

FAIRPLAY

Journal homepage: <https://jurnal.javamutiaramedia.org/index.php/fairplay/index>

Effect of active triangle and quartangle passing training on the accuracy of passing of men's participants futsal extracurricular

Danang Afrianto^{1✉}, Pipit Fitria Yulianto¹, Wisnu Mahardika¹, Ronny Suryo Narbito¹

¹Departement of Sports Coaching Education, Universitas Tunas Pembangunan Surakarta, Indonesia

Corresponding author*

E-mail: danangutina@gmail.com

ABSTRACT

This study aims to determine the effect of active triangle passing and active rectangular passing training methods on the passing accuracy of men's futsal extracurricular participants at SMA Negeri 6 Surakarta. The type of research used in this research is an experiment using the research design "The Two Group Pretest Post-test Design" namely an experimental research design carried out on two different groups who received different training or treatment. The research sample consisted of 30 people. The instrument that will be used is a soccer playing skills test. Hypothesis testing uses the t-test with the help of the SPSS 25 program, namely by comparing the mean between group 1 (pretest) and group 2 (post-test). Hypothesis test results for active triangle passing training method shows a difference in mean value of 2.13 with a percentage of 31% and resultstestt, obtained $t_{count} > t_{table} = 6.52 > 2.145$. Meanwhile, the results of the hypothesis test for the rectangular passing practice method showed a difference in mean value of 2.86 with a percentage increase of 41.26% and the resultst valuecount $> t_{table} = 9.28 > 2.145$. So it can be concluded that H_a is accepted, which means that the triangle active passing training method and the rectangular active passing training method has significant influence on increasing the passing accuracy of men's futsal extracurricular participants at SMA Negeri 6 Surakarta.

ARTICLE INFO:

Article History:

Submitted/Received 2 May 2024

First Revised 10 May 2024

Accepted 30 May 2024

First Available online 31 May 2024

Publication Date 4 June 2024

Keyword:

Futsal, Passing, Training Methods

1. INTRODUCTION

Futsal is a ball game played by two teams, each consisting of five people (Dwiyanto, 2011). Lhaksana, (2011) the game of futsal can be said to be almost similar to the game of soccer. The difference between futsal and soccer is that futsal is played by 5 people with a smaller field and ball. Futsal is a ball game played by 2 teams, each team consisting of 5 players. The goal is to put the ball into the opponent's goal, by manipulating the ball with the feet.

Futsal is a ball game played by two teams with one team of 5 people (Halim, 2009). Murhananto (2006) believes that futsal is very similar to football except that it is played five against

five on a smaller field, smaller goal and a relatively smaller and heavier ball. Lhaksana (2011) said that futsal is a team sport with a very fast and dynamic game. According to Jaya (2008), futsal is a dynamic sport because the ball rolls quickly from foot to foot, where the players are required to always move and good skills and high determination are needed. In terms of skills, futsal is almost the same as grass field football, the only difference is that futsal uses a lot of the soles of the feet when holding the ball, because the surface of the field is flat and hard with a small field size, so the ball cannot bounce far from the feet, because if the ball bounced far away, the opponent will easily seize the ball.

Futsal is also known by various other names. The term "futsal" is an international term, derived from the Spanish or Portuguese words, *futbol* and *sala*. Futsal was created in Montevideo, Uruguay in 1930, by Juan Carlos Ceriani. To be able to play futsal well, a person needs to master the basic techniques in playing futsal. Jaya (2008) to be able to play futsal well, a player must be equipped with good basic skills/techniques, not just being able to kick the ball but also having expertise in mastering or controlling the ball.

Futsal is a game where players are taught to play with very fast ball circulation, attack and defense, and also player circulation without the ball or precise timing. The basic techniques in playing futsal consist of passing (feeding the ball), dribbling (dribbling the ball), control (stopping the ball), and shooting (kicking the ball towards the goal) (Lhaksana, 2012).

Passing(passing the ball) is one of the dominant techniques used in futsal games. The game is not effective if the players have poor passing accuracy because tactics cannot work well if they are not supported by good passing accuracy skills between players. The movement of the ball and fast movement without the ball which is carried out with teamwork and ends with a goal, is the beauty and purpose of the game of futsal. Passing in the game of futsal is a basic technique used to pass the ball or transfer the ball's momentum to teammates to create space, so that one player can connect with another player to create opportunities and ultimately score a goal against the opponent's goal. To be able to pass accurately, players must do it routinely and continuously so they can create automatic movements. However, if training is carried out monotonously and without variation, it can cause boredom in the players.

An effective, efficient and programmed training process must be supported by a platform or system and good coaching. Marjohan (2018) sports achievement coaching is a systematic and planned process of developing and guiding athletes' talents supported by good human resources and science to achieve the goal, namely sports achievements in accordance with the level and level of competence of athletes through sports agencies and organizations. Coaching in this sports field aims to achieve maximum performance. Therefore, programmed, structured, targeted and sustainable coaching is needed. This development requires facilities and support from various parties. Apart from that, the coaching process also takes a long time, starting from childhood or early age until the child reaches a high level of competitive efficiency (Hidayatullah, 2002). Through this coaching period, it is hoped that athletes can remain at the peak of their performance for a long time.

Development of futsal sports achievements can be done through futsal academies. Apart from going through academies, futsal coaching can be developed through extracurricular activities at school. Usman stated that extracurricular activities are activities carried out outside of class hours (face to face) both at school and outside school with the aim of further enriching and broadening the knowledge and abilities possessed by students from various fields of study. The aim of the extracurricular activity program is to deepen and expand students' knowledge, recognize the relationships between various subjects, channel talents and interests, and complete efforts to develop the whole person.

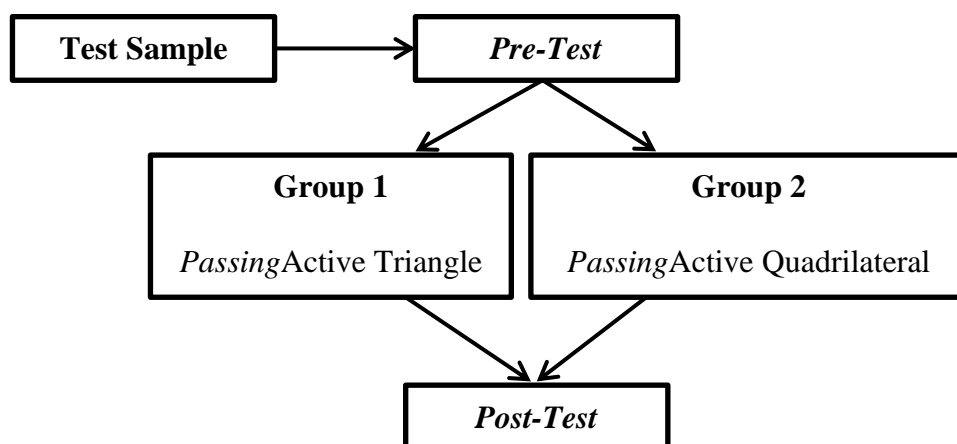
SMA Negeri 6 Surakarta is one of the schools that provides futsal sports development at school through futsal extracurricular activities. The futsal extracurricular at SMA Negeri 6 Surakarta was first opened in 2005. In 2022 the Futsal Team of SMA Negeri 6 Surakarta won 1st place in the futsal competition commemorating the anniversary of UMS at the high school level throughout Surakarta.

To improve futsal performance, a planned and systematic training program is needed. The training program must also have variations or varied training methods. One aspect that futsal players must master is basic technique. The basic techniques in playing futsal consist of passing (feeding the ball), dribbling (dribbling the ball), control (stopping the ball), and shooting (kicking the ball towards the goal).

Passing is the basic technique that is dominantly used in the game of futsal. Players must master basic futsal techniques well. For this reason, effective and efficient training methods are needed. Based on this background, this research aims to determine the effect of active triangle and quadrilateral passing exercises on the passing accuracy of men's futsal extracurricular participants at SMA Negeri 6 Surakarta.

2. METHODS

The research method used in this research is research with a quantitative approach and experimental research type. The design used in this research is "The Two Group Pretest Post-test Design", namely an experimental research design carried out on two different groups who received different training or treatment (Sugiyono, 2017). This research aims to determine the effect of active triangle and quadrilateral passing training methods on passing accuracy in futsal. To find out the differences in training methods, the researchers divided them into 3 stages, namely (1) the first stage, each group first carried out a pretest; (2) the two groups were given different treatments, the first group was given treatment using the active triangle passing training method, while the second group was given treatment using the rectangular active passing training method. The final stage is to carry out a post-test, the results of the pre-test and post-test are then analyzed to determine the differences between the two training methods. The following is an overview of the research design flow using The Two Groups Pre-Test Post-Test Design.



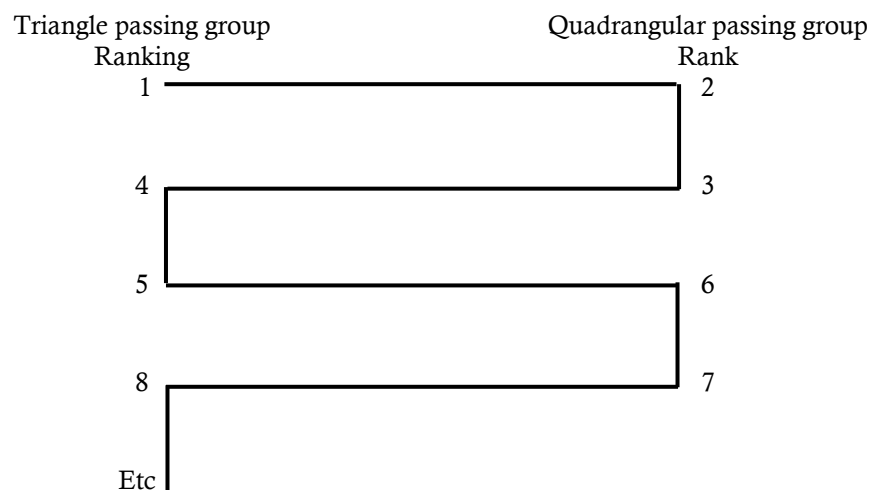
Picture 1. Research design

This research was carried out at SMA Negeri 6 Surakarta which is one of the State High Schools in Surakarta, which is located at Jl. Mr Sartono No. 30 Surakarta, Central Java. The research period starts from January-March 2023. The following is a description of the place and time for the research. The population is the subject of research. Sugiyono (2017) population is a generalized area consisting of objects or subjects that have certain quantities and characteristics determined by researchers to be studied and then it is concluded that the population in this research is students of SMA Negeri 6 Surakarta.

Determining the sample in this research was carried out using a purposive sampling technique, which is a sampling technique used by researchers if the researcher has certain considerations in taking the sample (Arikunto, 2016). Sampling in this study used certain criteria, namely:

- a. The sample used in this research was 30 extracurricular participants from SMA Negeri 6 Surakarta
- b. The gender of the sample is male
- c. Physically and mentally healthy
- d. Willing to be a research sample

The technique for dividing sample groups was carried out using original pairing. Ordinal pairing is the separation of samples based on ordinal criteria (Hadi, 2000: 111). Sample separation is used to determine the groups that will be given a treatment, then matched (matched) using the ABBA pattern in two groups with the same number of members in each. The explanation at the ordinal pairing stage is to pair research subjects based on ordinals. Meanwhile, pairing is carried out on a continuum variable, for example: the best result from the pretest is placed in group A, the best result number two is placed in group B, the best result number three is placed in group B, the best result number four is placed in group A and so on. The sample of 20 people was then divided into two groups consisting of a group with triangular passing treatment and a group with rectangular passing treatment. Sample separation was carried out using ordinal pairing. "Sample separation was carried out using ordinal pairing. "Ordinal pairing is the separation of samples based on ordinal criteria" (Hadi, 2000: 111). The technique for dividing groups using original pairing is as follows:



Picture 2. Original Pairing

Technique is a way or system of doing something to achieve a certain goal. Data collection is a systematic and standard procedure for obtaining the required data (Nazir, 2013). The data collection technique in this research is to use test techniques, namely pre-test and post-test.

The research instrument is a measuring tool in the data collection process. According to Ali (2010) data collection instruments are measuring tools used to obtain data from research. Data collection in this research used measurement tests, namely initial measurements (pretest) and final measurements (post-test). Arikunto (2006) research instruments are tools or facilities used by researchers in collecting data to make their work easier and better. Data collection in this research was by measurement tests which were used for initial measurements (pre-test) and final measurements (post-test). The instrument that will be used is a soccer playing skills test prepared by Nurhasan, 2001: 157-163. The following is a description of the soccer passing test instrument:

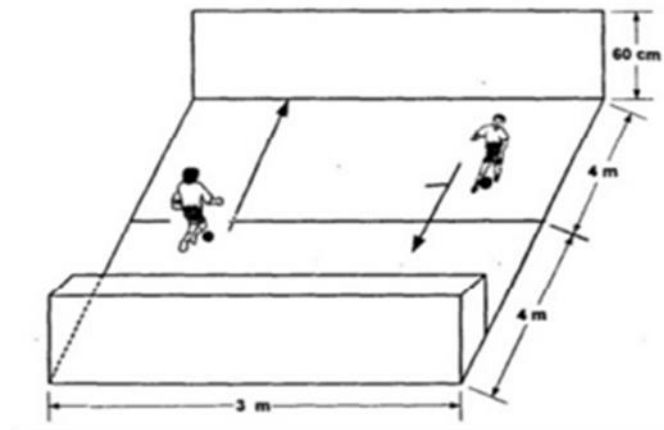
Objective: measure kicking and holding the ball skills.

Tools used:

1. Ball
2. Stop watch
3. Wall
4. Kun

Implementation Instructions:

1. Testi stands behind the shooting line which is 4 meters from the target or with a board with the right foot or left foot ready to shoot according to the player's habits.
2. At the "yes" signal, the testi begins to kick the ball towards the target, the bounce is held back with the foot behind the shooting line.
3. Perform this task alternately with the left and right leg for 30 seconds.
4. If the ball leaves the soccer area, the tester must use the spare ball provided.
5. The movement is declared failed if:
 - a. The ball is held or kicked in front of the kick line at each task
 - b. Punt.
 - c. The ball is held and kicked with only one foot.
6. Score: Number of legal kicks and holds of the ball for 30 seconds. Count 1, obtained from one activity of kicking and holding the ball.



Picture 3. Football Passing Test Instrument
(Nurhasan, 2001: 157-163)

The data analysis technique in this research uses quantitative data analysis, the data obtained is then subjected to a normality test and homogeneity test (Arikunto, 2016).

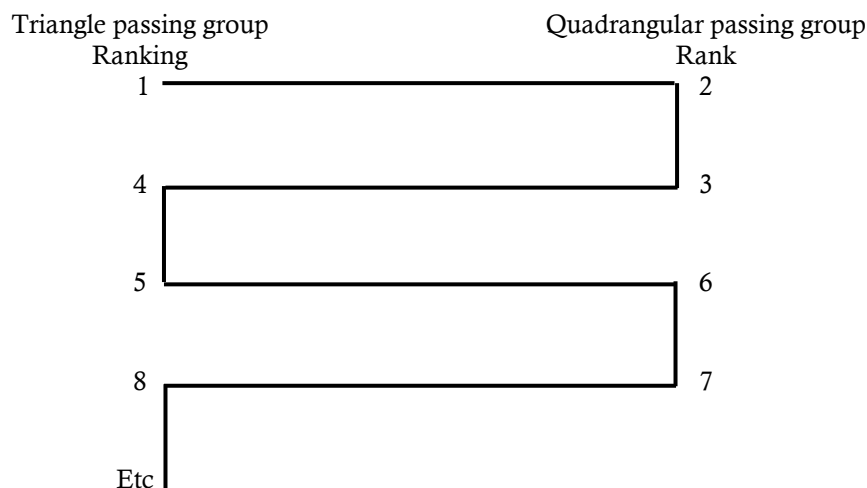
Participants

This research was carried out at SMA Negeri 6 Surakarta which is one of the State High Schools in Surakarta, which is located at Jl. Mr Sartono No. 30 Surakarta, Central Java. The research period starts from January-March 2023. Determining the sample in this research was carried out using a purposive sampling technique, which is a sampling technique used by researchers if the researcher has certain considerations in taking the sample (Arikunto, 2016). Sampling in this study used certain criteria, namely: The sample used in this study was 30 extracurricular participants from SMA Negeri 6 Surakarta, the gender of the sample was male.

Sampling Procedures

This research aims to determine the effect of active triangle and quadrilateral passing training methods on passing accuracy in futsal. To find out the differences in training methods, the researchers divided them into 3 stages, namely (1) the first stage, each group first carried out a pretest; (2) the two groups were given different treatments, the first group was given treatment using the active triangle passing training method, while the second group was given treatment using the rectangular active passing training method. The final stage is to carry out a post-test, the results of the pre-test and post-test are then analyzed to determine the differences between the two training methods. The following is an overview of the research design flow using The Two Groups Pre-Test

Post-Test Design. Determining the sample in this research was carried out using a purposive sampling technique, which is a sampling technique used by researchers if the researcher has certain considerations in taking the sample (Arikunto, 2016). Sampling in this study used certain criteria, namely: The sample used in this study was 30 extracurricular participants at SMA Negeri 6 Surakarta, the gender of the sample was male. The technique for dividing sample groups was carried out using original pairing. Ordinal pairing is the separation of samples based on ordinal criteria (Hadi, 2000: 111). Sample separation is used to determine the groups that will be given a treatment, then matched (matched) using the ABBA pattern in two groups with the same number of members in each. The explanation at the ordinal pairing stage is to pair research subjects based on ordinals. Meanwhile, pairing is carried out on continuum variables



Picture 4. Original Pairing

Materials and Apparatus

Data collection in this research used measurement tests, namely initial measurements (pretest) and final measurements (post-test). Arikunto (2006) research instruments are tools or facilities used by researchers in collecting data to make their work easier and better. Data collection in this research was by measurement tests which were used for initial measurements (pre-test) and final measurements (post-test). The instrument that will be used is a soccer playing skills test prepared by Nurhasan, 2001: 157-163. The following is a description of the soccer passing test instrument:

Objective: measure kicking and holding the ball skills.

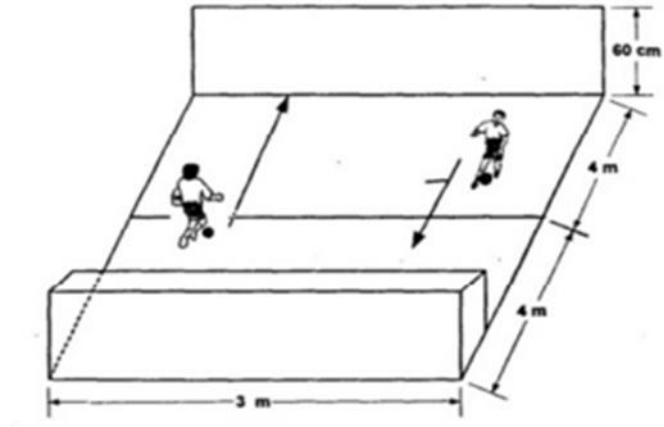
Tools used:

1. Ball
2. Stop watch
3. Wall
4. Kun

Implementation Instructions:

1. Testi stands behind the shooting line which is 4 meters from the target or with a board with the right foot or left foot ready to shoot according to the player's habits.
2. At the "yes" signal, the testi begins to kick the ball towards the target, the bounce is held back with the foot behind the shooting line.
3. Perform this task alternately with the left and right leg for 30 seconds.
4. If the ball leaves the soccer area, the tester must use the spare ball provided.
5. The movement is declared failed if:
 - a. The ball is held or kicked in front of the kick line at each task

- b. Punt.
- c. The ball is held and kicked with only one foot. 78 Score: Number of legal kicks and holding the ball for 30 seconds. Count 1, obtained from one activity of kicking and holding the ball.
Score: Number of legal kicks and holds of the ball for 30 seconds. Count 1, obtained from one activity of kicking and holding the ball.



Picture 5. Football Passing Test Instrument
(Nurhasan, 2001: 157-163)

Design or Data Analysis

The research method used in this research is research with a quantitative approach and experimental research type. The design used in this research is "The Two Group Pretest Post-test Design" namely an experimental research design carried out on two different groups who received different training or treatment (Sugiyono, 2017). This research aims to determine the effect of the active passing training method in terms of three and four squares on passing accuracy in futsal. To find out the differences in training methods, the researchers divided them into 3 stages, namely (1) the first stage, each group first carried out a pretest; (2) the two groups were given different treatments, the first group was given treatment using the active triangle passing training method, while the groupThe second was given treatment using the rectangular active passing training method. The final stage is to carry out a post-test, the results of the pre-test and post-test are then analyzed to determine the differences between the two training methods. The following is an overview of the research design flow using The Two Groups Pre-Test Post-Test Design.

3. RESULT

Based on the results of the normality test of the treatment group data triangle dPlease note that the significance value obtained from calculating the triangular normality test using the SPSS 25 program is $pre-0.413 > 0.05$ and post-test $0.15 > 0.05$. So it can be concluded that the residual value is normally distributed. Meanwhile, the results of the rectangular normality test show that the significance value obtained from normality test calculations using the SPSS 25 program is pre-test $0.406 > 0.05$ and post-test $0.325 > 0.05$. So it can be concluded that the residual value is normally distributed. The results of the homogeneity test show that the triangular group, the rectangular group is $0.929 > 0.05$, so the distribution of data from the two groups is declared homogeneous..

Reliability test results use Cronbach's Alpha calculationsThe influence of active triangular and rectangular passing exercises on the passing accuracy of men's futsal extracurricular participants at SMA Negeri 6 Surakarta, the result obtained was $(1.904 > 0.60)$, while the calculated r result was $1.904 > 0.361$ r table (r table was obtained based on the r Person table, namely the number (n) of samples $30 = 0.361$). So, based on this, it can be concluded that the indicator is declared reliable.

The research results related to the differences in the influence of significant differences from Active triangle passing and rectangular active passing training methods on the passing accuracy of men's futsal participants presented as follows:

1. The Effect of the Triangle Active Passing Training Method

Based on test results *paired samples statistics* above shows the difference in mean values for the pre-test and post-test data variables. The mean pre-test value is 6.87 while the mean post-test value is 9, the difference in mean values is positive so there is an increase of 2.13 with the percentage increase in the triangle active passing practice method on the passing accuracy of men's futsal extracurricular participants at SMA Negeri 6 Surakarta is 31% and results. The paired sample t test shows that the significance value of Sig. (2-tailed) is $0.00 < 0.05$, while the results of $t_{count} > t_{table} = 6.52 > 2.145$, it can be concluded that H_a is accepted which means the triangle active passing practice method has significant influence on the passing accuracy of men's futsal extracurricular participants at SMA Negeri 6 Surakarta.

2. The Effect of Quadrilateral Active Passing Training Methods

Based on the results *paired samples statistics* above shows the difference in mean values for the pre-test and post-test data variables. The mean pre-test value was 6.93 while the mean post-test value was 9.8, the difference in mean values was positive so there was an increase of 2.86 with a percentage increase in the rectangular active passing practice method on the passing accuracy of men's futsal extracurricular participants at SMA Negeri 6 Surakarta is 41.26% and results. The paired sample t test shows that the significance value of Sig. (2-tailed) is $0.00 < 0.05$, while the results of the t value $t_{count} > t_{table} = 9.28 > 2.145$ then it can be concluded that H_a is accepted which means the rectangular active passing practice method has significant influence on increasing the passing accuracy of men's futsal extracurricular participants at SMA Negeri 6 Surakarta.

3. Differences in Influence Training methods for active triangle passing and active rectangular passing.

Knowing which training method is better between the triangular active passing training method and the rectangular active passing training method can be determined based on comparing the differences in the percentage of improvement in training methods. Percentage increase in passing by active triangle passing training method against passing accuracy is 31%. Meanwhile, the percentage increase in passing using the rectangular active passing training method was 41.26%. Based on the results of this increase in percentage, it can be seen that the rectangular active passing training method has a better effect on improving the precision passing ability of futsal players.

REFERENCES

- Arikunto, S. 1988. Classroom Management and Students. Jakarta: CV. Rajawali.
- Arikunto, Suharsimi. (2010). Research Procedures A Practical Approach. Jakarta: Rineka Cipta.
- Asmar, Jaya. (2008). Futsal: Lifestyle, Rules and Game Tips. Yogyakarta: East Library.
- Bompa, Tudor O. (1994). Theory and Methodology of Training, Kendal/ Hunt Publishing Company, Dubuque, Iowa.
- Edwards, William H. 2010. Motor Learning and Control. USA: Wadsworth.
- Gagne' Robert M. 1989. Learning Conditions and Learning Theory. translation Munandir and Kartawinata, H. Jakarta: Depdikbud Directorate General of Higher Education.
- Hadi, S (2004). Research Methodology I. Yogyakarta: Andi Offset.
- Hidayatullah MF. 2002. General Theory of Exercise (J. Nossek. Translation). Lagos: Pan Afrikan Press LTD. Book published 1982
- Irianto, DP. (2002). Fitness Exercise Guide (Effective and Safe). Yogyakarta: Lukman Offset.
- Justinus Lhaksana. (2011). Modern Futsal Tactics & Strategy. Jakarta: Penebar Swadaya Group.
- Law H. 2013. The Psychology of Coaching, Mentoring and Learning. Second Edition. John Wiley & Sons, Ltd., UK.

- Magill, Richard A. 2011. Motor Learning and Control: concepts and applications (9th Ed.). New York: McGraw-Hill.
- Mulyana, R. 2004. Articulating Values Education. Bandung: Alfabeta.
- Murhananto. (2006). Futsal Game Basics (In Accordance with FIFA Regulations). Jakarta: PT. Kawan Pustaka
- Schmidt, Richard A & Lee, D. Timothy. 2014. Motorcycle Learning and Performance (5th Ed.). Champaign: Human Kinetics.
- Subagyo Irianto. (2010). Guidelines for Implementing the Development of the "David Lee" Skills Test for Football Schools (SSB) aged 14-15 years. Thesis. Yogyakarta: FIK UNY.
- Sugiyono. (2007). Statistics for Education. Bandung: Alfabeta.
- Sukadiyanto. (2010). Theory and Methodology of Physical Training for Tennis Players. Yogyakarta: FIK UNY.
- Sukatamsi, 1985. Basic Techniques for Playing Football. Solo: Triumvirate.
- Sutisna, O. 1987. Educational Administration; Theoretical Foundations For Professional Practice. Bandung: Space.
- Turnip, JMF. 2020. The Effect of Active Triangular and Quadrilateral Passing Practices on Players' Passing Accuracy in the Calcetto Futsal Family. Thesis. Yogyakarta: UNY
- Wardana, DF. 2015. The Effect of Tactical Approach Training on Passing and Dribbling Skills in Futsal Extracurricular Participants at SMAN 1 Maospati. Thesis. Yogyakarta: UNY.