

## Interaction between Training Methods and Eye-Foot Coordination on Football Passing Ability



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**ABSTRACT:** This research aims to determine the differences in the influence of the El Rondo and Diamond Passing Drill training methods on female players' soccer passing abilities. This research uses experimental methods. Research design is a plan for conducting research, which helps research in collecting and analyzing data. The research design used in this research is 2 x 2 factorial. In order to find out differences in the results of the treatment given using control variables. This research was conducted at the Baturan Football Field, Kec. Colomadu, Kab. Karanganyar, Central Java. The test results with 2-way ANOVA statistics obtained in the interaction test obtained a calculated f value of 7.157 and a probability of 0.017. Based on the criteria mentioned above, probability  $< 0.05$  means that interaction factors influence increasing football passing ability. interaction factors mean that training methods and eye-foot coordination work together to improve football passing ability. So Hypothesis 3 which states: there is an interaction between training methods and eye-foot coordination on increasing football passing ability is accepted. The conclusion of this study is an interaction effect between training methods and eye-foot coordination on increasing football passing ability as proven by the ANOVA statistical test, namely the probability value is  $0.017 < 0.05$ .

**KEYWORDS:** Training methods, Foot-eye coordination, passing ability

### INTRODUCTION

Football is a team sport, where each team consists of eleven players, and one of them is a goalkeeper (Anwar et al., 2013). The sport of football is the most popular activity among all groups and is the most popular in the world (Maliki et al., 2017). The development and progress of the sport of football over time has experienced significant rapid and better improvement in all countries in the world, both among parents, adults, teenagers and children, even men and women. Football can be used as an entertaining game and recreational activity, then it has developed widely as a means of maintaining physical fitness, has become a professional work profession, achieved high achievements, and can bring a good name to the region, nation and state (Pamungkas, 2021).

Football is a very popular and popular sport in Indonesia and throughout the world. The development and progress of the sport of football over time has experienced significant and rapid improvement in all countries of the world, both among parents, adults, teenagers and children, even men and women (Wibowo et al., 2019). Therefore, in general female footballers like this sport. To increase motivation, it is necessary to carry out exercises that contain a high content of fun and teamwork, as well as providing challenges for the players. The attraction of football is the skill of demonstrating the ability to handle the ball, a performance full of struggle, dynamic movements, accompanied by tactical surprises that make the audience amazed to see it (Wahyudi et al., 2016). Players' fluid and controlled movements express their individuality in team play. Speed, strength, stamina, skill and knowledge of tactics are all important aspects of performance (Pambudi et al., 2023).

Practice is an organized and deliberate series of game actions completed over a long period of time, meaning training physical, special, strategic and mental abilities to help competitors make the most extreme game progress (Putra, 2021). The expected achievement can be achieved if the athlete's physical condition improves thanks to a program designed by a coach (Firdaus Soffan Hadi, 2016). Training programs must be designed appropriately and systematically and directed at increasing the ability and functional capacity of the body system, so that athletes can achieve the best possible peak performance (Rizki Hazazi Ali et al., 2023).

A training method is a pattern, a simulation of a real condition that is composed of specific elements from a number of phenomena that are monitored and studied by someone from actual real examples (the same as describing the atmosphere of a

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match). A training method must of course be in accordance with training that is identical in form to the characteristics of a real match (Almy & Sukadiyanto, 2014).

In general, coordination is defined as cooperation and procedures or something different and physiologically, coordination is defined as cooperation between the central nervous system and muscles to produce energy, both inter and intramuscular (Sakti, 2017). In a broad sense, coordination refers to the term or name for several abilities that support the cooperation of different movement processes, for example in learning coordination is divided into basic coordination (the ability to learn movements) and stable fine coordination (the ability to change and adapt movements). Coordination is a very complex biomotor ability, related to accuracy, speed, strength, endurance and flexibility. Apart from that, it is also included in the combination of behavior of two or more joints, which are related to each other in producing a movement skill (SUDARSONO, 2015).

This ability is intended to control parts of the body that are freely involved in a complex movement method, and combine these parts in a movement, a movement that is smooth and successful in achieving a goal. (Irwanto & Romas, 2019). Thus, coordination is the quality of muscles, bones and joints including the five senses in producing movement. Coordination ability is an actualization of movement components that work simultaneously (Iwandana et al., 2022). Because the movement components in question include, among other things, the energy system, muscle contraction, bone nerves, joints and eye senses, apart from that, combining the functions of several muscles appropriately and in balance into one good coordinated movement pattern will be able to combine several movements without tension. in the correct sequence and perform complex movements smoothly without expending excessive energy.

### RESEARCH METHODS

This research uses experimental methods. Research design is a plan for conducting research, which helps research in collecting and analyzing data. The research design used in this research is 2 x 2 factorial. In order to find out differences in the results of the treatment given using control variables. This research was conducted at the Baturan Football Field, Kec. Colomadu, Kab. Karanganyar, Central Java.

2x2 Factorial Research Design Framework Table

Eye-Foot Coordination (a)	Practice Method	
	<i>El Rondo</i> (b1)	<i>Diamond Passing Drill</i> (b2)
High (a1)	a1b1	a1b2
Low (a2)	a2b1	a2b2
Football Passing Ability		

Information :

a1 : Players who have high eye-foot coordination

a2 : Players who have low eye-foot coordination

b1: Games Training Method (El Rondo)

b2 : Drill Training Method (Diamond Pass Drill)

a1b1: Treatment with game training methods for players who have a high level of eye-foot coordination

a2b1: Treatment with game training methods for players who have a low level of eye-foot coordination

a1b2 : Treat with the drill training method for players who have a high level of eye-foot coordination

a2b2: Treat with the drill training method for players who have a low level of eye-foot coordination.

### RESULTS AND DISCUSSION

Description based on a combination of training methods and eye-foot coordination

**Table 1. Descriptive statistics combination of training methods and eye-foot coordination**

Observation	Stage	N	Minimum	Maximum	Mean	Std. Deviation
ER KMK low	Pretes	8	3	6	4,5	0,926
	Postes	8	7	9	7,75	0,707
	Difference	8	2	5	3,25	1,035
DPD KMK low	Pretes	12	3	7	5	1,279

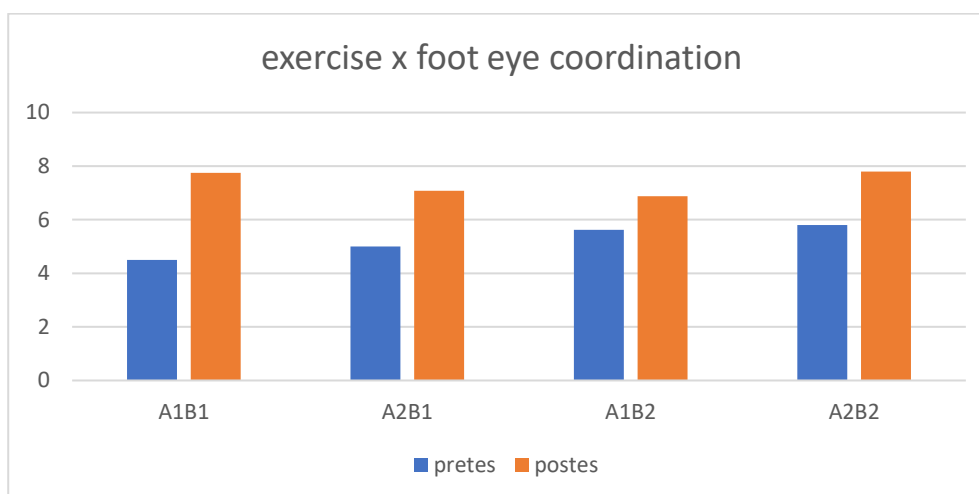
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	Postes	12	5	9	7,0833	1,240
	Difference	12	1	4	2,0833	0,900
ER KMK low	Pretes	8	5	6	5,625	0,518
	Postes	8	6	8	6,875	0,835
	Difference	8	0	2	1,25	0,707
DPD KMK high	Pretes	5	4	7	5,8	1,095
	Postes	5	7	8	7,8	0,447
	Difference	5	1	3	2	0,707

The results of the descriptive statistical tests in the table above show that the average pretest score for El Rondo's football passing ability with low ankle coordination is 4.5 with a standard deviation value of 0.926. The minimum pretest score for El Rondo's football passing ability with low eye-foot coordination is 3 and the maximum score is 6.

The results of the descriptive statistical tests in the table above show that the average post-test score for El Rondo's football passing ability with low ankle coordination is 7.75 with a standard deviation value of 0.707. The minimum post-test score for El Rondo's football passing ability for low eye-foot coordination is 7 and the maximum score is 9.

The results of descriptive statistical tests in the table above show that the average value of the difference in El Rondo's football passing ability with low ankle coordination is 3.25 with a standard deviation value of 1.035. The minimum value of the difference in El Rondo's football passing ability with low ankle coordination is 2 and the maximum value is 5.



**Chart 1. Combination of training methods and eye-foot coordination**

In the picture above it can be seen that the four groups of combinations of training methods and eye-foot coordination resulted in good improvements in El Rondo with low eye-eye coordination (A1B1), Diamond Passing Drill with low eye-eye coordination (A2B1), El Rondo with high eye-eye coordination (A1B2). as well as the Diamond Passing Drill with high eye toe coordination (A2B2). respectively, the increases from largest to smallest are El Rondo low ankle coordination (A1B1), Diamond Passing Drill low ankle coordination (A2B1), Diamond Passing Drill high ankle coordination (A2B2), and El Rondo high ankle coordination (A1B2) namely 3.25; 2.0833; 2; and 1.25. To ensure whether the increase is significant, statistical tests need to be carried out which will be explained in a separate discussion.

The test results with 2-way ANOVA statistics obtained in the interaction test obtained a calculated f value of 7.157 and a probability of 0.017. Based on the criteria mentioned above, probability < 0.05 means that interaction factors influence increasing football passing ability. interaction factors mean that training methods and eye-foot coordination work together to improve football passing ability. So Hypothesis 3 which states: there is an interaction between training methods and eye-foot coordination on increasing football passing ability is accepted.

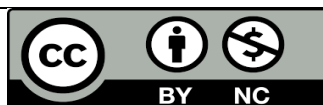
## CONCLUSION

The conclusion of this study is an interaction effect between training methods and eye-foot coordination on increasing football passing ability as proven by the ANOVA statistical test, namely the probability value is  $0.017 < 0.05$ .

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### REFERENCES

- 1) Almy, Muh. A., & Sukadiyanto, S. (2014). Perbedaan Pengaruh Circuit Training Dan Fartlek Training Terhadap Peningkatan Vo2Max Dan Indeks Massa Tubuh. *Jurnal Keolahragaan*, 2(1), 59–68. <https://doi.org/10.21831/jk.v2i1.2603>
- 2) Anwar, S., Pendidikan, J., Kesehatan, J., & Keolahragaan, F. I. (2013). *Survei Teknik Dasar Dan Kondisi Fisik Pada Siswa Sekolah Sepak Bola ( Ssb ) Se Kabupaten Demak Tahun 2012*. 2(9), 596–604.
- 3) Firdaus Soffan Hadi, Dkk. (2016). Pengaruh Latihan Ladder Drills Terhadap Peningkatan Kelincahan Siswa U-17 Di Persatuan Sepakbola Jajag Kabupaten Banyuwangi. *Jurnal Pendidikan Jasmani*, 26(1), 213–228.
- 4) Irwanto, & Romas, M. Z. (2019). Profil Peran Psikologi Olahraga Dalam Meningkatkan Prestasi Atlet di Serang-Banten Menuju Jawara. *Prosiding Seminar Nasional IPTEK Olahraga*, 2(1), 1–14.
- 5) Iwandana, D. T., Falaahudin, A., & Romadhoni, M. (2022). Koordinasi Kegiatan Menjaga Kebugaran Melalui Massage Bagi Atlit KONI Bantul Yogyakarta. *Seminar Nasional Hasil Riset Dan Pengabdian*, 28(6), 1426–1429.
- 6) Maliki, O., Hadi, H., & Royana, I. F. (2017). Analisis Kondisi Fisik Pemain Sepakbola Klub PERSEPU UPGRIS Tahun 2016. *Jendela Olahraga*, 2(2), 1–8.
- 7) Pambudi, T., Mukarromah, S. B., Rahayu, S., & Iwandana, D. T. (2023). Efektivitas Aplikasi Data Base Kondisi Fisik Atlet Bulu Tangkis Berbasis Android. *Gelombang Olahraga: Jurnal Pendidikan Jasmani Dan Olahraga (JPJO)*, 6(2). <https://doi.org/10.31539/jpjo.v6i2.6170>
- 8) Pamungkas, O. I. (2021). Hubungan Fleksibilitas dan Kekuatan Terhadap Kemampuan Tendangan Dollyo Chagi Atlet Taekwondo Universitas Negeri Yogyakarta. *Jorpres (Jurnal Olahraga Prestasi)*, 17(2), 142–147.
- 9) Putra, M. B. R. (2021). Pengaruh Latihan Drill Passing Dan Ball Feeling Terhadap Keterampilan Sepak Bola Ditinjau Dari Koordinasi Mata-Kaki Peserta Didik Ekstrakurikuler Smp N 3 Godean. *NBER Working Papers*, 89.
- 10) Rizki Hazazi Ali, Witri Suwanto, & Dody Tri Iwandana. (2023). Kombinasi Latihan Aerobik dan Konsumsi Kunyit dapat Meningkatkan VO2Max Mahasiswa. *SPRINTER: Jurnal Ilmu Olahraga*, 4(1). <https://doi.org/10.46838/spr.v4i1.297>
- 11) Sakti, B. P. I. (2017). Hubungan koordinasi mata-kaki dan kelincahan dengan keterampilan menggiring bola dalam permainan sepakbola pada siswa ekstrakurikuler SMA Negeri 2 Lubuklinggau. *Biomatika : Jurnal Ilmiah Fakultas Keguruan Dan Ilmu Pendidikan*, 3(2), 1–7.
- 12) Sudarsono, S. (2015). Penyusunan Program Pelatihan Berbeban Untuk Meningkatkan Kekuatan. *Ilmiah SPIRIT*, 12(1), 31–43.
- 13) Wahyudi, W., Hariyoko, H., & Amiq, F. (2016). Pengaruh Latihan Pliometrik Barrier Hops Dengan Latihan Komando Terhadap Peningkatan Prestasi Shooting SSB Indonesia Muda Kota Malang. *Pendidikan Jasmani*, 26(2), 244–256.
- 14) Wibowo, A. T., Syafitri, A., & Iwandana, D. T. (2019). Psychological Characteristics of PSIM Yogyakarta Players in Wading the League 2 Soccer Competition in 2019/2020. *Quality in Sport*, 9(11), 217–225. <https://doi.org/10.12775/qs.2019.018>



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