Original Article

Development of specific motor skills in primary school children through means of the football game

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Published online: November 30, 2019

(Accepted for publication: November 15, 2019)

DOI:10.7752/jpes.2019.s6314

Abstract

In our paper we try to present a new didactic strategy who can increase the quality of the instructional process. This modern strategy can develop new means and methods to be applied in the content of the instructional process. It is necessary for us to present content with real motivation to practice physical exercises, a first aspect of the new system of modern technologies that are put at their disposal, many times by their parents (who are modern, but on the other side, insensible);

Problem statement - I started from the following hypothesis: 'Believes that if the school year during the use of a number of games in dynamic compliance with bio-psycho-social features of students, then driving the development of qualities you know the higher values significantly improving motor skills baggage different branches of sport specific ". According to the opinions of Dragnea, A., Bota, A., (1999) – Theory of Motion Activities, Didactic and Pedagogical Publishing House, Bucharest, Page 44)

„The motion capacity is a plurifactorial resultant, a vector resulting from the interaction of stable components: skills, motion qualities, motion skills, operational structures, knowledge, experience and of state components: motivation, emotional states, which may favour, reduce or block the motion capacity expression”;

Key words: dynamic games, strategy, football, physical education.

Introduction

„The motion capacity, a notion specific to the medical – biological field, represents the „totality of motion-related, morphological and functional attributes, native or acquired, by which the individual can perform exercises and efforts varied in structure and dosage”, while the psychomotor capacity „assumes the participation of different psychical processes and functions that ensure both the reception of information, and the performance of the act of motion response” (Rață, G., Rață, C-tin, B., (2006), Skills in motion activity, EduSoft Publishing House of Bacău, pages 13-17)”.

„A manner of combining didactic methodology and education means by which to ensure selection, organization and carry out of a training sequence”, by Cerghit, I., 1997, quoted by (Sacară, L., Dămian, I., Macarie, G.F., Tebeanu, A.V. (2006), Psychopedagogy in syntheses EduSoft Publishing House of Bacău – pag. 85). „By didactic strategy is understood a coherent system of methods, didactic materials, means, reinforced by a number of principles, rules, teaching/learning styles and forms of organization of the activity, combined fortunately with a view to fully achieve certain well-defined operational objectives”, by (Colibaba, Evuleț, D. 2007, Praxiology and curricular design in physical education and sports, Universitaria Publishing House of Craiova, pag. 137).

Research design

The research hypotheses

We proposed to ask the following questions to which we try to get answers from, through research carried out during a school year.

1. If the methods and means specific to the football game are useful for the work of achieving the objectives of school and sportive physical education.
2. If the methods and means proposed with a view to accomplish the initial pattern of assimilation are efficient for the optimization of physical education lessons;
3. If the morpho- functional and psycho- mobility particularities of pupils in 5th grade are compatible to the achievement of the pattern proposed.

Research methods and techniques

Within the research were used, as means of investigation, the following research methods and techniques:

- *The method of bibliographical information; Bibliographical material The method of pedagogical observation; The method of recording; The testing method; The graphical method – to perform kinograms; The experiment method.*

General trials and specific tests

A. Trials for verifying of the general motion capacity: 20 m sprint running, 600 m Resistance running, long jump (expansion of legs); abdominal strength for 30 seconds (the abdominal muscle strength); kicking the ball at a distance (the legs 'strength).

B. Trials for perfecting pass precision: kicking the ball from a standing position, with the shoelaces and square kick; kicking the ball from volley with the shoelaces and square kick; kicking the ball with right foot (half volley); kicking the ball from movement with the shoelaces and square kick; complex test no. 1; complex test no. 2.

Organization and carry out the research

Duration and place of research carry out. Research subjects

In order to verify the effectiveness of the means selected for training the pupils in 5th grade A and 5th grade B (11- 12 years) according to the patterns elaborated, we organized a pedagogical experiment:

The experiment was conducted within 1st -8th Grades Middle School No. 13 (Mircea cel Bătrân) from Pitești, during the school year 2018- 2019, on a sample of 24 pupils from 5th grade A and 5th grade B, born in 2008- 2009, during the period September 15th, 2018- June 1st, 2019.

The Middle School No. 13 (Mircea cel Bătrân), from Pitești, by the structure of its optional programs on different subjects within the curriculum, pays special attention to the optional in the subject of Physical Education and Sports, due to tradition but also to the involvement in the field of activity of the specialty teaching staff. Coordination and carry out of the experimental part took place under the guidance and with the help of the Physical Education and Sports Department, having important merits in the field of activity, but also implications in specialty methodical commissions and Middle School Boards of Physical Education and Sports

For a proper carry out of the experiment, we have established the following tasks:

- initial and final testing of motion and specific qualities;
- anthropometric measurements
- section of pupils into the control group A and experiment group B, by biometric calory level;
- intermediate testing, following a certain cycle of lessons in the experiment group B in order to assess if the methods and means used lead to the achieving of objectives proposed
- Drafting calendar plan having selected acting systems and adapted to each value group.
- Analysis of the results obtained, to see if the hypothesis used is confirmed or not.

We have used a calendar planning common to classes having a sports program and one specific to classes of optional training classes (extracurricular). It was operated on closed groups and from the total number of 14 initial tests were build up the control group A and the control group B, formed of 12 pupils each.

Game patterns, Player, Didactic Projects, Unit of learning and acting systems proposed for practical experimentation

GAME PATTERN – in 5th grade

- Proper application of the basic mechanism of technical- tactical habits;
- Performing technical- tactical habits with skill but also in quickness in adversity conditions;
- Effectively acting in attack and defense depending on the teammate, adversary and ball position;
- vertical rails and one in the central part of the goal, the norm being of three successful kicks
- complex: receiving a ball with the foot or chest, passed to the circle in the middle of the field from approximately 20 meters, having a high trajectory + ball advancement for about 20 meters + advancing through 5 range poles (on 30 meters) + kicking the ball to the net from the boundary of penalty box (for 12 year pupils)
- Bilateral play 7 x 7 on a field having reduced sizes (2 x 25 minutes).

PATTERN OF THE PLAYER in 5th grade

Physical development

- Muscle gracefulness and optimum mobility in the joints of the legs;
- Accented arch of the foot.
 - ***Motion related qualities***
- Skill in manifestation of general and specific mobility (running in various tempos, changes of direction, stopping, setting off from different positions, turnings, jumps, etc);
- Skill in execution of basic technical elements and procedures;
- Speed of reaction, movement and of execution of basic technical procedures.
 - ***Technical qualities***
 - Correct assimilation of the basic mechanism in the following technical elements and procedures:
- Kicking the ball (square kick, with the inside of shoelaces, in full and with the outside of the foot)
- Receiving the ball with the foot and with the chest, by amortization and ricochet;
- Advancing the ball from square kick, full shoelaces and outside of shoelaces

- Kicking the ball with the head (forehead, side parts) from standing position, from running and from jump (by detaching from one and from both legs)
- Fake (feints) moves without the ball (with the body) and with the ball (of stopping, kicking, passing the foot over the ball, etc)
- Protecting the ball with the body and with the foot
- Tackling from the front and by interception
- Throw in of the ball from standing position and from take-off.
- Goalkeeper's play (procedures for keeping and ball boxing, plunge, coming out of the net and disengagement with the hand and foot).

Operational project for the 5th grade - pattern

Lesson type: Single sport (football) – 5th grade

Identification elements

Subject teacher: _____

Date: _____

Education institution (sportive): _____

Grade: 5th; Class number: 25 pupils

Subject: Physical Education and Sports

Theme: **kicking the ball with the foot from take-off**

Lesson type: **single sport – football**

Lesson purpose: fortifying the kick of the ball with the foot from take-off;

Operational objectives: (citing the Cojanu F., in 2009);

O1 Cognitive: to receive and pass the ball with the foot from take-off, on a pre-established direction;

O2 Psychomotor: to acquire the capacity of passing the ball with the foot from take-off to a fix point, forming precision of passing the ball.

O3: Affective: to set game-related relations by kicking the ball with the foot under the conditions of mini-football game.

Necessary resources:

Official: the content of school curriculum for 5th grade; the technical elements acquired previously; the projects of previous lessons.

Temporal: didactic time attributed: 35 min. - learning- fortifying; 15 min. preparation, organization, evaluation.

Psychological: the desire to learn, the capacity of learning, the desire to play mini-football, ludic behavior, the spirit of competition.

Materials: Mini-football fields (handball), 11 foot balls no. 4, 11 nets, pawns, whistle.

Human: the pupils who have medical exemption shall help prepare the competition games.

Rules: the football rules set for the 5th grade.

Didactic strategy:

- **Methods:** demonstration and explanation, practicing, the ludic component: didactic games;
- **Materials:** mini-football field, 11 light balls, 11 nets
- **Means:** movement games, racing games, relay races, mini-football game.

Means for acting:

The game begin with group of pairs, pass from both ways for each other, distance 1, 50 m width and 80 centimeters high. Passing the ball is made by pawing drills, then from take-off; Passing the ball made between two pupils, by ricochet of the ball from the panel (pupils are faced sideways); Passing the ball in pairs from take-off, with moderate speed, without receive the ball, distance between childrens is between 10 and 15 meters; Three children cooperate, permanently switching positions. Child from team A passes to child from team B (1), who passes again the ball by a sidekick and on future position to A (2) and this one further on to C (3).

We group the children in different teams (A, B, C) posted on 6 m distance from one-another, on left side of the field. First player from the team A sets the game in play and, following a quick pass change with first player of team B (1,2) passes in diagonal line to first player of team C (3), who passes by sidekick (4) on the direction of movement of B (in position B1) who score from approximately 10 m (5);

Four pupils: A, B, C, D, are faced in a rectangle formation at 6 m distance, the ones from the small side, respectively 10 m the ones from the large side. A and B pass directly with C and D (1) and following each kick, quickly shift places with each other (A with B and C with D (2); then, they pass again, this time on the sideways, A with D and B with C (3).

2. Racing games:

“Game 4 against 2 with diagonal passes”;

“Game 4 against 2 with long passes”.

3 Mini-football game

Football game on reduced field, having reduced number of players, under simplified rules. **1 h/week**

Discussions

After we present the principal means used in the experimental part, we have some discussions about

- ❑ In the educational system at primary cycle, the need to develop psychomotor qualities with the help of dynamic, sports games and athletics and gymnastics is supported by attractive and motivating content for children. In this study we try to offer with the content of football used in the primary level of education a modern quality processes with the help of the Soccer Tutor Tactics Manager 3D Software, especially conceived for the football coaches, but especially, key moments of their introducing to the planning at this age, dosed correspondingly in the different phases of instruction;
- ❑ This is confirmed by and experimented practically by using into practice in periods of semester one and two, specific general motric skills programs with and without the ball created by us, used alternatively to the dosages and contents consistent to the educational phase.
- ❑ In the experimental part, the results obtained in the tests show the level of general motric skills, but especially the specific skills used in the football game at this age of primary cycle level. So, analyzing by comparison the results obtained by us within the practical experiment following the administering of the alternated general motric skills in the semester periods, and comparing between initial and final testing, we obtained next results:
- ❑

Tabel no 1 - Sprint 20 meters

	Test 1	Test 2	Test 3	Test 4
X	4,7205	4,630769	4,51575	4,41825
S	0,136343	0,363849	0,143525	0,144469
CV	2,888323	7,857208	3,17832	3,269818
Comparative analysis				
Statistical indicators	T 1-2		T 1-3	T 1-4
Means' difference	1,5		3,5	4,6
Mean error	0,02		0,02	0,02
t critical	2,02		2,02	2,02
t calculated	1,5		3,5	4,6
p	0,09		0,005	0,001

The interpretation of first test named *sprint 20 meters*, is made with the results between the two tests, the means' difference does not show us a significant increase in the results, the t calculated value being of 1,5 inferior to the t critical value for the threshold of 0,05, that we established.

The progress achieved by the obtained results is achieved especially by the strategy used by including attractive and motivating means for the child, which did not aim at this motion quality primarily. We may notice, however, that between tests 1- 3 and 1-4 it is seen a tendency of statistical increase of the initial level with a significance of thresholds registered of 0,005, respectively 0,001, which shows that during this period the content of the programs that we proposed had a much higher effectiveness than the first one.

The evolution of the significance during the periods we tested may be presented as well by the rating chart showing the value of t- calculated by us and the value of t-critical that we will find in Fischer's table at threshold 0, 05.

Chart no 1 –Statistical indicators– Sprint 20 metres

After this, we realize a comparative analyse between the initial and final results that we obtained in the final of the practical experiment who show a better image of the level of specific general motric skills, such as the test Complex test no. 1

Tabel no 2 - Test Complex no. 1

	Test 1	Test 2	Test 3	Test 4
X	28,25	28,2	27,8	27,1
S	0,88	1,03	1,19	0,316
CV	3,13	3,66	4,307	1,166
Comparative analysis				
Statistical indicators	T 1-2		T 1-3	T 1-4
Means' difference	0,05		0,45	1,15
Mean error	0,03		0,0025	0,0025
t critical	2,02		2,02	2,02
t calculated	0,22		3,21	7,66
p	0,07		0,001	0,001

From our point of view, we may say that, the progress of the results between the first two tests, the means' difference does not show a significant increase of the results, the t calculated value being of 0,22, inferior to the t critical one for the threshold of 0,05 that we established. Is confirm statistically can may be due to the content of the programs that we proposed, which did not aim at this parameter primarily in the first period of school semester.

Chart no 2 – Statistical indicators–Complex test no.1

From our point of view, can interpretate the comparition between tests 1- 3 and 1-4 it is seen a tendency of statistical increase of the initial level with a significance of thresholds registered of 0,001, which shows that during this period the content of the programs that we proposed had a much higher effectiveness than the first one. General increase of the results registered for the general motric skills realize from our strategy, may show us that, depending on the period of the semester, it is useful to develop skills of children in the primary level by specific means and by corresponding dosage.

In our experiment result interpretation may be presented as well by the rating chart showing the value of t-calculated by us and the value of t-critical that we will find in Fischer's table at threshold 0, 05.

Conclusions

Following the previous experiment conducted, the conclusions that may be set are:

- ☐ The procedures and methods used within the experiment have enlarged the density and intensity of the lesson, and the progresses registered by pupils have demonstrated that most of them have had an active and aware attitude during the lesson;
- ☐ A substantial increase in individual results was noted, in most of the pupils and especially in those who, in the beginning of the experiment, have had poor results;
- ☐ It was noticed an increase of the arithmetic mean of the results obtained to the trials, concomitantly with the decrease of the coefficient of variation, thus a homogeneity tendency of value groups;
- ☐ Pass precision increases the possibility of carrying out attack drills, solving the positions tasks and scoring the goal;
- ☐ Using an own pass system, characterizing the game of the entire team, points out perfection, as it has the advantage of a better tactical understanding between players;
- ☐ Pass precision, as a tactical element, increases the momentousness of the entire team's game play;
- ☐ The exercises chosen have to correspond to the degree of physical, theoretical, tactical and technical training.

It should be pointed out the aspect from a methodical point of view, as it is highly necessary to perfect the kicking of the ball by both feet (ambidexterity) on a very important condition for future activity of football players.

Proposals

- ☐ Perfecting the pass precision should be made by all players, regardless of the position in the team or section they play in;
- ☐ To be perfected all passing procedures;
- ☐ The passing procedures to be made from a smaller age as possible, so that the players may form the skill and ability in striking the ball;
- ☐ Perfecting the pass precision to be made under conditions of tactics and skill in the adversary's presence;
- ☐ Stimulation and encouragement of pupils to invent new passing procedures, especially in those who have a low effectiveness during the game.

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