ORIGINAL RESEARCH PAPER

Physical Education

THE STUDY OF THE PSYCHOMOTRICITY ABILITY IN PRIMARY SCHOOL CHILDREN

KEY WORDS: psychomotricity ability; primary school, children

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ABSTRACT

The present paper represents a study which approaches the issue of the psychomotricity ability in primary school, children, in the context of physical education and sport, as well as certain data from the respective research. This research aimed the development of the methodology form the psychomotricity type of intervention from the pre school child's physical education classes. In accomplishing the proposed objective one has started from the existent correlations between the means used in physical education class and their influences on the psychomotricity abilities. The subjects of the research, through getting actively involved and having positive results, prove the possibility of influencing the psychomotricity development through efficient means and systems.

INTRODUCTION

Physical education, along with the other fundamental motile activities, is a core part of the measures regarding the harmonious physical development and maintaining an optimal state of health for all the categories of population in our country. Physical education is mainly subordinated to the preparation for work and life (Carstea, GH., 1993). Presently, the process of physical education of pupils, the development of psychomotricity all represent a compulsory condition of the process of training. The development of the psychomotricity process must be at the core of the teacher's preoccupations, bearing in mind, firstly, the applicative side and the necessity of consolidating the objectives and the results of the physical education and sport (Birch, a., 2001).The psychomotricity development can be defined by knowing your own body, in a major, dynamic, general and segmentary coordination (and particularly, in the ocular-manual coordination), in a tonic and motile ability of inhibition and in a respiratory control, in establishing a secure motivation, in acquiring orientation, in organizing a correct special and temporal structure, in a vastly and more major social adaptation (Albu, C., Albu., A., 1999).

Psychomotricity thus appears as aptitude and as a complex function of controlling the individual behavior. We can thus say that it includes the participation of different processes and psychological functions that ensure both the reception of information and the adequate execution of the response.

We recall the main components of psycho motility, highlighting the fact that its analytic study does not manage to offer us the synthesis of the coordinative ability of a certain subject. On the other hand, "the paths" composed of the most different tasks cannot be well structured and standardized in order to supply objective and valid numbers (scores). The coordination is the resulted process from the activation of certain schemes of muscular contractions, with simultaneous inhibitions of the other muscles, with the purpose of accomplishing the desired movement. The coordination combines a minimum number of muscles within a continuous scheme of movement, with a normal, smooth and adequate rhythm for effectuating a motile action. The coordination is controlled by the cerebellum and through a sustained training it can be fixed in an extra pyramidal engram. Repeating each pattern several times with a consistent force and speed, with precision, develops in time fast motile and secure engram (Sbenghe, 2008). The practical activities of physical education and sport comprise an important part of the learning plan. The usage with maximum efficiency of the time in class, the involvement of the entire collective in a sustained activity, represent a major request that leads to the accomplishment of the physical education objectives

Materials and Methods

The research has been done on a period of a school year and comprised 20 subjects of pupils with ages between 6 and 8.
The means used in the experiment had as a main purpose:

- improving the static and dynamic equilibrium;
- improving the coordination of hand dynamics;
- improving the coordination of general dynamics;
- correcting the physical deficiencies and stopping their evolution;
- ensuring the harmonious physical development and the correct corporal posture;
- improving the respiratory cycle and control;

Accomplishing these objectives has been done by implementing certain means and systems specific to psycho motile development that have been echeloned during an entire school year according to annual planning. During the research one has done two testings (initial and final), applying trials and testings selected depending on the desired purpose.

In the psycho motile development, one has used a trinomial of adapted physical exercises such as: motile exercises, motile and sensorial exercise, motile and perceptive exercises.

For developing the knowledge regarding the corporal scheme and forming the space orientation ability one has used applicative exercises that comprised: crawling on the back, standing in one leg, climbing on a fixed ladder with both hands and legs, exercises substantially contributing to a faster and clearer awareness of the child's body representation and its part in particular. Tightly connected to the process of awareness to what the corporal scheme is concerned, the pupil gets gradually familiar to the asymmetric aspect of the body, recognizing that he has two hands, two eyes, and two ears, one on each side of the median line of the body. Through a lot of exercises, the pupils manage to correctly differentiate the right side from the left side of the body and to orientate themselves in space, thus accomplishing laterality. In this sense, repeated beatings of the left leg, waking with an accent, whistle on the left, climbing on a fixed ladder is the right arm at the back, with the left arm in the back, weightlifting with the left hand, with the right hand, climbing with opposed left and leg, all of these have lead to a better difference of the human body and implicitly a better coordination. For the space orientation as an essential component in the psycho motile development, one has used exercises in which the body is the center of reference, applicative exercises such as: forward crawling, backwards crawling, under the apparatuses, climbing on the gymnastics ladder, walking, bench running, all of these have stimulated exercising and correcting the equilibrium and climbing exercises both in the fundamental part of the lesson and in the last part of the lesson; here the pupils practically realize the comparison of durations especially when the acceleration and deceleration possibilities of execution are favored, as well as following the conscious rhythm change that contributes to forming the rhythm representations.

For obtaining certain significant data on the phenomenon we have used a system of methods for which we have analyzed the data both qualitative and quantitative. For obtaining the data the fundamental method used was based on adapted physical exercises done frontally or individually in different specific activities.

For ensuring the conditions in studying the level of psycho motile development, the pupils were given a motivation. One has explained the fact that within these physical education activities done collectively or individually, certain actions take place, tests as games or attempts to see to what extent the child is able to accomplish that action. Depending on the results the activity is continued if weak performances are still around. Within the practical activities, applied in physical education classes, we have followed the level of psycho motile development.

With the purpose of knowing the level of psycho motile development the following tests have been created:

Test 1: the OZERETSKI GUILLMAIN
The present study references the following coordinates:

- the dynamic coordination of hands;
- the general dynamic coordination;
- equilibrium;
- space orientation;

1. The dynamic coordination of hands: catching the rounders ball with a single hand, thrown from a distance of 3m. The subject must keep the arms by the body until the action "catch" is said.

- after 30 seconds one tries with the other hand;
- failed attempt: he/she cannot catch the ball at least 3 out of 5 times;
- attempts with the right hand; attempts with the left hand;
- evaluation: number of attempts: 5 for each hand.

2. The general dynamic coordination: jumping with the ball throwing the heels at the back and touching both heels with the hands.

- failed attempt: not managing to touch the heels simultaneously with both hands;
- evaluation: doing the sequence correctly: 1 point;
- not doing the sequence: 0 points;

3. Equilibrium: with closed eyes, sitting on the right leg, the left leg being bent (thighs being parallel), arms by the body, after 30 seconds of repose, the same exercise by changing the leg.

- failed attempt: lowering the leg more than 3 times, touching the ground with the leg that must have been bent, losing balance, jumping;
- duration: 10 seconds;
- number of attempts: 2 for each leg;
- evaluation: doing the sequence correctly: 2 points;
- doing the sequence with certain mistakes: 1 point;
- not doing the sequence: 0 points;

4. The Piaget-Head Test – Examining the space orientation ability
The test consisted of executing on command a series of 8 motile actions: torsions while standing, moving the body in space and the movement of segments. The two verifications, initial and final, have been done on a 6 month period.

- evaluation: the number of motile actions done correctly.

Results of Study
The dynamic coordination of hands
Interpreting the results: during this trial, one has followed the coordination and hand skill. The coordination trial by catching a rounder's ball with a single hand, thrown from a distance of 3m, shows us that 11pupils have managed to accomplish the final test by catching the ball with the right hand while no pupil manages to catch the ball 5 out o5 with the left hand, making it hard to accomplish this task.

The presented results from figures 1 and 2 show that if in the beginning of the study period the attention and concentration of the subjects was weak, from the final testing it can be shown that all subjects have improved their results the right hand. Left hand results show that three students did not improve their results To the final values a major role had the attention and concentration span of the pupils.

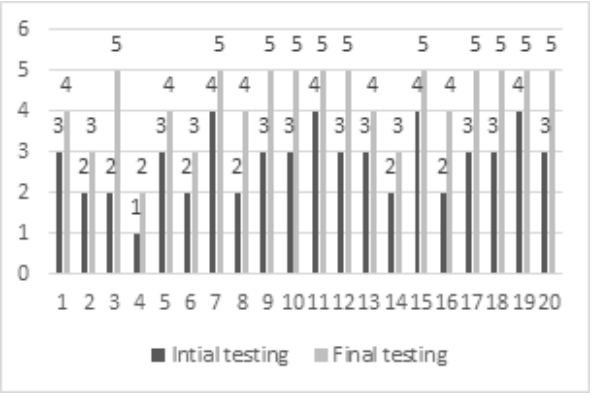

Fig.1 The trial of coordinating the right hand

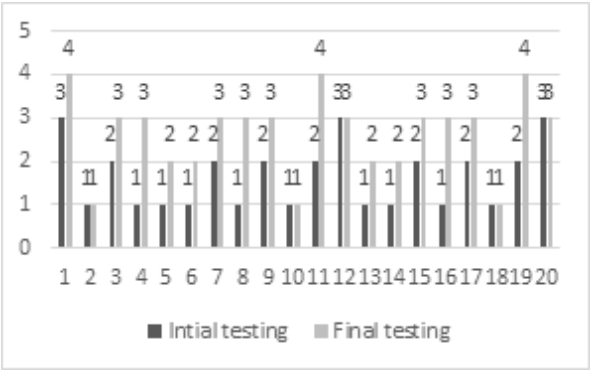

Fig.2. The trial of coordinating the left hand

2. The general dynamic coordination: jumping with the ball by throwing the heels at the back and touching both heels with the hands; failed attempt: not managing to touch the heels simultaneously with both hands. The results obtained to the general dynamic coordination test accomplishing this task presumes a good distribution of motile attention and coordination.

Regarding the general dynamic coordination, one observes an improvement of study results. As in the case of the dynamic hand coordination, we consider the positive results to be the effect of the development – learning – compensation process which has been done so as to favor the possibilities of each child. One has followed the coordination and speed of execution in doing this task.

The general dynamic coordination trial, by jumping with the ball and throwing the heels at the back and touching both heels with the hands, movement which needs a lot of attention and speed, the subjects did not find it very difficult. The results show that 4 subjects did not manage in the end to fulfill the task, whereas 16 subjects have managed to fulfill the task both in the initial and final testings, obtaining positive values.

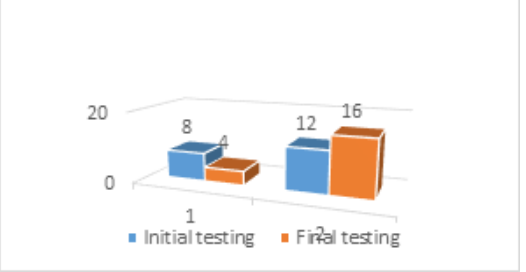

Fig.3.The results of the general dynamic coordination

3.Equilibrium
Interpreting the results: accomplishing this task presumes a good motile coordination. One notices in figures 4 and 5 that for the right leg, out of 20 pupils,12 pupils are in progress, 8 subjects has the same score maximum , both in the initial and final testings.
The final testing, regarding the left leg results, out of 20 pupils, only 5 subjects improve their results in the final testing, managing to accomplish without any mistakes and obtaining the maximum score. 15 subjects maintain the results both in the initial and final testing. One also notices that no subject is in regress which proves that the subjects manage to fulfill the task better with the right leg than with the left leg. One considers the failed attempts are due to a weak correlation of the desired aspects.

4. The Piaget-Head Test – Examining the space orientation. The test consisted of executing on command a series of 8 motile actions: torsions while standing, moving the body in space and the movement of segments. The two verifications, initial and final, have been done on a 6 month period. The spatial and temporal orientation presumes two levels of organizations: the level of immediate experience, direct perception through action and mental representation, the mutual factor of the two being the motility. Space organizes itself from the sensorial and motile level based on the perceptions related to action and the insufficiencies of "spatial discrimination" lead to numerous disturbances on different levels. Recovering the spatial and temporal structure is down slowly and with great difficulty. In the space orientation trial, the effect of the program of perceptive and motile stimulation has been better from the subjects' point of view, each subject improving its result at the final evaluation. We consider this to be the consequence of the improvement program which aimed the psycho motile components which are also dependent to the degree of deficiency (perception, representation, memory). As one can notice from the graphic representation, 19 subjects have made a considerable progress, of which only 1 subject has maintained the same value parameter.

CONCLUSIONS

The data that can be taken out of this study, on an issue related to psychomotricity in primary school children and considerable. The research has proved that the psychomotricity indicators can be improved in time through mutual efforts from the children and the ones educating them. The subjects of the test have scored improvements in the researched parameters, especially in the dynamic coordination of the hands (especially the left hand) and the general dynamic coordination. The investigated parameters represent a further argument in the need of an individual approach for every child in the sense of knowing his/her psychomotricity particularities. Using the action systems presented in the paper has positively influenced the values of the test. The age of the subjects is compatible with the adaptation and response possibilities of the body to specific physical education activities.

Educating psycho motility means preparing the pupil for professional tasks, but also improving his/her physical and mental balance, giving his/her body gradual control and multiplying his/her efficient relationships with things and other individuals.

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