



Effectiveness Of Small Side Games 3v3 And 4v3 Training On Passing Accuracy In The Men's Futsal Team, Jakarta State University

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ABSTRACT

The purpose of this study was to find out 1) The effectiveness of 3v3 small side game exercises compared to 4v3 exercises in increasing passing accuracy. 2) Knowing the effectiveness of the Small Side Games 3v3 and Small Side Games 4v3 exercises on the passing accuracy of the Jakarta State University Futsal team. Research data collection was carried out from March 8 2023 which took place at the Futsal Field Hall B, Jakarta State University. The research method used is a quantitative research method with quasi-experimental studies. This research is experimental, namely to determine the effect between variables. The population of this study was the Jakarta State University futsal team players, totalling 80 people, and the sample was 30 people using a purposive sampling technique. The results of the data analysis show that 1) Is the Small side games 3v3 exercise effective in increasing the passing accuracy of the Men's Futsal Team at Jakarta State University? 2) Is the 4v3 Small Side Games exercise effective in increasing the passing accuracy of the Jakarta State University Men's Futsal team, 3) Which is more effective, the 3v3 Small Side Games or 4v3 Small Side Games Exercise in increasing the Passing of the Jakarta State University Men's Futsal team.

Keywords: *Effectiveness; Small Side Games; Futsal.*

INTRODUCTION

Futsal is a sport that is very popular with various groups. Everyone from children to adults enjoys futsal (Kurniasih et al., 2014). Futsal is popular with most people around the world because it is an interesting and entertaining game (Anggriawan, 2016). Futsal is also easy to play, you only need a futsal ball and a field that is not too big to be able to play futsal (Habibul Rasyd, Ahmad Atiq, 2019). Futsal was discovered in Uruguay by Juan Carlos Ceriani, this breakthrough was made in Montevideo when Uruguay hosted the World Cup in 1930. The new sport was called futebol de salao (Portuguese) or futbol sala (Spanish) which has the same meaning, namely football room. From these two languages, the

abbreviation futsal emerged which is worldwide today (Asmar Jaya, 2008; Wibowo, 2018).

Futsal is a very fast and dynamic game in terms of a relatively small field, so players have to minimize mistakes (Mashud et al., 2019). This game can never be free from collisions (Suherman, 2016). Because of this, players are required to be smart and quick in making decisions when playing (Khoiriah & Yudiana, 2016). Mastering good technique will make it easier for players to achieve victory. According to (Bahtra, R., & Annas, M, 2020). To get there, to fulfil this, prospective athletes must have all of these, basic techniques highly prioritized because they are mandatory in coaching (Octavianus, 2018; Festiawan, 2020).

To achieve maximum performance, explains that there are four aspects that athletes need to pay attention to and train carefully, namely physical, technical, tactical and mental (Himmi & Suhartiningsih, 2018; (Solihin, 2020). So to play futsal well requires maximum physical, technical and mental support along with the application of game tactics or strategies that are appropriate to the situation and conditions on the field (Hamzah & Hadiana, 2018). To be able to play futsal well, a player must practice regularly, in a planned manner, and must pay attention to four aspects of training, namely physical, technical, tactical and mental (Kusuma, 2019). To achieve maximum performance, each sport must pay attention to several aspects of training, one of which is perfect mastery of basic techniques (Firmansah et al., 2019).

What must be done to improve and enhance the basic techniques in the game of futsal in increasing passing accuracy is through the small-side games approach. Small-side games are a form of training carried out in the form of a real game so that players are expected to be able to make decisions quickly and correctly (Sudirman, 2022). Of course, doing all of this is not easy. So you can improve your ability in passing techniques. Without using an actual field, this form or method can be designed with many variations, such as varying the number of balls or players on the field (Fatimah, 2018). The small-sided games training model aims to improve basic techniques through playing with areas that can be modified (Development, 2012). Passing is the art of transferring the ball's momentum from one player to another. Good passing starts when the team is in control of the ball creating space between opponents by moving and opening up space. Passing should aim straight at your teammates as much as possible, and use as much force as necessary. But when in difficult situations, sometimes players can also pass the ball using their head or chest. In reality, in the field, researchers saw that there were many obstacles in the football and futsal clubs at

Jakarta State University, especially when passing, athletes often passed carelessly or passed incorrectly with other teammates.

For this reason, a training program using small-sided games is important because it is hoped that it can help athletes correct mistakes when passing when practising or competing (Ashari & Adi, 2019). The small-side game training method has the advantage of simultaneously training technical/tactical skills as well as decision-making in sports (Davies et al., 2013; Oman Hadiana, 2020). In the small side game, good passing accuracy or precision is required. Accuracy is a supporting aspect of basic techniques that every player must have, including its application in futsal (Syandhiva et al., 2022). In directing an object to the desired goal, accuracy is needed, which is the ability to move correctly (Susilo & Bawono, 2021). The problem found on the field is that athletes cannot master basic technical skills, especially passing techniques. After observing KOP Soccer and Futsal UNJ, there are still players who are not good at doing it.

From the problems above, it can be concluded that the author intends to conduct research with the title: "The Effectiveness of 3v3 and 4v3 Small Side Game Training on Passing Accuracy in the Men's Futsal Team, Jakarta State University.

METHOD

Place and time of research

This research was conducted starting on March 8 2023 at the Hall-B field, which is located at Jalan Pemuda, East Jakarta, Indonesia 13220.

Research methods

The experimental method was used by the research in this study. The experimental method is a method that examines something to find out the consequences of the treatment given (Hardani et al., 2020). The design in the research uses a "Two group pretest-posttest design". The design used was an experimental design carried out by two groups who were given different exercises. Thus, each group was given an initial test (pre-test) and then a final test (post-test) to determine their ability to pass accurately as a result of the treatment.

Research Population

Population is the subject of research. In this study, the population was 80 members of the Jakarta State University Futsal KOP.

Sample

The sample is a part or representative of the population studied. In this study, researchers took samples from the population using accidental sampling techniques. The accidental sampling technique was carried out based on spontaneity or chance factors. This means that anyone present during the research can be used as a sample (Sugiyono, 2016). In this study, the total population present and then used as a sample was 20 people consisting of 17 men and 3 women. All samples were subjected to a power kick pretest to determine the treatment group, their pretest scores were ranked, then matched (matched) using an A-B-B-A pattern in two groups with 15 members each. The sample distribution technique used in this research was by using ordinal pairing. Ordinal pairing is dividing a group into two with the aim of both having similarities or even accuracy (Sugiyono, 2007). The sample was divided into two groups, Group A as the experimental group was given Small Side Games 3v3 training and Group B was given Small Side Games 4v3 training. The way to take a sample from a population is called a sampling technique. Sampling technique is a way to determine a sample whose number corresponds to the sample size that will be used as a data source

Research Instrument

The data collection technique used by researchers is a futsal passing accuracy skills test. According to Sugiono, a research instrument is a tool used to measure natural or social phenomena that are observed (Sugiyono, 2013). Data collection in this research was by measurement tests which were used for initial measurements (pretest) and final measurements (posttest).

- 1) At the signal "ready" the testee stands next to the marker and places the ball next to the marker.
- 2) The testee steps back to take a stance for the kick.
- 3) At the signal from the whistle, the testee starts kicking at a distance of 10m and is given 60 seconds, then the ball must hit the device.
- 4) Kick the ball using the right or left foot according to the testee's strongest foot.



RESULTS AND DISCUSSION

The initial test results for the small side game 3v3 practice group obtained the lowest score of 3, the highest score of 8, a mean of 5.1, a median of 5, mode 4, a standard deviation of 2.0, variance of 1.4. Based on the results of these calculations, the frequency distribution can be seen in Table 1.

Table 1.

Frequency Distribution of Initial Test Results for Small Side Game 3v3 Practice Groups

No	Mark	Frequency	Frequency Relatively
1	3	1	7
2	4	5	33
3	5	4	27
4	6	2	13
5	7	2	13
6	8	1	7
Total		15	100

The final test results for the small side game 3v3 practice group obtained the lowest score of 7, the highest score of 13, a mean of 9.8, a median of 10, a mode of 10, a standard deviation of 3.0, variance of 1.7. Based on the results of these calculations, the frequency distribution can be seen in Table 2.

Table 2.

Final Test Results for Small Side Game 3v3 Practice

No	Mark	Frequency	Frequency Relatively
1	7	1	7
2	8	3	20
3	9	2	13
4	10	5	33
5	11	2	13
6	13	2	13
Total		15	100

The initial test results for the small side game 4v3 practice group obtained the lowest score of 3, the highest score of 10, a mean of 6.3, a median of 6, a mode of 7, a standard deviation of 3.6, variance of 1.9. Based on the results of these calculations, the frequency distribution can be seen in Table 3.

Table 3.

Frequency Distribution of Initial Test Results for Small Side Game 4v3 Practice Group

No	Mark	Frequency	Frequency Relatively
1	3	1	7
2	4	2	13
3	5	2	13
4	6	3	20
5	7	4	27
6	8	1	7
7	9	1	7
8	10	1	7
Total		15	100

The final test results for the small side game 4v3 practice group obtained the lowest score of 5, the highest score of 11, a mean of 7.9, a median of 8, a mode of 6, a standard deviation of 3.5, variance of 1.9. Based on the results of these calculations, the frequency distribution can be seen in Table 4.

Table 4.
 Distribution of Final Test Results for Small Side Game 4v3 Practice Groups

No	Mark	Frequency	Frequency Relatively
1	5	1	7
2	6	3	20
3	7	3	20
4	8	2	13
5	9	3	20
6	10	1	7
7	11	2	13
Total		15	100

Hypothesis Test Results

The following are data results for testing hypotheses, both research hypotheses and statistical hypotheses.

Correlation Test

To know the level of relationship of the variables studied, you can use the interpretation of the correlation coefficient (Safrit & Wood, 1995). To determine the level of relationship between the variables studied, you can use the interpretation of the correlation coefficient of the Spearman correlation test hypothesis, namely:

Ho: No significant relationship between the independent variable and the dependent variable.

Ha: There is a significant relationship between the independent variable and the dependent variable.

The t-test decision conditions are:

If the sig value is > 0.05 , then the independent variable does not have a significant relationship with the dependent variable (Ho is accepted).

If $\text{sig} < 0.05$, then the independent variable has a significant relationship with the dependent variable (Ho is rejected).

Table 5.
 Spearman Correlation Test Results

Information	Correlation	Sig.	Results
Explosive Power of Leg Muscles	0.733	0.016	There is a significant relationship
Leg Length	0.935	0,000	There is a significant relationship

Based on the Spearman correlation test table presented in Table 5, the results of this research will be explained as follows:

Small Side Game 3v3 Practice Effectively Improves Passing Accuracy.

From the results of the passing accuracy test for the small side game 3v3 practice group, the initial test average was 5.1 and the standard deviation was 1.4. The final test average of the small side game 3v3 practice group was 9.8 and the standard deviation was 1.7. From the results of the average and standard deviation, the t-count is 7.9, while the t-table with a significance level of 0.05 with $df (n - 1) = 14$ is 1.71. Based on the results of these calculations, it can be seen that $t\text{-count} (7.9) > t\text{-table} (1.71)$ then H_0 is rejected and H_1 is accepted. This means that 3v3 small-side game training is effective in increasing passing accuracy in the Jakarta State University men's futsal team.

Small Side Game 4v3 Practice Effectively Improves Passing Accuracy.

Based on the Spearman correlation results, it shows that the Length Length variable has a correlation value of 0.935 and a significance value of 0.000 where the significance value is smaller than 0.05 so it can be concluded that H_2 is accepted, which means there is a significant relationship between limb length and the results of the flop style high jump in KOP Athletics Students at Jakarta State University. The correlation value of 0.935 which leads in a positive direction indicates that the greater the value of the Leg Length, the greater the flop-style high jump results will be by 0.935 or 93.5. This value shows that there is a significant relationship between limb length and the results of the flop-style high jump in KOP Athletics Students at Jakarta State University. Small Side Game 3v3 Practice is More Effective Than Small Side Game 4v3 Practice on Passing Accuracy.

Small Side Game 3v3 Practice is More Effective Than Small Side Game 4v3 Practice on Passing Accuracy.

To find out which is more effective between the 3v3 small side game training group and the 4v3 small side game training group passing accuracy, it is determined using the t-test. The results obtained are a t-count of 2.8 and a t-table at a significance level of 0.025 and $df (n - 2) = 28$ are 2.47. Based on the results of these calculations, it can be seen that $t\text{-count} (2.8) > t\text{-table} (2.47)$, so H_0 is rejected and H_1 is accepted. This means that 3v3 small-side game training is more effective than 4v3 small-side game training in increasing passing accuracy on the Jakarta State University men's futsal team.

Discussion

Small Side Game 3v3 Practice Effectively Improves Passing Accuracy.

This follows the framework of thinking and theory and research hypothesis which states that 3v3 small-side game training is effective in increasing passing accuracy.

The small-side games model is 3v3, which means playing using 3 players against 3 players. Small-sided game (SSG) is a classification of conditioned game drills used widely in team sports. Small-sided games are played in smaller areas, with modified rules and with fewer players than real futsal games.

The advantage of this game method is that students are invited to a situation real game so that the techniques produced are also appropriate to the real game. In addition, the small-side game training method has the advantage of simultaneously training technical/tactical skills as well as decision-making in sports. Small-side games can be meaningful when players do it 3v3 because they have more passing, dribbling and shooting. In a 3 vs 3 small-sided game situation, the available space or playing area is limited, which encourages players to move more aggressively.

Small Side Game 4v3 Practice Effectively Improves Passing Accuracy.

Based on the results of the hypothesis test, it is known that the Limb Length variable has a correlation value of 0.935 and a significance value of 0,000 where the significance value is smaller than 0.05. The correlation value for the variable Leg Length has a positive value, which means that the higher the value of the Leg Length, the better the flop style high jump results will be and the correlation value of 0.935 indicates that there is a significant relationship between the Leg Length and the flop style high jump results. This means that H2 is accepted, which means that there is a relationship between limb length and the results of the flop-style high jump in KOP Athletics Students at Jakarta State University.

A flop-style high jump athlete must have long legs. This is something athletes get from birth, which is a hereditary factor from their parents, so leg length is a gift from God. Having long legs is the initial capital for a flop-style high jumper in making a jump. Athletes who have a height of 190cm will find it easier to pass a height of 160cm compared to athletes who only have a height of 170cm. This is because long legs will produce high jumps because the longer the legs, the higher the distance between the waist and the ground. The results showed that there was an increase in passing accuracy after being given 4v3 small-side game practice with a value of $t\text{-count} = 7.9 >$ from $t\text{-table} = 1.71$ with a

significance level of 0.05. This follows the framework of thinking and theory and research hypothesis which states that 4v3 small-side game training is effective in increasing passing accuracy. This exercise focuses on attackers with a numerical advantage. Attackers must learn how to exploit their advantages and finish with shots on goal. Small-side game 4v3 drills are great for training players to provide support in defence and attack with an emphasis on how to play in over-the-top situations – up or down.

Small Side Game 3v3 Practice is More Effective Than 4v3 Small Side Game Practice in Increasing Passing Accuracy

The results of the research show that 3v3 small-side game training is more effective than 4v3 small-side game training in increasing the passing accuracy of the Jakarta State University men's futsal team with a value of $t\text{-count} = 2.8$ which is greater than $t\text{-table} = 2.47$ with a significance level of 0.025. This follows the framework of thinking and theory as well as the research hypothesis which states that 3v3 small-side game training is more effective than 4v3 small-side game training in increasing the passing accuracy of the Jakarta State University men's futsal team. To display good technical skills in futsal, some components must be trained to be able to master a movement so that it looks dynamic. And also allows players to take more action on the ball, increasing their confidence when attacking and defending. One of the methods that can be given is small-sided games. Open in Google Translate Feedback

CONCLUSIONS AND SUGGESTIONS

Conclusions

Based on the problems raised, which are supported by a literature review, framework of thinking and research results, it can be concluded that:

1. Small-side game 3v3 training is effective in increasing passing accuracy on the Jakarta State University men's futsal team.
2. Small-side game 4v3 training is effective in increasing passing accuracy on the Jakarta State University men's futsal team.

Suggestion

Based on the problems raised, which are supported by a literature review, framework of thinking and research results, it can be concluded that:

1. Small-side game 3v3 training is effective in increasing passing accuracy on the Jakarta State University men's futsal team.
2. Small-side game 4v3 training is effective in increasing passing accuracy on the Jakarta State University men's futsal team. (3) It is hoped that coaches will be more selective in recruiting prospective athletes according to their talents and potential so that they can continue to develop.

REFERENCES

- Anggriawan, F. (2016). Tingkat Keterampilan Bermain Futsal Peserta Ekstrakurikuler Futsal Di SMP Negeri 6 Yogyakarta Tahun 2016. *Pendidikan Jasmani Kesehatan dan Rekreasi*, *V*(12), 1–8.
<https://journal.student.uny.ac.id/index.php/pjkr/article/view/4807>
- Ashari, R. F., & Adi, S. (2019). Pengembangan Model Latihan Menyerang Futsal Menggunakan Formasi 3-1. *Sport Science and Health*, *1*(2), 2019.
<http://journal2.um.ac.id/index.php/jfik/indexhttp://fik.um.ac.id/>
- Aslan A. (2013) Cardiovascular responses, perceived exertion and technical actions during small-sided recreational soccer: effects of pitch size and number of players. *J Hum Kinet.* 38: 95-105
- Bompa (2000). Total Training For Young Champion. York University. Canada Pate. Rotela. McClenaghan (1993). Dasar-dasar Ilmiah Kelatihan. Saunders College Publishing. America Serikat.
- Bompa, T. O. (1994). Theory and Methodology of Training. Toronto: Kendall/ Hunt Publishing Company.
- Davies, M. J., Young, W., Farrow, D., & Bahnert, A. (2013). Comparison of agility demands of small-sided games in elite Australian football. *International Journal of Sports Physiology & Performance*, *8*(2), 139- 147.
- Dellal A, Lago-Peñas C, Wong DP, Chamari K. (2011). Effect of the number of ball contacts within bouts of 4 vs. 4 small-sided Soccer games. *Int J Sports Physiol Perform.* 6, 322-333
- Festiawan, R. (2020). Pendekatan Teknik Dan Taktik: Pengaruhnya Terhadap Keterampilan Bermain Futsal. *Jurnal Pendidikan Jasmani dan Olahraga*, *3*(2), 143–155.
<https://journal.ipm2kpe.or.id/index.php/JPJO/article/view/1080>
- Firmansah, Y. D., Hernawan, Wasan, A., & Widiastuti. (2019). Meningkatkan Keterampilan Dribbling Futsal Melalui Metode Bermain. *Penjaskesrek Journal*, *6*(1), 77.
<https://penjaskesrek.stkipgetsempena.ac.id/?journal=home&page=article&op=view&path%5B%5D=124>
- Ganesha Putera (2004). Managing a Small-Sided Games Organization. Yogyakarta: Kickoff. (April 2004).
- Harsono. (2015). Sports Coaching Theory and Methodology. Bandung. PT. Remaja

Rosdakarya

- Habibul Rasyd, Ahmad Atiq, F. P. H. (2019). Tingkat Keterampilan Teknik Dasar Futsal Ekstrakurikuler Di SMA Negeri 1 Galing Kabupaten Sambas. *Jurnal Pendidikan dan Pembelajaran Khatulistiwa*, 8(10), 1–12. <https://jurnal.untan.ac.id/index.php/jpdpb/article/view/37425>
- Hamzah, B., & Hadiana, O. (2018). Pengaruh Penggunaan Model Problem Based Learning Terhadap Keterampilan Passing Dalam Permainan Futsal. *JUARA : Jurnal Olahraga*, 3(1), 1–7. <http://jurnal.upmk.ac.id/index.php/juara/article/view/210>
- Hill-Haas, S.V.; Dawson, B.; Impellizzeri, F.M. & Coutts, A.J. (2011). “Physiology of Small-Sided Games Training in Football a Systematic Review”. *Journal of Sports Medicine*, 2011; 41 (3): 199-220.
- Himmi, S., & Suhartiningsih. (2018). Pengaruh Model Pembelajaran Kooperatif Tipe TGT (Team Games Tournament) Terhadap Hasil Belajar Anatomi Dan Fisiologi Di SMKN 6 Surabaya. *Jurnal Tata Rias*, 7(2), 8–12. <https://jurnalmahasiswa.unesa.ac.id/index.php/19/article/view/23717>
- Irawan, A. & dkk. (2021). Indonesia Futsal Coaching Manual. Forum Diskusi P elatih Futsal Indonesia
- Jaya, A. (2008). Futsal Lifestyle, Rules and Game Tips. Yogyakarta, Pustaka Timur.
- Katis, A., & Kellis, E. (2009). Effects of small-sided games on physical conditioning and performance in young soccer players. *Journal of Sports Science and Medicine*, 8(3), 374–380.
- Khoiriah, D. S., & Yudiana, Y. (2016). Pengaruh Model Pembelajaran Kooperatif Tipe Team Game Tournament (TGT) Terhadap Pembentukan Nilai-Nilai Kerjasama Dalam Pembelajaran Permainan Hoki. *Jurnal Pendidikan Jasmani Dan Olahraga*, 1(1), 27–37. <https://doi.org/10.17509/jpjo.v1i1.3661>
- Kurniasih, D., An'nur, S., & Wati, M. (2014). Meningkatkan Hasil Belajar Dan Keterampilan Sosial Siswa Melalui Penerapan Pembelajaran Kooperatif Tipe Teams Game Tournament (TGT). *Berkala Ilmiah Pendidikan Fisika*, 2(3), 281–291. <https://scholar.archive.org/work/ic6pakaf55da5obdq47rkxtxwm/access/wayback/http://ppjp.unlam.ac.id/journal/index.php/bipf/article/download/892/pdf>
- Kusuma, R. W. (2019). Penerapan Pendekatan Taktis dan Gaya Mengajar Tugas dalam Pembelajaran Futsal. *TEGAR: Journal of Teaching Physical Education in Elementary School*, 2(2), 118–128. <https://doi.org/10.17509/tegar.v2i2.15484>
- Lhaksana, J. (2011). Taktik & Strategi FUTSAL Modern. Penebar Swadaya Group. Little, T., & Williams, AG. (2006). Suitability Of Soccer Training Drills For Endurance Training. *National Strength & Conditioning Association*. 20(2), 316–319
- Mara, J. K., Thompson, K. G., & Pumpa, K. L. (2016). Physical and physiological characteristics of various-sided games in elite women's soccer. *International Journal of Sports Physiology and Performance*, 11(7), 953– 958. <https://doi.org/10.1123/IJSP.2015-0087>
- Mashud, M., Hamid, A., & Abdillah, S. (2019). Pengaruh Komponen Fisik Dominan Olahraga Futsal Terhadap Teknik Dasar Permainan Futsal. *Gladi: Jurnal Ilmu Keolahraagaan*, 10(1), 28–38. <https://doi.org/10.21009/gjik.101.04>
- Mikanda Rahmani. 2014. Buku Super Lengkap Olahraga. Jakarta: Dunia Cerdas.

- Oman Hadiana. (2020). Implementasi Pendekatan Taktis Dalam meningkatkan Motivasi Belajar Futsal. *Indonesian Journal of Science*, 1(1), 38–44. <http://jurnal.pusatsains.com/index.php/jsi/article/view/5>
- Solihin, A. O. (2020). Tingkat Keterampilan Siswa pada Ekstrakurikuler Futsal Tingkat Sekolah Dasar. *Journal of Physical and Outdoor Education*, 2(2), 239–246. <https://doi.org/doi.org/10.37742/jpoe.v2i2.110>
- Sudirman. (2022). Paired and Unpaired Passing Practice Against the Ability of Passing the Ball in Football Games. *COMPETITOR : Jurnal Pendidikan Kepelatihan Olahraga*, 14(1), 149–158. <https://doi.org/doi.org/10.26858/cjeko.v14i1.32526>
- Suherman, A. (2016). Pengaruh Penerapan Model Kooperatif Tipe Jigsaw Dan Tgt (Teams Game Tournament) Terhadap Keterampilan Sosial Dan Keterampilan Bermain Bolavoli. *Jurnal Pendidikan Jasmani Dan Olahraga*, 1(2), 8–15. <https://doi.org/10.17509/jpjo.v1i2.5659>
- Susilo, R. R., & Bawono, M. N. (2021). Upaya Peningkatan Kelincahan Melalui Latihan Kombinasi Ladder-Cone Pada Pemain Ekstrakurikuler Futsal Siswa SMAN 3 Jombang. *Jurnal Kesehatan Olahraga*, 9(4), 223–228. <https://ejournal.unesa.ac.id/index.php/jurnal-kesehatan-olahraga/article/view/42896>
- Syandhiva, M. uhammad R., Rahayu, E. T., & Siswanto. (2022). Pengaruh Direct Instruction Model Terhadap Keterampilan Bermain Kegiatan Ekstrakurikuler Futsal Siswa Sekolah Menengah Kejuruan. *Jurnal Ilmiah Wahana Pendidikan*, 8(14), 233–239. <https://doi.org/doi.org/10.5281/zenodo.6991638>
- Wibowo, P. A. (2018). Peningkatan Keaktifan Siswa Dalam Permainan Futsal Melalui Metode TGT Pada Siswa Kelas X Di SMA Selamat Pagi Indonesia Kota Batu. *JP.JOK (Jurnal Pendidikan Jasmani, Olahraga dan Kesehatan)*, 1, 14–23. <https://core.ac.uk/download/pdf/229306964.pdf>