# Development of Motor Qualities through Means Specific to Football in Middle Schools

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**Abstract :** This paper represents the applied research for the elaboration of the Grade I Paper of professor V.G., at "Matei Basarab" National College of Informatics from Râmnicu Vâlcea. The issued hypothesis, that was verified, aimed to develop the motor qualities through technical methods specific to football, at the level of the representative school team, but also the efficiency and attractivity in comparison to the traditional means. The subjects of the research were students from 6th - 8th grades, members of the representative team of the abovementioned school. The applied control trials were: Speed 5x10m – for acceleration speed; Jumps over the gymnastics bench - for the strength of the lower limbs; dribbling among cones - for skill, and Short Marathon - for resistance. After applying the technical methods from football for the development of the motor qualities of the representative team of the school, that were the aim of the control trials, and after analysing the results from the control trials, from the initial testing until the final testing, progress was made concerning all control trials. We concluded that the hypothesis was confirmed, the applied means were efficient and attractive in comparison to the traditional ones.

**Key words:** representative team, speed, coordination, resistance, strength.

## Introduction

The football game is characterized by the alternation of the maximal, submaximal and medium efforts with active or passive, sometimes unequal and incomplete, pauses, as well as by physical, spontaneous and unforeseen actions like duration and intensity.

Agility, coordination and speed are important components of a football player`s performance needed to play football, and then these can be developed through taking part in playing football systematically and regularly. [1]

To date speed, agility, coordination, dribbling and kicking theoretically and practically found to be the issue which numerous studies suggested, a paramount difference has been observed in the physical capacity of the team compared with the past. Numerous research studies has brought sufficient evidence that in the game situation, agility, coordination and speed are the components of the dribbling and kicking performance of football players. [2]

Apparently, speed, coordination, agility, dribbling and kicking are becoming more and more imperative in football game situations. It is not surprising, the intensity of the game, the attacking movements, the breaks from out of defense and changes in the tempo of the game require greater and nonstop endurance on the part of the players. [3]

A vast number of publications revealed that agility, coordination, speed, dribbling and accuracy pass has been the fundamental components of a successful football player`s performance. [4]

One of the most overlooked aspects in the game of soccer is the importance of the overall physical conditioning. It has been my experience that many soccer coaches understand the benefits of strength training, but view it as secondary to skill training or simply misunderstand its importance in the game. Contrary to popular belief, strength training has a positive effect on an athlete's speed and explosive power. In addition, strength training helps to reduce injuries and aids in a faster recovery should the unfortunate occur. [5]

The main aim of fitness training in football is to target the physiological mechanisms causing fatigue and thereby limiting physical football performance. A higher fatigue resistance will allow the players to utilize their technical and tactical capacity throughout a game and especially during the critical game periods. [6]

In middle schools, the activity with the representative football team can start simultaneously with the school year, adding, of course, in its composition, other students, after a selection from the middle school classes, considering that the students from the previous 8th grade have gone to high school.

A lesson carried out with the student of the representative team is similar to a training class at junior level, it being planned 3 times

per week or every day, if possible, especially around the time of competitions.

Teaching soccer on a reduced field, at middle school, was conducted using the analytical method, every technique being isolated taught for acquisition, respecting the teaching methodology of this discipline.

After the learning stage, we will pass to the binding of the learned procedures into technical and tactical structures which will be consolidated through repetition. Subsequently, the leaned and consolidated technical processes, and technical and tactical actions will be applied in the bilateral game with simplified rules which will lead to their perfecting. Thus, the student, will must resolve some game phases using the available motor luggage and especially overcoming the opponent, who, during the game, is active and with unforeseen actions.

The integral game can't be practiced without the students having the minimum theoretical knowledge in addition to the specific motor skills.

As a conclusion, the isolated learning of the technical processes will be for a short period, insisting on their consolidation during the technical and tactical structures and activities of the game, and through practicing the bilateral game.

In the present research we tried to determine whether the use of the technical processes from football, which have reached the consolidation stage, will be effective for the development of motor qualities at the students of the representative school team.

**Material and methods**

The hypothesis from which we started the research was: is the development of the motor qualities using the technical methods specific to football, at the level of the representative boys team of the school, more effective and more attractive than using traditional means.

The experiment was performed at the representative team of "Matei Basarab" National College of Informatics from Râmnicu Vâlcea, boys from the 6th to 8th grades, during the two semesters.

We have worked with the students of the representative school team, after the planning documents drafted, involving their participation in sport competitions provided for the middle schools.

The applied control trials at the initial and final testing were: Control trial 1 - Speed 5x10m - from acceleration speed; Control trial 2 - Jumps over gymnastics bench - force of the lower limbs; Control trial 3 - Dribbling between cones (skill), and Control trial 4 - Short Marathon (resistance).

Working with the students of the representative school team in the training lesson followed the traditional means, treating the speed or skill theme at the beginning of the fundamental part (never both in the same lesson), and the force and/or resistance theme at the end of the fundamental part. These were permanently coupled with football themes.

The motor qualities themes were covered using the game and emulation means, the means being the technical methods specific to the football game, reached in the consolidation stage, and the methodical succession of the discipline teaching was respected for the football themes.

Next we exempify/mention a few the actuation means (Ungureanu A. 2009) specific to football for motor qualities targeted to develop in the present experiment: **"**The pitches into a semicircle**"**, **"**The pitches into a circle**"**, **"**Following it on the front**"**, **"**The man and the ball**"**, **"**Emulations for force**".** [7]

**Results**

**Table no.1 - The Table of the control trial results of the initial testing ($T_I$) and final testing ($T_F$)**

| No. | The students ' initials | Class | Control Trial 1 | | Control Trial 2 | | Control Trial 3 | | Control Trial 4 | | Control Trial 5 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | $T_I$ | $T_F$ | $T_I$ | $T_F$ | $T_I$ | $T_F$ | $T_I$ | $T_F$ | $T_I$ | $T_F$ |
| 1 | A.O. | VIII A | 14.40 | 14.03 | 35 | 42 | 11.42 | 11.21 | 89 | 83 | 1.37 | 1.23 |
| 2 | C.S. | VIII A | 13.87 | 13.10 | 36 | 38 | 12.41 | 12.04 | 38 | 47 | 1.40 | 1.22 |
| 3 | P.L. | VIII A | 14.05 | 13.80 | 32 | 37 | 13.04 | 12.84 | 81 | 92 | 1.41 | 1.20 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | S.A. | VIII A | 13.25 | 13.07 | 31 | 34 | 12.85 | 12.70 | 56 | 58 | 1.38 | 1.23 |
| 5 | F.L. | VIII B | 13.66 | 13.23 | 41 | 43 | 11.85 | 11.25 | 187 | 212 | 1.31 | 1.24 |
| 6 | D.R. | VIII C | 13.93 | 13.60 | 34 | 38 | 13.04 | 12.53 | 57 | 84 | 1.38 | 1.22 |
| 7 | D.A. | VIII C | 12.93 | 12.85 | 44 | 45 | 10.44 | 10.24 | 158 | 184 | 1.35 | 1.23 |
| 8 | D.Ş. | VIII C | 13. 23 | 13.03 | 30 | 38 | 13.89 | 12.74 | 55 | 65 | 1.38 | 1.24 |
| 9 | O.A. | VIII C | 14. 24 | 13.70 | 31 | 42 | 11.94 | 11.25 | 46 | 54 | 1.38 | 1.30 |
| 10 | T.R. | VIII C | 14.84 | 14.17 | 35 | 39 | 13.50 | 12.90 | 42 | 50 | 1.43 | 1.35 |
| 11 | G.R. | VIII D | 14.42 | 13.95 | 34 | 40 | 12.14 | 12.05 | 88 | 76 | 1.44 | 1.36 |
| 12 | P.B. | VIII D | 14.12 | 14.00 | 32 | 36 | 11.87 | 11.07 | 75 | 81 | 1.41 | 1.33 |
| 13 | I.Ş. | VIII E | 13.88 | 13.65 | 36 | 38 | 13.94 | 12.91 | 47 | 51 | 1.38 | 1.30 |
| 14 | P.D. | VIII E | 13. 23 | 13.13 | 33 | 35 | 12.91 | 12.24 | 45 | 57 | 1.30 | 1.24 |
| 15 | P.M. | VIII E | 14.34 | 14.10 | 33 | 37 | 10.40 | 10.22 | 108 | 113 | 1.35 | 1.27 |
| 16 | P.E. | VII A | 13.57 | 13.11 | 42 | 44 | 10.82 | 10.64 | 123 | 119 | 1.36 | 1.30 |
| 17 | S..C. | VII E | 13. 95 | 13.21 | 38 | 40 | 11.91 | 11.77 | 51 | 64 | 1.37 | 1.30 |
| 18 | T.A. | VII E | 14.57 | 14.11 | 30 | 35 | 12.21 | 11.65 | 84 | 91 | 1.45 | 1.37 |
| 19 | R.L. | VII C | 13.81 | 13.52 | 40 | 43 | 10.97 | 10.41 | 103 | 125 | 1.39 | 1.32 |
| 20 | P.E. | VII C | 13.75 | 13.40 | 36 | 35 | 11.96 | 11.42 | 175 | 205 | 1.42 | 1.40 |
| 21 | T.V. | VII D | 13.21 | 13.10 | 41 | 42 | 13.40 | 12.90 | 43 | 57 | 1.39 | 1.38 |
| 22 | T.A. | VI B | 13.84 | 13.70 | 34 | 32 | 10.11 | 10.15 | 39 | 28 | 1.41 | 1.39 |

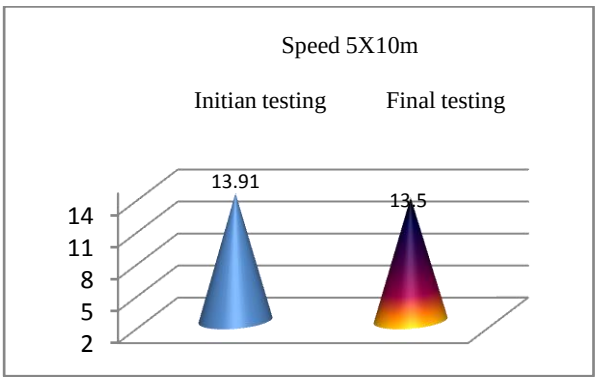
Legend:
$T_i$ - Initial testing
$T_f$ - Final testing

**Discussions**

**Table no. 2 - The Table of the differences and progress between the initial and final testing at all control trial**

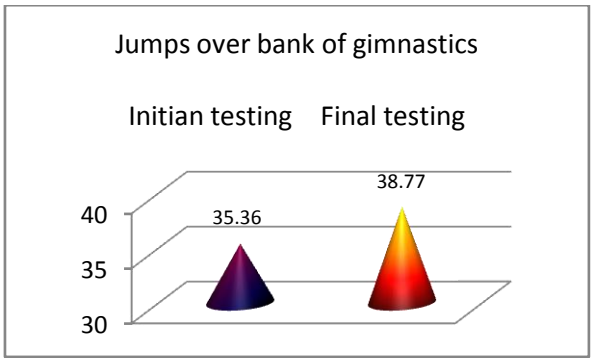
| The control trial | Speed 5x10m | Force - - Jumps over gimnasticsbeanch in 30″ | Skill - Dribling between cones on 10 m | Skill - Kepping the ball in the air using both legs | Resistence - Short Marthon |
|---|---|---|---|---|---|
| **D** | 0.42 | 3.41 | 0.45 | 9.36 | 0.10 |
| **D%** | 2.99 % | 10.24 % | 3.59 % | 12.43 % | 6.95 % |

Legend: D-difference; D% -difference in % (the progress)



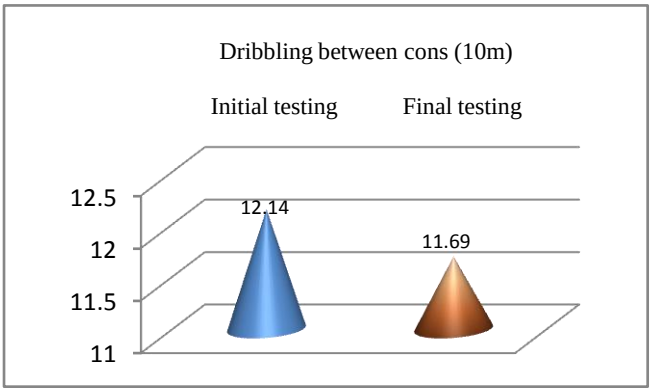

**Graphic no. 1. Average of the initial testing (13,91) and of the final testing (13,5) of the control trial Speed 5x10m**

**1**. At the control trial Speed 5x10m for the testing of the acceleration speed it **was** obtained an average of 13.91 seconds at the initial testing, and at the final testing of 13.50 seconds, recording an increase of 0.42 seconds and a progress of 2.99 % (graphic no 1.)



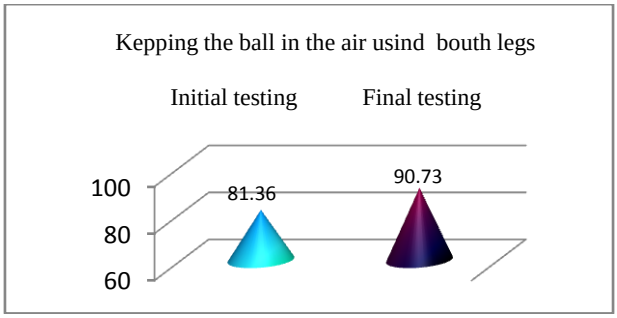

**Graphic no. 2. Average of the initial testing (35,36) and of the final testing (38,77) of the control trial of Jumps over the gimnastics beanch for 30 seconds**

**2.** For testing the **force** of the lower limbs, the control trial of Jumps over the gimnastics beanch for 30 seconds was applied, and the average at the initial testing was of 35.36 seconds and at the final testing of 38.77 second, recording an increase of 3.41 seconds corresponding to the progress of 10.24 % comparison withthe initial testing (graphic no. 2).



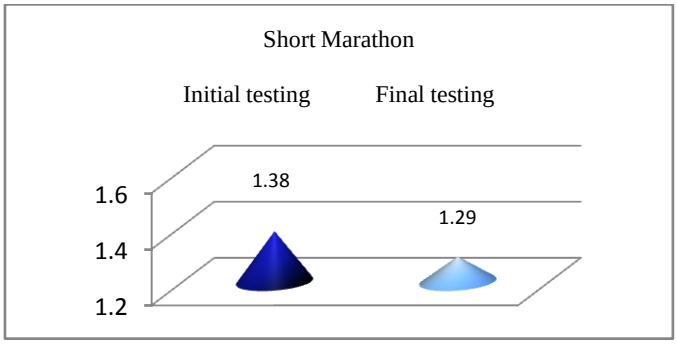

**Graphic no. 3. Average of the initial testing (12,14) and of the final testing (11,69) of the control trial Driddling between cons (10 m)**

**3.** The trial Dribbling between cones which focussed on **skill** wich, at the final testing records an increase of 0.45 seconds (the rate of the progress is of 3.59%) in comparison with the initial testing, the averages being of 12.14 seconds at the initial testing and of 11.69 seconds at the final testing (graphic no. 3.).




**Graphic no. 4. Average of the initial testing (81,36) and of the final testing (90,73) of the control trial Kepping the ball in the air using both legs**

4. The skill specific to football was tested also through the trial Kepping the ball in the air using both legs and at the final testing (90.73) it is recorded an increase of 1.15 (the progress rate is of 33.10%) in comparison with the initial testing (81.36) - (graphic no. 4.)




**Graphic no. 5. Average of the initial testing (1,38) and of the final testing (1,29) of the control trial Short Marathon**

5. The resistence in speed, specific to game phases on reduced field, was tested through the - Short Marathon obtaining an average of 1.38 seconds at the initial testing and of 1.29 seconds at the final testing and it was recorded an increase of 0.10 seconds (the progress rate is of 6.95 %) in comparison with the initial testing (graphic no. 5.).

**Conclusions**

**1.** From the initial testing to the final testing, the development indices of the motor qualities have improved, at all control trails, as:

✓ for the motor quality SPEED at the control trial *Speed 5x10 m*, the progress was of 2.99%;

✓ In the FORCE cases, the evolution the performances at Jumps over gimnastics beanch it was recorded a progress of 10.24;

✓ for the motor quality SKILL two control trials were applied and the evolution of the performances at Dribbling between cones it was recorded a progress of 3.59 %, and at the control trial - Kepping the ball in the air using both legs, it was marked an substantial increase of 33.10%;

✓ for the motor quality RESISTENCE at the control trial – The Short Marathon it was recorded a progress of 6.95%.

**2.** The differences and the progress between the averages from initial and final testing, are significative at all control trials, therefore we can say that using the tehnical methods specific to football, at this level, for development of the motor qualities (speed, force, resistence, skill) had expected efficiency, the hypotesis being confirmed.

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