posttest score is higher than the pretest score. The results of the Paired Sample T-test analysis show a significance value of 0.000<0.05. In accordance with the criteria, if the significant value is <0.05, it means that H0 is rejected and H1 is accepted.

Based on research results, it shows that applying the tic tac toe game model can improve learning outcomes. The improvement obtained in this research is because this model can change passive

learning conditions into active ones and requires students to work together to complete the game.

This research is supported by other research that there is an increase in student learning outcomes through the application of the tic tac toe game model in physical education subjects (Nur Nugroho, 2021). Similar research also shows that the tic tac toe game model can influence students' basic locomotor movement abilities. (Rudian, 2021).

Based on the research that has been carried out, it can be proven that after implementing the Tic Tac Toe game model, it can improve the learning outcomes of PJOK subjects for class III student at SDN Jelambar Baru 03. Success was proven based on pretest and post test value which showed that after the game was improved than before the treatment.

This means that after implementing learning using the Tic Tac Toe game model based on posttest average score data, student learning outcomes are higher than the pretest average score so it can be concluded that the Tic Tac Toe game model in PJOK learning can improve learning outcomes for basic locomotor movements.

CONCLUSION

Based on the results of the research and described above, it can be concluded that there is a positive and significant influence in the learning process using the Tic Tac Toe game model. The results of testing the analytical requirements used are normality tests using the saphirowilk test formula known data learning results pretest obtained Sig 0.659 > 0.05 and class posttest students obtaining Sig 0.30 > 0.05. Based on the results and the research data it is said to be distributed normally. In the homogeneity test, it can be concluded that the significance value obtained is 0.379. This means the value of significance count > 0.05. It can then be concluded that the results of the pretest and posttest have the same level of variance. On the hypothesis test used Paired Sample Test showed based on the results of the analysis of the test t on the data pretest and posttest learning results students of class III SDN Jelambar Baru 03 obtained a p value value (0,000) < of 0.05. then based on the testing criteria H0 is rejected and H1 is accepted.

So it can be concluded that the This Tic Tac Toe game is very helpful in the basic lokomotor movements learning process because it can make student

more active during learning activities. Tic Tac Toe game model has a significant influence in improving the learning outcomes of basic locomotor movements for class III students at SDN Jelambar Baru 03. From these conclusions, the researcher provides solution options and provides suggestions to physical education and sports teachers on learning material for basic locomotor movements.

The pretest score which is lower than the posttest score based on this proves that the application of research results can have an impact on learning outcomes. Further research regarding the use of the tic tac toe game can be carried out and developed through modification of variables, samples and research locations and subjects. so that it can complement or even perfect this research and previous research.

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