



The Effect of Training Methods and Eye-Foot Coordination On Football Dribbling Ability

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Abstract

This research aimed to examine: (1) the difference in the effect of acceleration and interval sprint dribbling methods; (2) the difference in the effect between high and low coordination towards; and (3) the interaction between training methods and coordination of football dribbling. This research is an experiment with a 2 x 2 factorial design. The coordination instrument is Soccer Wall Test while the dribbling instrument is Short Dribbling Test. The data were analysed using ANAVA. From this research, it can be concluded that (1) there is a significant difference in the effect between acceleration and interval sprint dribbling training methods on dribbling ability; (2) there is a significant difference in the effect between high and low coordination ability on dribbling ability; and (3) there is a significant interaction between training methods and coordination of football dribbling ability.

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INTRODUCTION

Football is one of the world's most popular sports. In order to be able to play football well, a football player must master the basic techniques of playing football. One of the basic techniques of football to master is the basic technique of dribbling. From some basic techniques of playing football, dribbling is one of the basic techniques that is quite dominant among the others. This is as stated by Huijgen et al. (2010: 690) that "the ability to sprint and dribble at high speed is essential for performance in soccer". Dribbling in football games is often done in determining how well the team or individual players play.

Talented players can also be seen from their dribbling abilities as Ali said (2011: 171) that in particular, the ability to dribble the ball past opposing players into an opponent's territory is a hallmark of gifted players, and a strong tactical advantage.

Football dribbling ability is inseparable from the support of the ability of good physical condition. One of the factors that can affect football dribbling ability is eye-foot coordination. Eye-foot coordination plays a role in football dribbling movements that is when dribbling a ball, a player must watch the ball and the game situation. When dribbling, a player does not have to look down and continue to pay attention to the location by continuing to see the ball. He must pay attention to the game situation.

If one wants to be a good football player, his training must emphasize on moving speed because in this modern football era moving speed plays an integral role in determining the result and course of the game. To move quickly, one must be trained to be quick as well. Moving speed when dribbling is essential in order to outwit and break through the opponent's defence. Thus, the opportunity to create goals is more open. Therefore, the training must emphasize the element of speed by not ignoring other important supporting elements in playing football. Many training methods can be used by trainers to develop the moving speed of the players, two of which are the acceleration sprint and interval sprint training methods. Both training methods are very good for developing speed because type of movement of the acceleration sprint training is almost the same as dribbling the ball until it really leads to the training goal.

The movement starts from running slowly. The longer it takes, the speed will increase. In slow running movements, the player can control the ball so tightly that it sticks on the foot.

Dribbling training with the acceleration sprint can increase the ability of dribbling speed with tight ball control. With the ability to control the ball while dribbling, a player can change direction quickly to get through obstacles or opponents while keeping the ball. Likewise, with the interval sprint training, the player is required to perform running movements with maximum speed repeatedly so that the student's running speed can increase. When a player runs dribbling with the maximum speed forward, an increase in dribbling speed can be achieved.

METHODS

The research design used was an experimental method using a 2x2 factorial design. This experimental research used two groups that received different treatments, the administration of acceleration and interval sprint training methods. The population in this research were football athletes aged 12-13 years in a football school in West Sleman from two football schools, namely SKK and AMS football schools in Sayegan totalling 37 male students. The population of 37 students was then tested for coordination using the Soccer Wall Test. This test was used to determine the level of eye-foot coordination that the student has. Based on the ranking, 27% of the upper group and 27% of the lower group were determined from the test results (Miller, 2008: 68). The instrument/test in this research is Soccer Wall Volley Test (Ismaryati, 2008: 36). The test has a validity score of 0.778 and reliability score of 0.860. The instrument/test in this research is the Short Dribbling Test. The researcher used this test because there are important elements that can identify the dribbling ability. This test emphasizes the speed of time. The data analysis technique used in this research is SPSS 20 by using two-way ANAVA with the significance level of $\alpha = 0.05$. Then, to compare the average pair of treatments, the Tukey test was performed (Sudjana, 2002: 36). Considering the data analysis of the research is carried out using ANAVA, before using two-way ANAVA, prerequisite tests are required, which include: (1) normality test and (2) variance homogeneity test and hypothesis testing.

RESULTS AND DISCUSSION

The descriptive statistics of the pretest and posttest of football dribbling abilities of 12-13-year-old students are presented in **Table 1**.

Table 1. Physical Activity Level Characteristic

Method	Coordination	Statistic	Pre-test	Post-test
Acceleration Sprint	High (A1B1)	Number	62.85	62.73
		Mean	12.57	12.54
		SD	.868	.482
	Low (A1B2)	Number	66.95	63.35
		Mean	13.39	12.67
		SD	.222	.372
Interval Sprint	High (A2B2)	Number	63.60	53.96
		Mean	12.72	10.79
		SD	.831	.583
	Low (A2B2)	Number	67.07	64.31
		Mean	13.41	12.86
		SD	.186	.399

The normality test used the formula of Kolmogorov-Smirnov Z. all data have p (Sig.) values > 0.05, which means that the variables are normally distributed.

The homogeneity test is useful for testing the similarity of samples that is the uniformity of the sample variants taken from the population. It can be seen the value of the pretest-posttest Sig. p > 0.05, so that the data is homogeneous.

The hypothesis testing of the research was conducted based on the results of data analysis and interpretation of two-way ANAVA analysis.

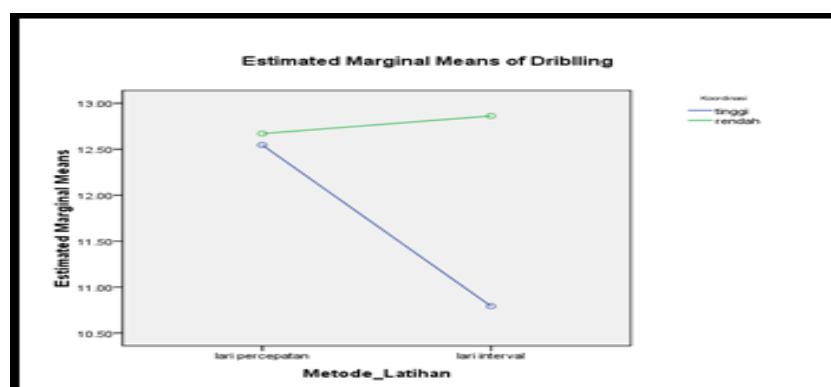
From the ANAVA test results the significance value p is 0.002. Because the significance value of p is $0.002 < 0.05$ and F is 14.032, it means that H_0 is rejected. Thus, there is a significant difference in the effect of acceleration and interval sprint dribbling training methods on the football dribbling abilities of 12-13-year-old students.

Based on the results of the analysis, it turns out that the interval sprint dribbling training method is higher (good) with an average posttest score of 11.827 seconds compared to the acceleration sprint dribbling training method with the posttest average score of 12.608. This means that the research hypothesis stating that there is a significant difference in effect between the acceleration and interval sprint dribbling training methods on the football dribbling abilities of 12-13-year-old students has been proven.

From the ANAVA test results the significance value p is 0.000. Because the significance value of p is $0.000 < 0.05$ and F is 27.685, it means that H_0 is rejected. Based on this, there is a significant difference in the effect between high and low eye-foot coordination of football dribbling ability. Based on the results of the analysis, it turns out that students with high eye-foot coordination abilities are higher (good) with an average posttest score of 11.696 seconds compared to those with low eye-foot coordination with a posttest average score of 12.766 seconds. This means the research hypothesis which states that there is a significant difference in the effect between high and low eye-foot coordination on the football dribbling abilities of 12-13-year-old students has been proven.

From the ANAVA test results the significance value p is 0.000. Because the significance value of p is $0.000 < 0.05$ and F is 94.340, it means that H_0 is rejected. Based on this, the hypothesis that there is a significant interaction between training methods (acceleration and interval sprint dribbling training) and eye-foot coordination (high and low) on the football dribbling abilities of 12-13-year-old students has been proven.

The results of the interaction diagram between the training methods (acceleration and interval sprint dribbling training) and eye-foot coordination (high and low) on the football dribbling abilities of 12-13-year-old students can be seen in **Figure 1** as follows.

**Figure 1.** Results of Interaction between Training Methods and Coordination

Based on hypothesis testing, it is known that there is significant difference in the effect of acceleration and interval sprint dribbling training methods on the football dribbling abilities of 12-13-year-old students. The interval sprint dribbling training method is higher (better) than the acceleration sprint in training the football dribbling abilities. As the name implies, interval sprint training is a running exercise carried out with a break between the repetitions. Interval sprint or progressive interval training is a series of running exercises with a certain and controlled break (Fox, et.al, 1989: 247). Interval sprint training is a system of running exercises interspersed by intervals in the form of rest periods (Kardjono, 2010). If the interval is short, it will involve participation from anaerobic metabolism, so that programmed interval sprint training will increase the power (explosive power) of leg muscles and result in increased running speed (Powers & Howley, 2012).

The results of the analysis show that there is a significant difference in the effect between high and low eye-foot coordination on the football dribbling abilities of 12-13-year-old students. Students with high eye-foot coordination skills are higher (better) than those with low eye-foot coordination skills. Football dribbling ability is influenced by eye-foot movement coordination. This is reinforced by Zago et al. (2015) that according to Bernstein's theory of motor learning, the level of the technique proficiency of the athlete is related to how his neuromuscular system handles joints degrees of freedom. Yulianto (2012) added that dribble is influenced by coordination, sensory sharpness, movement speed, feeling of movement and the technique of the movement itself. It is added to the Special Olympics Football Coaching Guide (2004: 33) that: When dribbling, the most important aspects are balance and coordination. To be able to go around a player, the body must be flexible enough to change direction by shifting weight quickly, while still maintaining balance and the ability to think quickly. When asking a player to jog round the field to warm up, it is better to do this with a ball at his/her feet

to help increase confidence in ball control when running.

A player who has high coordination, in doing football dribbling will be very different from that who has a low level of coordination. In this regard, Bomp (1994: 43) suggests that children with good coordination will always get expertise quickly and can do it smoothly, compared to those who do movements with stiffness and difficulty. A young athlete who coordinates well will spend less energy on the same performance. Therefore, the results of good coordination will be more effective in a skill.

Based on the results of this research, there are significant interactions between the training methods (acceleration and interval sprint dribbling training) and eye-foot coordination (high and low) on the football dribbling abilities of 12-13-year-old students. The results showed that the interval sprint dribbling training method is the most effective method used for athletes who have high eye-foot coordination and the acceleration sprint dribbling training method is more effective for those who have low eye-foot coordination.

CONCLUSION

Based on the data analysis, description, testing the results of research, and discussion, it can be concluded that: There are significant differences in the effect of acceleration and interval sprint dribbling training methods on football dribbling abilities. The interval sprint dribbling training method is higher (better) than the acceleration sprint in training the football dribbling abilities. There is a significant difference in the effect between high and low eye-foot coordination on football dribbling abilities. Students with high eye-foot coordination skills are higher (better) than those with low eye-foot coordination skills. There are significant interactions between the training methods (acceleration and interval sprint dribbling training) and eye-foot coordination (high and low) on football dribbling abilities

REFERENCES

- Ali, A. (2011). Measuring soccer skill performance: a review. *Scandinavian Journal of Medicine & Science in Sports*, Vol. 21(2), 170-183.
- Bompa, T. O. (1994). *Theory and methodology of training*. Toronto: Kendall/ Hunt Publishing Company.
- Fox, L.E, Bowers, R, & Foss M.L. (1989). *The physiological basic of the physical education and athletes*, fourth edition, New York: Sounders college Publishing.
- Huijgen, B., Elferink-Gemser, M., Post, W., & Visscher, C. (2010). Development of dribbling in talented youth soccer players aged 12-19 years: a longitudinal study. *Journal of Sports Science*, Vol. 28, pp. 689-698.
- Ismaryati. (2008). *Tes pengukuran olahraga (Sport Measurement Test)*. Surakarta: UNS.
- Kardjono. (2010). *Pembinaan kondisi fisik (Physical condition coaching)*. Bandung: UPI Press.
- Miller, P.W. (2008). *Measurement and teaching*. Illinois: Patrick W. Miller and Associates.
- Powers, K.S. & Howley, T.E. (2012). *Exercise physiology: theory and application to fitness and performance*, 8th edition. New York: McGraw-Hill.
- Special Olympics Football Coaching Guide. (2004). *Football coaching guide teaching football skills*. Special Olympics Football Coaching Guide.
- Sudjana. (2002). *Desain dan analisis eksperimen: edisi ke-1V (Experimental design and analysis: fourth edition)*. Bandung: Tarsito.
- Yulianto, P.F. (2012). Perbedaan pengaruh pendekatan pembelajaran praktik drill dan bermain terhadap peningkatan dribble shooting sepakbola ditinjau dari koordinasi mata-kaki (The difference in the effect of drilling practice and playing learning approaches on increasing football dribble shooting in terms of eye-foot coordination). *Jurnal Ilmiah SPIRIT*, ISSN; 1411-8319 Vol. 12 No. 3.