

The Effect of Invasion Soccer Games on the Motor Skills of Sixth-Grade Students at Upt SD Negeri 066045 Medan

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Article Info

Article history:

Received: 1 July 2025

Publish: 31 July 2025

Keywords:

Invasion Games;

Soccer;

Motor Skills;

Elementary School Students.

Abstract

This study aims to determine the effect of soccer invasion games on the motor skills of sixth-grade students at UPT SD Negeri 066045 Medan in the 2024/2025 academic year. This research uses a quantitative approach with an experimental method of One Group Pretest-Posttest Design. The sample consisted of 20 students selected using total sampling. Data collection was conducted through observation of students' motor skills in dribbling, passing, and shooting. The results showed an increase in the average score from the pre-test (69.05) to the post-test (80.10). Based on the t-test analysis, the significance value (Sig. 2-tailed) was $0.000 < 0.05$, indicating that there was a significant effect of soccer invasion games on improving students' motor skills. Thus, soccer invasion games can be used as an alternative learning method to enhance the motor skills of elementary school students.

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1. INTRODUCTION

This lack of physical activity can negatively impact children's motor development. Gross and fine motor skills, which should develop through physical movement, are hampered. Children who are less active tend to have difficulty with basic skills such as running, jumping, and writing. Data from Sujana (2017) shows that children who actively play outside have better motor skills than those who spend more time in front of screens. In elementary schools, soccer games can be adapted to students' abilities. Research by Graham and Holt/Hale (2017) shows that simplifying the rules of the game can help novice students understand the basic concepts of soccer. Using a smaller field and fewer players can increase student engagement and provide them with opportunities to actively practice basic motor skills. The results of field observations through motor tests on 20 students at the UPT SD Negeri 066045 Medan provide an overview of students' motor skills in several aspects, such as balance, coordination, agility, strength, and endurance. It is important for educators to design learning programs that not only focus on developing technical skills but also integrate physical exercises that support balance, coordination, agility, strength, and endurance. Test results showed that 8 students (40%) were in the high category, 7 students (35%) in the medium category, and 5 students (25%) in the low category. This data indicates the need to improve basic motor skills, particularly in terms of physical fitness and physical readiness to participate optimally in learning activities. Invasion games such as soccer continue to be developed in the context of modern physical education to support students' motor, cognitive, and social development. According to Memmert and König (2020), soccer encourages game intelligence, which is the ability of students to make quick

and accurate decisions in dynamic game situations. This tactics-based learning approach emphasizes the importance of understanding game situations before mastering techniques. In a recent study, Fernández-Río et al. (2021) explained that a cooperative learning model in invasion games can improve teamwork, empathy, and student engagement during the learning process. In addition, research by Morales-Belando and Arias-Estero (2022) shows that the use of a student-centered tactical games approach in soccer can improve critical thinking skills, coordination, and intrinsic motivation of elementary school students.

With all the benefits offered, the importance of selecting soccer invasion games as part of the elementary school physical education curriculum cannot be overstated. This game not only supports students' motor development but also shapes their social character and physical health, making it the right choice for improving active movement skills, improving health, and enhancing intelligence. Therefore, based on the above background, the researcher wishes to investigate and conduct research on "The Effect of Soccer Invasion Games on Students' Motor Skills." In soccer, fine and gross motor skills are essential. Fine motor skills can be seen in ball control, while gross motor skills are more visible in running, jumping, and kicking movements. Yusup (2021) shows that the development of these skills can be done through structured exercises, which can improve student performance on the field. Therefore, it is important to design training programs that pay attention to these aspects. In the physical education learning process, dribbling techniques can be taught through various simple games, such as dribbling through obstacles (*cones*), dribbling in a zigzag path, or 1 on 1 play. Suharto and Fauzi (2024) stated that variations in training *dribbling* methods can improve students' agility, balance, and ball control accuracy. Through this activity, students are trained to understand when to dribble quickly, when to slow down, and how to tactically avoid opponents. This not only impacts technical skills but also encourages intelligent decision-making on the field. In addition to the physical and technical aspects, ball kicking practice can also shape positive mental attitudes and character in students. During kicking practice, students learn discipline in following instructions, courage to take risks (*shooting from* various distances), and persistence in repeating movements until achieving better results. This aligns with the opinion of Hidayat and Nugraha (2021), who stated that motor skills such as kicking a ball can encourage students' achievement motivation in a competitive yet enjoyable learning environment. In addition to technical aspects, passing exercises also have a positive impact on the development of students' social skills. This activity teaches the importance of cooperation, trust in teammates, and non-verbal communication in the game. Yusup (2021) emphasized that in the passing process, students learn to understand their respective roles on the team and the importance of supporting each other to achieve common goals. Thus, passing exercises not only improve motor skills but also shape character values such as sportsmanship and responsibility. Furthermore, Kusuma and Lestari (2023) emphasized that motor skill development in elementary schools needs to be carried out using active and participatory learning methods that involve exploration, problem-solving, and reflection. This aligns with the constructivist approach in physical education, which views children as active subjects in the learning process. Therefore, physical education not only aims to improve students' physical abilities, but also to shape character, emotional intelligence, and life skills through comprehensive and meaningful physical activities of Sixth-grade elementary school students are generally between the ages of 11 and 12, which is the final stage of development from childhood to early adolescence. At this stage, students show significant changes in physical, cognitive, social, and emotional aspects. According to Hurlock (2020), this age is characterized by improved motor coordination, stronger muscle growth, and an increased interest in physical activities and group games. This makes sixth-grade an ideal phase for developing sports skills, including soccer skills.

2. METHOD

The research design used in this study was a quasi-experimental one-group pretest-posttest design. In this design, the research subjects consisted of one group that was given treatment in the form of basic soccer technique training, namely: *dribbling, passing, and shooting*. Before the treatment was administered, a pretest was conducted to measure students' initial motor skills. After the treatment was completed, a posttest was conducted to assess any changes or improvements in motor skills.

One Group Pretest-Posttest Model. This design is considered appropriate for field conditions in elementary schools, where only one class can be used as research subjects. This design allows researchers to compare pre- and post-treatment results within the same group. Furthermore, this design allows for direct measurement of the effects of basic soccer technique training on students' motor skills.

The use of this design has also been supported by previous literature. Arikunto (2021) stated that quasi-experiments are suitable for educational contexts where controlling external variables is difficult. Through this approach, researchers can evaluate the effectiveness of a learning method in a practical and relevant way to the situation in the field. This design can be illustrated in the following figure:

Gambar2. SEQ Gambar2.* ARABIC 2one Group
Pretest-posttest

According to (Sugiyono, 2019) population is a general area consisting of objects/subjects with a certain number and characteristics determined by the researcher as the object of study and from there conclusions are drawn. The population used in this study is the UPT SD Negeri 066045 Medan school, which only has one class, the number of boys is 20 and girls is 15, so the total number is 35 students.

The research sample was total sampling. This was done to ensure the research results were more representative of the overall situation of sixth-grade students at the school. The use of total sampling also allowed the researcher to conduct more in-depth observations of all research subjects. Furthermore, in the context of elementary education, this approach is considered effective because it takes into account ethical and policy factors. average treatment for all students in one class (Sugiyono, 2020).

A research variable is an attribute, characteristic, or value of a person, object, or activity with certain variations that are identified and studied by researchers and from which conclusions are drawn (Sugiyono, 2019). The variables used in this study are the independent variable (X) and the dependent variable (Y).

The data collection technique used in this research is **direct observation and motor skills test**. Observations were conducted by researchers with the assistance of physical education teachers to record students' performance in basic soccer techniques. The motor skills test consisted of several measurement items, such as balance, coordination, and agility, each with its own assessment indicators.

The instruments used are observation **sheet** and **soccer skills assessment grid**, which has been compiled and validated by physical education experts. Each basic technique has a qualitative assessment indicator (e.g., very good, good, sufficient, poor) with a specific value scale. Data from the pretest and posttest are recorded and analyzed to determine the effectiveness of the treatment provided.

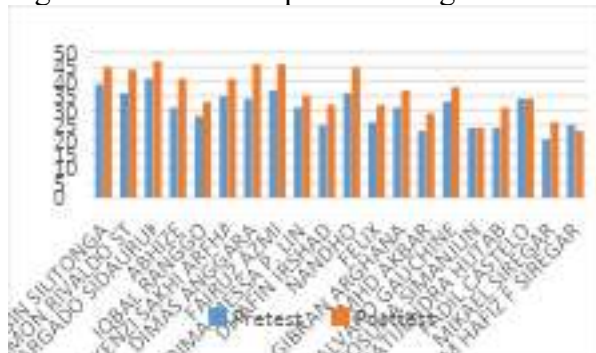
According to (Sugiyono, 2017), the data collection method is the most strategic step in research because the main goal of this research is to obtain data. Researchers can do this in any way that suits the research objectives.

3. RESULTS AND DISCUSSION

This study aims to determine the effect of soccer invasion games on improving students' motor skills. The data collected were pre-test and post-test motor skills scores from 20 students of UPT SD Negeri 066045 Medan. The pre-test scores were taken before the treatment was given, while the post-test scores were taken after the treatment for two weeks. Descriptive statistics Pre-test and post-test Effect of Soccer Invasion Games on Students' Motor Skills at UPT SD Negeri 066045.

The bar chart of the pre-test and post-test of the influence of football invasion on students' motor skills at UPT Sd Negeri 066045 is presented in Figure 4.

Figure 4 Pre-test and post-test diagram



Based on the explanation in Figure 4.1, it can be concluded that during the soccer invasion game, the average result during the pre-test was 30.65, where the more time spent during training, it states that the increase in motor skills during the post-test was 36.45 with a Post-test standard difference of 5,958 < Post-test standard difference of 7,715.

The analysis in this study uses an experimental method with a data collection technique using the t test, which aims to see the effect of the independent variable on the dependent variable and the variables studied, in this study, the independent variable is the invasion soccer game, and the dependent variable is the student's motor skills taken are dribbling, passing and shooting abilities. The purpose of the test and measurement is to determine the effect of the invasion soccer game on students' motor skills.

Table 14 Results of the Hypothesis T Test

	N	Mean	Std. Deviation	Std. Error Mean
PRE TEST	20	31.7000	6.45715	1.44386
POST TEST	20	36.2500	6.61637	1.47946

4. CONCLUSION

Based on the results of data analysis, hypothesis testing and discussion that have been described previously, the conclusion of this study is as follows "It can be concluded that the soccer invasion game has a significant effect on the motor skills of students at UPT Sd Negeri 066045 Medan."

5. SUGGESTION

Based on the conclusions above, there are several suggestions that can be conveyed, namely:

1. For Physical Education Teachers

It is hoped that the soccer invasion game can be an effective learning method in improving students' motor skills in a fun, active and varied way.

2. For School

The school is expected to provide support in the form of facilities and infrastructure, such as fields and balls, so that learning the game of soccer can run optimally and have a positive impact on students' physical development.

3. For Further Research

It is hoped that this research can be developed by expanding the number of samples, adding other variables (such as physical fitness), and using a more complex experimental design so that the results obtained are more in-depth and applicable.

6. ACKNOWLEDGEMENT

The researcher would also like to express his gratitude to all parties who have helped during the process of completing this proposal, among them

1. The Head of Bina Guna Sports & Health College, Dr.dr. Hj. Liliana Puspa Sari, S.Pd, M.kes, who also served as my thesis supervisor.
2. Mr. Ahmad Almunawar S.Pd, M.Pd as the head of the study program for physical education, health and recreation.
3. The Head of LPPM Alan Alfiansyah Putra Karo Karo, S.Pd, M.Pd along with staff who have provided all information on the implementation of the final assignment at the Bina Guna Sports & Health College
4. The Principal of UPT SD NEGERI 066045 MEDAN provided a research location for me.
5. Especially to the late father and mother who have very patiently helped and supported the researcher during the preparation of this thesis proposal.

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