

# IMPACT OF DEVELOPING SIMPLEX VS. COMPLEX MOTOR SKILLS ON TECHNICAL PERFORMANCE EFFICIENCY IN FOOTBALL MIDFIELDERS

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## Introduction

Football is a sport that comprises a large number of skills presented in situations that are changeable, unpredictable and always need incorporation of offensive, defensive strategies and movement's skills. In order to attain the supreme level of performance during soccer contests, the player should to be completely technically and physically prepared to achieve his tactical tasks efficiently all along the match times. Having a range of complex motor skills (CMS) that are necessary in a football match enables the player to use the suitable motor performance in most positions of the virtual match. The study aimed to determine the impact of developing simplex vs. CMS on physical and technical performance efficiency in football midfielders.

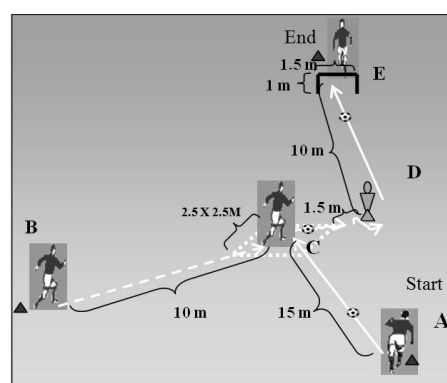
## Methods

The study applied an experimental design for two groups (experimental and control) by applying the pre and post measures, it was set in a designed training program for 10 weeks. The samples of 34 male football midfielders aged between 12-14 years (M age 12.36, s = 1.88 years) were selected and randomly divided into two equal groups of 17 players. The experimental group was given a training program (I) (CMS) which includes collections of CMS chosen across quantitative & qualitative investigation of Brazil, France, Germany and Argentina football teams in the football world cup 2006; Controls was given a traditional training program (II) [simplex motor skills (SMS)]. Physical and technical tests were measured Pre & post the interventions. Statistical data treatments were preceded using the SPSS v13.0 software. (SPSS Inc, Chicago).

## Results & Discussion

Results pointed out statistically significant differences ( $P < 0.05$ ) between the experimental group (received CMS intervention) and the control group (received SMS intervention) in the post measures (to the advantage of the experimental group) in all of the physical tests (e.g. 4×10m shuttle run test 11.87s vs. 12.31) technical tests (e.g. tackling whilst in motion, running, feinting then passing 4.76s vs. 5.59). This is consistent with Wulf & Shea (2002) that the CMS which require spatial and temporal coordination of a mixture of sub movements, result in improving performance more than the simplex skills.

Figure 1. Tackling whilst in motion, running, feinting then passing test.



## Conclusion

Our results confirm that utilizing CMS to enhance motor skills in football midfielders might contribute positively on physical and technical performance efficiency.

## References

1. Wulf, G. & Shea, C. (2002). Psychol Bull Rev, 9(2), 185–211.