



Effectiveness of Modified Exercises to Improve Ball Control Skills in Elementary School Futsal Extracurricular Students in Sumedang Regency

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Abstract

This study aims to analyze the effectiveness of training modification using cat-mouse games in improving ball control skills in elementary school futsal extracurricular participants in Sumedang Regency. Ball control is an important basic technique in futsal, but many players still have difficulty mastering it. Therefore, a more interactive and effective training method is needed. This study used an experimental method with a pre-test and post-test design. The research sample consisted of two groups, namely the experimental group that received training using cat-mouse games and the control group that underwent conventional training. Data were collected through passing-controlling tests before and after treatment, then analyzed using statistical tests, including normality tests, homogeneity tests, paired sample t-tests, independent t-tests, and N-Gain tests. The results showed that there was a significant increase in ball control skills in the experimental group compared to the control group. The N-Gain test analysis showed that the experimental group obtained an average score of 0.8091 (high category), while the control group only obtained an average score of 0.3033 (low category). The results of this study indicate that the cat-mouse game is one of the effective training methods in improving ball control skills in futsal games. The conclusion of this study is that the cat-mouse game can be used as an alternative interesting and effective training method in improving ball control skills in beginner futsal players. The results of this study contribute to the development of sports learning strategies, especially in the context of futsal games at elementary school level.

How to Cite

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INTRODUCTION

Children in school really like futsal. Extracurricular activities in school will provide opportunities for students to further develop their abilities and potential.(P. Ginting et al., 2022)This activity is carried out outside of school hours and aims to channel students' interests and talents in certain fields, such as futsal. Extracurricular activities provide opportunities for students to develop their interests, talents, and creativity in certain fields.(Purnama et al., 2022)This is also beneficial because it helps students avoid dangerous things around them, such as the prevalence of drug abuse and promiscuity.(Zainuddin & Yusuf, 2020).

Globally, the term "futsal" is used for indoor soccer games. The term comes from the words "futbol" or "futebol", meaning soccer, and "salon" or "sala", meaning indoors.(Alhababy, 2016)Futsal is played by two teams, each consisting of five players. In addition to the five main players, futsal also has reserve players. Futsal relies more on feet and skill, where the goal is to get the ball into the opponent's goal while keeping your own goal from being penetrated by the opposing players. Futsal has several characteristics that distinguish it from other types of sports, especially because it requires fast and agile footwork.(Hamdani et al., 2022).

Every futsal player must have strong basic techniques. Because it is very important to become a great player or athlete, every player or athlete must learn the basics of the futsal game. The goal of the futsal game depends heavily on the player's ability to understand the basics of the game. Basic techniques are the first way to achieve the goal.(Adi Surya et al., 2019)Receiving the ball, kicking, passing the ball, dribbling the ball, heading the ball, holding the ball, and blocking the ball are the basic techniques for playing futsal.(Rohman et al., 2021). Passing the ball, shooting, ducking, heading the ball, and dribbling are basic futsal techniques. Passing is one of the basic techniques in futsal, where passing is the movement of passing the ball to a teammate. Stopping is a basic technique in futsal, where stopping is the movement of stopping the ball passed by a teammate. While dribbling is a basic futsal technique, where the purpose of dribbling is to move the ball from one place to another. Heading is a basic futsal technique performed by players by using their heads to pass or score goals into the opponent's goal. While shooting is a basic futsal technique performed by players by kicking the ball directed at the opponent's goal.(Hamdani et

al., 2022).

Of the many basic futsal techniques, ball control is one of the basic futsal techniques used in conjunction with the technique of kicking the ball. The feet, thighs, chest, and head are some of the body parts that can control the ball.(Apri-lianta, 2022)Because the flat field causes the ball to roll quickly, the dominant control movement is to use the sole of the foot to hold the ball. Therefore, ball control must be possessed by the player.(Norifansyah et al., 2024). If the ball is far from the feet, then the opponent can easily grab it. To stop the ball, it is very important to pay attention to the direction the ball is coming from, maintain body balance, and use the soles of the feet to touch or hold the ball so that it remains still and easy to control.(SS Ginting et al., 2019)Knowing how to stop the ball in futsal is very important. We will have difficulty doing other movements such as dribbling or kicking the ball if we cannot stop it well.

Based on the results of observations on November 23, 2024 in one of the extracurricular activities in Sumedang Regency, the basic techniques of passing, dribbling, and shooting have been implemented quite well, but many children still have difficulty in mastering the technique of controlling the ball properly. In futsal, athletes should control the ball using the soles of their feet. However, in reality, many players do not control the ball using the soles of their feet properly so that the ball often comes loose and bounces in an unwanted direction. This can result in the risk of losing the ball, difficulty in opening opportunities, passing, and the ball being easily taken by the opponent. The technique of controlling the ball with the soles of shoes in futsal is very important so it must be mastered by every player.(Source: AFP).

Knowing how to stop the ball in futsal is very important, because if we can't stop it well, it will be difficult to do other movements such as dribbling or kicking the ball. One way that an athlete can optimize their performance is by practicing regularly. Even very talented athletes will not be able to achieve their best performance if they do not practice regularly. Conversely, someone who is less talented in a particular sport can achieve their best performance if they practice regularly.(Daniel et al., unknown).

Players often experience low skill learning outcomes, because the training methods used so far are often monotonous and less motivating for players. Therefore, to improve ball control skills, a more interesting, interactive, and effective training method is needed. The playing method is a

learning method that can be quickly accepted by beginners because it emphasizes improving creativity, challenge, fun, motivation, and solutions to problems (Haris et al., 2020). One method that can be used is to modify the technique by playing the traditional game of "cat and mouse".

Because Cat-and-mouse game involves active movement, quick decision making, and interaction between players, which is very relevant to be applied in futsal games. By changing the exercises carried out using this game to emphasize ball control, such as keeping the ball from the "cat" while moving in a certain area, players can improve their concentration, agility, and ball control skills in a game environment that is similar to real conditions. For the cat-and-mouse game, there are simple rules. This game is usually played by children in the yard or field during recess or after school. It is hoped that this method will not only improve the technical abilities of the players, but also make training more fun. Hopefully, this can improve the learning outcomes and motivation of the players as a whole.

Related to the above problems, in this study the author will explain about ball control skills with the cat-mouse game training method. The author takes the title "Effectiveness of Modification Training to Improve Ball Control Skills in Futsal Extracurricular Activities in Elementary Schools in Sumedang Regency".

This study focuses on the effectiveness of training modification in improving ball control skills in elementary school futsal extracurricular activities in Sumedang Regency. Previous research by (Aminullah et al., 2022) shows a positive influence of traditional games on the speed of Special Olympics Indonesia futsal athletes. This finding provides a basis that traditional games such as "cat-mouse" can be used as an effective training method to improve athlete skills, especially in terms of speed.

Although previous studies have discussed several things related to the cat-mouse game in the context of futsal, there has been no study that specifically discusses the effectiveness of this game in improving ball control. This is important because ball control is one of the crucial basic techniques in futsal. Based on observations in the field, many students have difficulty in mastering ball control techniques properly, causing them to lack good ball control techniques. This has the potential to hinder their performance while playing.

Seeing these shortcomings, this study aims to fill these shortcomings by focusing on modifying training using cat-mouse games. This method is expected to create a more interesting and

interactive training atmosphere, so that students can learn in a fun way while improving ball control skills. Cat-mouse games involve active movements and quick decision making, which are very relevant to futsal game situations.

Through This study is expected to obtain useful data and information regarding the effect of training modification on ball control skills. The results of this study not only contribute to the development of basic futsal techniques among students, but also provide new insights for coaches and educators in designing more effective and interesting training programs. Thus, this study is expected to improve the quality of sports learning in elementary schools and help young athletes achieve their maximum potential in the field of futsal.

Based on this background, In futsal, athletes must control the ball using the soles of their feet. However, in reality, many players fail to control the ball using the soles of their feet properly, so the ball often comes loose and bounces in an unwanted direction. This can result in the risk of losing the ball, difficulty in opening opportunities, passing, and the ball being easily taken by the opponent.

The novelty in this research lies in the application of the cat-mouse game as an innovative training method to improve ball control skills in futsal games.

The purpose of this study was to identify and analyze the effect of cat-mouse game on ball control skills in futsal. This study aims to explore the extent to which cat-mouse game can help players improve their ability to control the ball, especially in dynamic and stressful situations. In addition, this study also aims to assess the effectiveness of cat-mouse game as a training method in improving ball control skills. Thus, this study will provide a deeper understanding of the role of cat-mouse game in the development of ball control techniques, as well as determine whether this game can be effectively applied in training to improve this skill in the context of futsal training.

The cat-mouse game is considered to have a significant influence on improving the ball control ability of futsal players. In futsal, ball control using the soles of the feet is very important to maintain ball control and build an attack strategy. However, many players still have difficulty in controlling the ball well, so an effective training method is needed. The cat-mouse game as an interactive training method involves game situations that require players to make quick decisions and control the ball under pressure. Thus, this method is expected to improve the ball control

ability of futsal players.

METHODS

This study used an experimental method with a quasi-experimental design with a two-group pre-test and post-test design. The research sample was divided into two groups, namely the experimental group that received training using the cat-mouse game and the control group that did not receive treatment.

Participants in this study were members of the futsal extracurricular. The sampling technique used is non-probability or non-random sampling, namely non-random sampling with a purposive sampling type, two groups are taken that have the same characteristics, namely the control group and the experimental group.

The instrument used in this study was a passing and ball control test (Passing-Control) from Hulfian (2022) which has high validity and moderate reliability.

This analysis data uses:

Normality test is a test conducted to determine whether the data obtained is normally distributed. Data normality test with the Shapiro-Wilk formula using the SPSS program. The criteria used to determine whether the data is normally distributed is if $p > 0.05$ then the data is said to be normal, but if $p < 0.05$ then the data is said to be abnormal.

One way to test a hypothesis is the paired t-test, which uses non-independent (paired) data. Paired cases usually involve one subject (research object) receiving two different types of treatments. Although using the same subject, researchers still obtain two types of sample data, namely data from the first and second treatments.

The homogeneity test, which is performed after the normality test, shows that the data are normally distributed. The t-test and ANOVA are important because many parametric statistical methods, such as those that assume that the variances between groups are homogeneous.

Simple independent t-test in this study uses t-test to compare two variables, whether significant or not. Hypothesis testing is used to determine whether or not there is a significant difference between the pretest and posttest. Hypothesis testing uses the SPSS 26 program.

N-Gain is used to measure the effectiveness of a learning method by comparing the pre-test and posttest.

RESULTS AND DISCUSSION

The t-test, or statistical test, is used to analyze pre-test and post-test data to compare the mean differences between the experimental and control groups. The purpose of the t-test is to determine whether there is a significant difference between student learning outcomes before and after the implementation of the cat-mouse game.

The results of the normality test show that the pretest data in the experimental group has a Sig. value = 0.103 which indicates a normal distribution and the posttest data in the experimental group has a Sig. value = 0.983 which indicates a normal distribution, while in the control group the Sig. value pretest = 0.323 which indicates a normal distribution and the posttest with a Sig. value = 0.128 is normally distributed.

The results of the study showed a significance value of sig. (2-tailed) 0.000, based on the decision that sig. < 0.05 according to the criteria then H_0 is rejected and H_a is accepted. Therefore, the results of the analysis show that after being given treatment, both the control group and the experimental group experienced significant changes. This shows that the learning approach used has a significant influence on student learning outcomes. The results specifically show that the application of the cat-mouse game has succeeded in improving the ball control skills of extracurricular students at SDN Tanjungsiang. This shows that the cat-mouse game can be an effective alternative to improve students' ball control skills.

In this study, H_0 is accepted and H_a is rejected because the Sig. value of 0.115 is greater than 0.05, in accordance with the results of the homogeneity test. Thus, it can be concluded that the variance between the experimental group and the control group is homogeneous, meaning that before being given treatment, both groups have the same level of data variation. The homogeneity test was conducted to ensure that the variance between the experimental group and the control group is the same. The results showed that there was significant variance in both groups; the significance value (Sig.) based on the mean was $0.115 > (0.05)$.

The results of the study showed that H_0 was rejected and H_a was accepted with a Sig. (2-tailed) value of 0.024 (< 0.05). Thus, it can be concluded that the cat-mouse game has a significant influence on improving students' basic ball control skills in futsal games on the pencak silat step pattern.

The results of the N-Gain calculation show that the experimental group has an average N-Gain of 0.8091 Included in the high category,

this shows that the cat mouse training method is effective in improving ball control skills in futsal games.

The comparison of N-Gain between the experimental and control groups shows that the training method using the cat-mouse game is quite effective, indicating that this training method is able to provide a more in-depth and contextual learning experience. Therefore, it can be suggested to use this training method as an alternative to futsal games in elementary schools which is better because it can improve students' ball control skills.

The results of this study indicate that the cat-mouse game has a major influence in improving the ability to control the ball in futsal players. This exercise not only helps players in dealing with opponent pressure but also increases movement speed and better ball control. The study conducted by (Aminullah, R., Prasetyo, B., & Suryani, 2022) supports this finding by stating that game-based training is able to significantly improve the motor skills and coordination of novice futsal players.

Compared to conventional training methods, training that involves game elements is more effective because it provides a more engaging learning experience and makes players more active in each training session. (Wahyudi, H., Prasetyo, R., & Andriani, 2021). (Nugroho, A., Wijaya, S., & Darmawan, 2020) also found that game-based training can increase player motivation by up to 90%, which contributes to improving the overall quality of training. In addition, the study (Purnama, R., Wijaya, S., & Darmawan, 2022) shows that the cat-mouse game method is able to improve ball control skills up to 30% higher compared to training methods without game elements.

Apart from improving ball control, another benefit of the cat-mouse game is that it improves the players' focus and reflexes. (Danu et al., 2014) in his research found that this game helps players in improving spatial awareness and reaction speed, which are crucial aspects in futsal. This finding is also supported by a study conducted by (Sari, M., & Widodo, 2021) where the game method is proven to improve ball control and passing accuracy by up to 20% compared to conventional training.

Thus, the implementation of cat-mouse game in futsal training not only improves ball control skills but also provides a more enjoyable and effective learning experience for players, so it is recommended to be implemented in futsal

training programs, especially at the beginner level.

There is no discussion of the results yet, please discuss your article with relevant previous research citations. If you do not understand how to make a discussion, please read the published journal active article.

CONCLUSION

Based on the results of the research that has been done, it can be concluded that the cat-mouse game has a significant influence in improving ball control skills in students who take part in futsal extracurricular activities in elementary schools. The results of statistical analysis showed that there was a significant increase in ball control skills in the experimental group using the cat-mouse game training method compared to the control group using conventional training methods.

Besides that, This study also proves that the cat-mouse game is an effective training method in improving ball control skills. The effectiveness of this method is supported by several factors, such as more interactive training, increased agility and body coordination, and stimulation of faster decision making in dynamic game situations.

With Thus, the cat-mouse game can be recommended as an alternative training method to improve ball control skills, because it has been proven to improve technical skills, thinking speed, and physical endurance of futsal players.

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