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The Effect of Combining Visual Training with Drills on Football Players' Dribbling Skills

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Abstract

This study aims to determine the effect of a combination of visual training and drills on the dribbling skills of 15-year-old football players at Football Academy Perbi. Dribbling is an important basic technique in football that requires the integration of motor, perceptual, and cognitive abilities. Visual training plays a role in improving perception, focus, and decision-making, while drills serve to strengthen basic techniques through structured repetition. The research method used was an experiment with a one-group pretest-posttest design involving 17 players. The measurement instrument used was a dribbling test. The training program was given for four weeks with a frequency of three times per week. The results showed a significant increase in dribbling skills after the treatment was given. The results of the paired sample t-test showed a significance value (Sig. 2-tailed) of 0.000 < 0.05, which means there was a significant difference between the pretest and posttest scores. The average dribbling time decreased from 23.17 seconds to 19.54 seconds. Thus, the combination of visual training and drills has been proven to have a significant effect on improving the dribbling skills of young football players.

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INTRODUCTION

Football is a sport that has developed rapidly over the past decade and demands that players master various aspects of physical, technical, tactical, and cognitive abilities. Dribbling skills are one of the most influential techniques in the quality of play because they are directly related to the ability to retain the ball, overcome pressure from opponents, and create attacking opportunities (Leal et al., 2022). Dribbling is also an open skill that relies heavily on information processing abilities and responding to rapidly changing game situations. (Iuliano et al., 2023).

At the youth level, improving dribbling skills is an important indicator of player development. Studies of football development show that the ages of 12–15 are a sensitive period for the development of basic technique and coordination skills, which determine player performance at higher levels (Liu, 2020). However, the reality on the ground shows that the dribbling ability of young players still tends to be low due to training programs that emphasize mechanical techniques without integrating the perceptual and cognitive elements required in the modern game.

The development of modern football has emphasized the importance of perceptual-cognitive skills in supporting dribbling quality. Players must be able to read space, anticipate opponent movements, and choose the most effective action under pressure. Research in ecological dynamics confirms that decision-making and technical execution are the result of the interaction between perception and the playing environment (Klostermann et al., 2020). Players with good visual perception tend to be more effective in dribbling situations and one-on-one duels (Ehmann et al., 2022).

Visual training has become a widely used approach in recent years to improve players' perceptual abilities. This training has been shown to strengthen eye-motor coordination, visual acuity, attentional focus, and reaction speed to game stimuli (Knöllner et al., 2022). Besides that,(Casa et al., 2019)found that players' visual abilities were positively correlated with the performance of open skills such as dribbling and passing because better visual abilities allowed players to process information more quickly.

While visual training offers many benefits, technical drills remain the foundation of football skill development. Through structured repetition, drills allow players to improve ball control, agility, and motor efficiency in dribbling (Harsono, 2015). Recent studies have also shown that variations in drills that mimic game situations can improve automatic movement patterns that support dribbling performance in matches (Torres-Luque et al., 2021).

The integrative approach between visual training and drills is starting to be highlighted as a training method that is able to train perception and technique simultaneously (Zhu et al., 2024) reported that a combination of perceptual and motor training significantly improved skill execution in team sports. This integration allows players to practice not only ball control but also reading relevant visual stimuli, resulting in more precise and adaptive technical actions to the dynamics of the game.

Recent visual training research also shows that visual stimulation has an impact on improving football technical skills (Bekris et al., 2023) found that visual training can improve the performance of basic techniques such as dribbling in young players (Song et al., 2019) confirms that visual stimuli training improves players' reaction speed and information processing, which are crucial components in dribbling situations. However, most of this research still examines visual training separately from traditional technique training.

The research gap is evident in the limited number of studies specifically examining the effect of a combination of visual and drill training on dribbling skills, particularly in 15-year-old players who are in the critical cognitive and motor development stage. Furthermore, some studies focus on general motor variables or cognitive performance without directly measuring specific technical performance such as dribbling (Iuliano et al., 2023). Therefore, research integrating these two types of training is urgently needed in the context of youth player development.

Through identifying these gaps, this study was developed to examine the effect of a combination of visual and drill training on the dribbling skills of 15-year-old football players. This integrative approach is considered capable of providing comprehensive stimulation because it trains both visual perception and motor skills in a single series of exercises. This is expected to provide more optimal dribbling skill improvement than conventional training methods that rely solely on one form of training.

Theoretically, this research is expected to contribute to the literature on perceptual-cognitive training in football, focusing on the development of open techniques such as dribbling. Practically, the results of this study have the potential to assist coaches in designing more effective, adaptive training programs that meet the

increasingly complex demands of the modern game. The integration of visual training and drills can be an innovative approach to improving the dribbling quality of young players and is relevant for application in football development programs in Indonesia.

METHODS

This study used a one-group pretest–posttest experimental design to measure changes in dribbling skills before and after treatment (Sarmugam et al., 2020). The research subjects consisted of 17 15-year-old football players at Football Academy Perbi, who were selected using total sampling technique because the entire population met the criteria.

The instrument used is a dribbling test which has good reliability in measuring ball control and dribbling speed in young players (Nurhasan, 2001). The measurement was carried out twice, namely pretest and posttest, with the score being the dribbling time.

The treatment was administered over four weeks, with a frequency of three training sessions per week, for a total of 12 sessions. The program consisted of a combination of visual exercises (color and number stimuli) and drills on dribbling techniques, ball mastery, changes of direction, and feinting. Each session lasted 60 minutes and was conducted according to the youth training structure (Torres-Luque et al., 2021).

The data were analyzed using descriptive statistics, the Shapiro–Wilk normality test, and the paired sample t-test to see the differences in pretest and posttest results using SPSS 25 (Fadluloh et al., 2024). The significance level was set at 0.05.

RESULTS AND DISCUSSION

Table 1. Descriptive Test

	N	Min	Max	Mean	Standard Deviation
Pre-test	17	20	27	23.17	2,034
Post_test	17	17	23	19.54	1,901
Valid N (listwise)	17				

This **Table 1** presents the descriptive statistical results of the Pre-Test and Post-Test scores of 17 respondents. The Pre-Test score had an average (mean) of 23.17 with a standard deviation of 2.034, while the Post-Test score had an average of 19.54 with a standard deviation of 1.901. It can be seen that the average post-test score was lower than the Pre-Test, indicating an improvement in results after the treatment was given.

The results of the Shapiro-Wilk normality test showed significance for the pre-test (sig. = 0.200 and 0.226) and post-test (sig. = 0.200 and 0.50), all of which were greater than 0.05. This means the data is normally distributed, so parametric tests such as the Paired Sample T-Test can be used.

All significance values were above 0.05, indicating no differences in variance between the data groups. Thus, it can be concluded that the data variance is homogeneous.

The test results showed an average difference of 3.638 between the pretest and posttest scores with a significance value (Sig. 2-tailed = 0.000). Thus, there was a significant effect of the combination of visual training and drills on dribbling skills, which means that the training treatment provided had a significant effect on improving test results.

The results of the study showed that the combination of visual training and drills significantly improved the dribbling skills of young football players. This was evident in the significant decrease in dribbling time after participants were given a 12-session training program. This improvement can be explained by the perceptual-cognitive skill theory, which states that decision-making, visual perception, and motor control are integrated aspects of sports skills (Klostermann et al., 2020).

Visual training helps players improve their ability to read situations, recognize movement patterns, and respond more quickly to visual stimuli. This is in line with findings (Bekris et al., 2023) which states that visual training can improve specific motor skills in football. On the other hand, drills provide movement repetition that improves dribbling technique, including ball control, changes of direction, and speed. Strengthening technique through consistent drills can improve movement efficiency and reduce technical errors Triggs et al (2025), repeated motor training can speed up the motor learning process.

The combination of these two training methods creates a synergy between perceptual abilities and motor execution. In the dynamic context of football, players need the ability to read visual information while simultaneously controlling the ball. This is what leads to a more significant improvement in dribbling performance compared to technique training alone.

The results of this study also support previous research by (Ck et al., 2016) And (Kumar & Arumugam, 2020) which found that visual training can improve dribbling, passing, and shooting skills. Thus, the findings of this study confirm that a combined approach of visual training and drills is very effective for adolescent players.

Overall, the significant improvement in posttest results indicates that the training program was able to produce positive changes in players' dribbling performance. This demonstrates that integrating cognitive-motor training is an effective approach to improving technical skills in football.

CONCLUSION

The results of this study indicate that the combination of visual training and drills effectively improves the dribbling skills of young football players. The structured training program has been shown to improve ball control, movement speed, and players' responses to visual stimuli in game situations. The improved performance after treatment indicates that the integration of perceptual and technical aspects is an effective and relevant training approach for developing dribbling skills. Therefore, this training method is worthy of recommendation as a strategy for developing youth football players.

REFERENCES

Bekris, E., Gioldasis, A., Souglis, A., Zacharakis, E., & Smirniotou, A. (2023). Enhancing Football-Specific Motor Skills Through Visual Training: A Quasi-Experimental Study in Young Football Players. Baltic Journal of Sport and Health Sciences, 2(129), 28–38. https://doi.org/10.33607/bjshs.v2i129.1381

Casa, DJ, Stearns, RL, Lopez, RM, Ganio, MS, McDermott, BP, Yeargin, SW, Yamamoto, LM, & Mazerolle, SM (2019). Influence of hydration on physiological function and performance during trail running in the heat. Journal of Athletic Training, 54(6), 600–609. https://doi.org/10.4085/1062-6050-344-18

Ck, T., Perumal, V., Radhakrishnan, T., & Tomas, C.K. (2016). Effects of vision training with skill practices on selected skill performance variables among inter collegiate male football players. International Journal of Physical Education, Sports and Health, 3(6), 255–258.

Ehmann, P., Beavan, A., Spielmann, J., Mayer, J., Altmann, S., Ruf, L., Rohrmann, S., Patrick, J., & Englert, C. (2022). Perceptual-cognitive performance of youth football players in a 360-degree environment. Psychology of Sport and Exercise, 59.

Fadluloh, FM, Sartono, H., Kusumah, W., & Mulyana, M. (2024). Athletes' Perception of Parental Support and Achievement Motivation: A Correlational Study with Early Age Individual Sport Athletes in Swimming. 412–421. https://doi.org/https://doi.org/10.31949/ijsm.v4i4.11454

Harsono. (2015). Periodization of Training Programs (2nd ed.). PT Remaja Rosdakarya.

Iuliano, E., Bonavolontà, V., Ferrari, D., Bragazzi, N., Capasso, B., Kuvačić, G., & De Giorgio, A. (2023). The decision-making in dribbling: A video analysis study of U10 football players' skills and coaches' quality evaluation. Frontiers in Psychology, 14. https://doi.org/10.3389/fpsyg.2023.1200208

Klostermann, A., Vater, C., Kredel, R., & Hossner, E.-J. (2020). Perception and Action in Sports: On the Functionality of Foveal and Peripheral Vision. Frontiers in Sports and Active Living, 1, 1–5. https://doi.org/10.3389/fspor.2019.00066

Knöllner, A., Memmert, D., von Lehe, M., Jungilligens, J., & Scharfen, H.E. (2022). Specific relationships of visual skills and executive functions in elite football players. Frontiers in Psychology, 13. https://doi.org/10.3389/fpsyg.2022.960092

Kumar, V., & Arumugam, S. (2020). Effect of visual perceptual training on selected performance variables in football. World Academy of Informatics and Management Sciences, 9, 9401–9405.

Leal, K., Pinto, A., Torres, R., Elferink-Gemser, M., & Cunha, S. (2022). Characterization and analysis of dribbling actions in football: A novel definition and effectiveness of dribbles in the 2018 fifa world cup RussiaTM. Human Movement, 23(1), 10–17. https://doi.org/10.5114/hm.2021.104182

Liu, X. (2020). Developmental characteristics of technical skills in youth football. (Source: Your Center).

Nurhasan. (2001). Tests and Measurement in Physical Education. Ministry of National Education.

Sarmugam, R., Worsley, A., & Wang, W. (2020). A review of intervention studies examining adolescents' nutrition literacy and food skills. Nutrients, 12(4), 1–20. https://doi.org/10.3390/nu12041128

Song, YH, Ha, SM, Yook, JS, & Ha, MS (2019). Interactive improvements of visual and auditory function for enhancing performance in youth football players. International Journal of Environmental Research and Public Health, 16(24). https://doi.org/10.3390/ijerph16244909

Torres-Luque, G., Olivares, P.R., Peña, J., Alarcón, F., & García-Angulo, A. (2021). Effects of sport-specific training on technical skill development in youth players: A systematic review. International Journal of Environmental Research and Public Health, 18(9), 1–15. https://doi.org/10.3390/ijerph18094473

Triggs, A.O., Causer, J., McRobert, A.P., & Andrew, M. (2025). Perceptual-cognitive skills and talent development environments in football: A scoping review. Plos One, 20(7 July), 1–31. https://doi.org/10.1371/journal.pone.0327721

Zhu, R., Zheng, M., Liu, S., Guo, J., & Cao, C. (2024). Effects of perceptual-cognitive training on anticipation and decision-making in team sports. Behavioral Sciences, 14(10). https://doi.org/10.3390/bs14100919.