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IMPACT OF THE OPTIMUM DEVELOPMENT OF COORDINATIVE CAPABILITIES IN THE SCHOOL RESULTS OF PRIMARY SCHOOL STUDENTS

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Abstract. *An important feature of the learning capacity is the student's receptivity to the assimilation of informational content, the ability to interpret this information and the development of skills based on the knowledge acquired to solve similar problems / situations.*

From the point of view of the somato-psychic field, the student must have an optimal state of health, sensory integrity and a harmonious physical development. If these requirements are not met, there are a number of unwanted manifestations, of which the most commonly observed are: psychomotor agitation, poor attention, fatigue, reduced ability to achieve school goals.

The purpose of this research is to intervene in the instructional-educational process so that these problems do not increase with the transition of the student to higher grades. That is why we tried to find out if by acting in the sense of developing coordination skills, we can influence the annual school results of students in terms of improving them.

Keywords: *students, primary school, school results, coordination skills, physical education.*

Introduction. School success is the optimal alternative to school performance. It is given by the theoretical training, but also by the ability to put these notions into practice, with optimal efficiency. School success is expressed by grading with grades from 7 to 10 or with the grade "good" or "very good", as well as by obtaining awards and diplomas for activities carried out nationally and internationally of a practical nature: technical-scientific , cultural, artistic, sports, etc. Another important aspect of school success is given by the special qualities of the students' personality, materialized by: intellectual abilities (creativity, imagination, abstract thinking, logic), ability to adapt to the school and social environment, outstanding skills, desire to overcome and perform, etc.

Achieving success is influenced in a significant percentage by the difficulties of adaptation, motivation, but also by the skills with which the student is endowed. Practice has shown that most of the time, the stronger the motivation and the more appreciated and rewarded the activity, the more intense the learning. [8]

Repeated failures and successes can be real pitfalls to learning, but special attention must be paid to success, as it has strong influences on the psyche. Success causes the student to be aware of the strategies used, and the joy felt has profound effects on the psyche, causing satisfaction, self-confidence and self-expansion, but also creates privileged status for the student.

According to Keeley, Thomas J. H., and Fox, Kenneth R., [5], school performance is highlighted primarily by assessing students' theoretical and practical readiness as a result of assessing the relationship between the content of education found in official school

documents and knowledge. theoretically and practically acquired by students.

Grading is the method of differentiating students in terms of value, depending on the results obtained, by assigning grades from 1 to 10, or grades, from insufficient to represent the equivalent of grade 3-4, sufficiently equivalent to grades 5-6 , well equivalent to grades 7-8 and very good equivalent to grades 9-10. Grading is part of the curriculum reform that "has brought so-called improvements to the assessment system for grades I-IV". [6]

Another dimension of school performance can be highlighted by the assessment of students' personality, in all its aspects. Ignoring the intellectual dimension assessed by grades, school performance also refers to the assessment of mental abilities, which include: memory, imagination, thinking, level of intelligence, creativity, motivation, skills, etc. School performance in terms of the qualities listed above requires a complex assessment system consisting of a system of meticulously developed tests.

The assessment of school results is usually materialized by grading. Note, is a labeling of learning outcomes, an indicator, which is associated with achieving a goal of school performance.

Professor Gilbert de Landsheere considers that the grade represents "the synthetic assessment that translates the evaluation of a performance in the field of education". [4]

Vasile Pavelcu (1976), quoted by C., Cucoș, considers that the grade fulfills several functions: [2]

- information (both for students and parents);
- regulators of the learning process;
- educational, due to the internalization of the appreciation and the increase of the aspirational level of the student;
- therapeutic, with a motivational role, when "extra" points are awarded;
- pathogenic, due to the appearance of mental stress when we talk about failure;

Coordinating skills

The current living conditions require a fast pace and a large volume of activities in various conditions and constantly changing. To meet these conditions requires a manifestation of cleverness, alertness, ability to concentrate, reaction speed, accuracy and rationalization of movements, from a biomechanical point of view.

Sbenghe, T., defines coordination as: "the combination of the activity of a number of muscles in a scheme of continuous, smooth movement, performed under normal conditions."[7]

According to Epstein, J., quoted by Albu, C., Albu, A., coordination represents "learning a fundamental motor ability that allows the maximum association of the movements of the 4 limbs". [1]

Theorists in the field such as Dragnea, A., Bota, A., Rață, G., appreciate coordination as a complex psychomotor skill, based on other psychomotor skills and which interrelate with motor skills and abilities. Coordination is considered a complex motor skill because it can be approached in many ways. [3], [6]

Coordinative abilities are a combination of the possibilities of manifestation in terms of coordination and flexibility in the execution of physical movements, they are conditioned by the ability to direct, take over and develop motor skills, which are based on the plasticity of the nervous system and muscle efficiency.

Motor experiences in young school-age children are essential for fixing the notions of spatiality and temporal landmarks, fundamental elements in the development of intelligence, directing psychomotor thinking and which unfolds as follows: it conditions their development". Therefore, given the above, the conclusion that emerges is the following: movement is the result of thinking, ie a product of mental processes, but also a factor in shaping them.

Research methods and procedure

The methods used in this research were the following:

a) The method of bibliographic study, this being responsible for most of the information found in the material presented;

b) The method of pedagogical observation;

c) Statistical-mathematical method, used for data processing and interpretation;

To verify the working hypothesis, a program was developed, which includes a diverse range of means, through which to act in order to train the coordination skills of third grade students. From these, we chose three of the coordinating capacities to analyze, relating their results to the students' school performance.

Table 1. Evolution of coordination capacities

Test name	Coordinating skills	3rd grade	
		Ti	Tf
Basketball Ball Driving (sec)	Coordination of movements	14.85	13.89
Tapping Test (pct)	Sense of rhythm	40.69	47.49
Hexagon test (sec)	Spatial-temporal orientation	33.97	31.72

Fig. 1. Evolution of results for the Basketball Ball Test

In the test of driving the basketball, in the initial test the arithmetic mean is 14.85 sec., And in the final test 13.89 sec., The difference between the two arithmetic averages in this test being 0.96 sec. The standard deviation has values of 2.38 in the initial test compared to 2.63 in the final test. The standard deviations do not have high values, which means that the degree of scattering of the results around the central values is not high. For the coefficient of variability, values of 16.0% were obtained at the initial test and 18.81% at the final test, which indicates that there is an average degree of homogeneity.

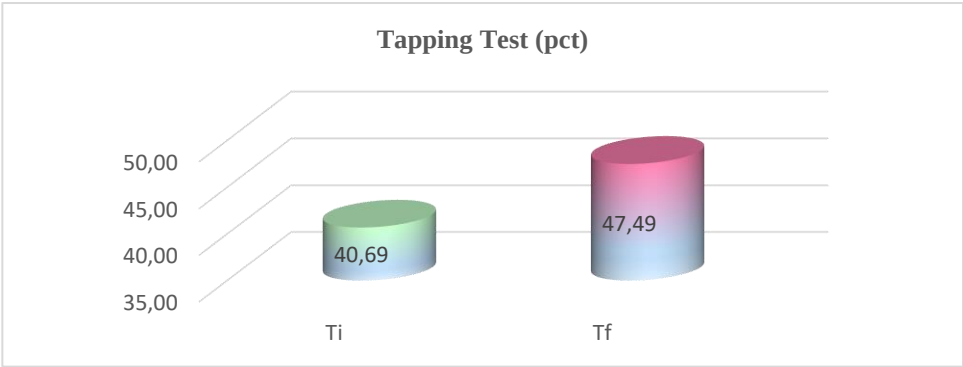

Fig. 2. Evolution of Tapping Test results

For the Tapping Test, we have an arithmetic mean of 40.69 points in the initial test, and in the final test the value is 47.49 points, the difference between the two arithmetic averages in this test being 6.8 points. has values of 8.55 at the initial test compared to 8.21 at the final test. The values are not high, which means that the degree of dispersion of the results around the central values is small. For the coefficient of variability, values of 21.01% were obtained at the initial test and 17.29% at the final test, this value indicating an average degree of homogeneity.

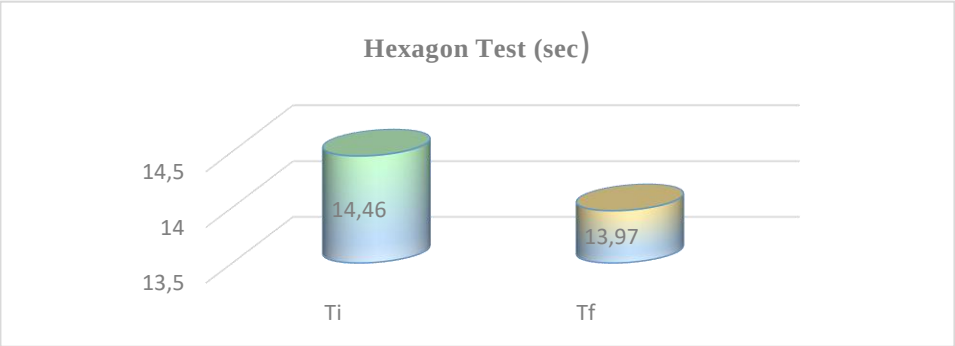

Fig. 3. Evolution of results for the Hexagon Test

For the Hexagon Test, we have an arithmetic mean of 14.46 sec. at the initial test, and at the final test the value is 13.97 sec, and the difference between the two arithmetic means is 0.49 sec. The standard deviation is the same value for both the initial test and the test at the final test, which is 2.39. The standard deviation does not have high values, which means that the degree of scattering of the results around the central values is not high. For the coefficient of variability, values of 16.59 % were obtained at the initial test and 17.10% at the final test, this value indicating an average degree of homogeneity.

For a more accurate assessment of students' school performance, they were graded, but also graded. From all the subjects studied, we chose three of them, namely: Communication in Romanian, Mathematics and Environmental Exploration and English, because these subjects have been studied since they entered the preparatory class.

Table 2. Evolution of school performance

Disciplina	Nota	
	Ti	Tf
Communication in Romanian,	8.50	9.35
Mathematics and Environmental Exploration	8.77	9.48
English	9.18	9,60

For the Romanian Language discipline, the experiment group obtained at the initial test an arithmetic mean of 8.50, and at the final test the arithmetic mean has a value of 9.35. The difference between the two averages is 0.85. The standard deviation has values of 1.23 at the initial test compared to 0.86 at the final test. The standard deviations do not have high values, which means that the degree of scattering of the results around the central values is not high. The coefficient of variability has the following values of 15% at the initial test and 9% at the final test, this aspect demonstrating that in this discipline,

although the degree of homogeneity is an average one at the initial test, at the final test its value decreases, so the homogeneity of the team has been considerably improved.

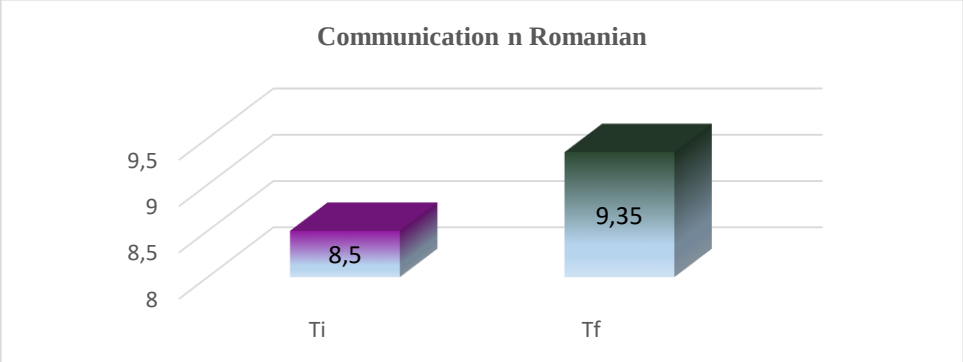

Fig. 4. The evolution of school performance for Communication in Romanian

For the subject Mathematics and Environmental Exploration, an arithmetic grade point average of 8.77 was obtained in the initial test, and in the final test the arithmetic mean has a value of 9.48. The difference between the two averages is 0.71. The standard deviation has values of 1.10 at the initial test compared to 0.84 at the final test. Since the deviations do not have high values, we can say that the degree of scattering of the results around the central values is not high. The coefficient of variability has the following values: 13% in the initial test and 9% in the final test, which shows that in this discipline, although the degree of homogeneity is average in the initial test, in the final test its value decreases, which shows that the homogeneity of the team has been improved.

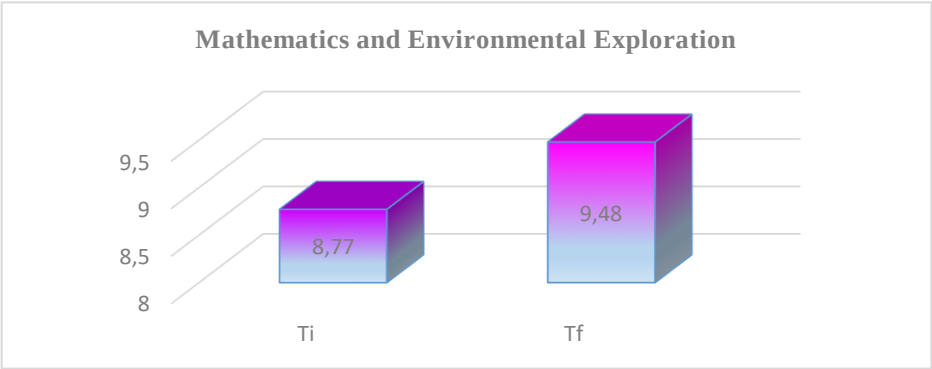

Fig. 5. The evolution of school performance in Mathematics and environmental exploration

For the English language subject, the initial test obtained an arithmetic average of 9.18, and the final test has an arithmetic mean of 9.60. The difference between the two averages has a value of 0.42. The standard deviation has values of 0.97 at the initial test compared to 0.56 at the final test, values that show us that the degree of scattering of the results around the central values is not high. The coefficient of variability records values of 11% at the initial test and 6% at the final test, values that show that in this discipline, although the degree of homogeneity is at an average level at the initial test, at the final test its value decreases, which demonstrates that the homogeneity of the team has been improved.

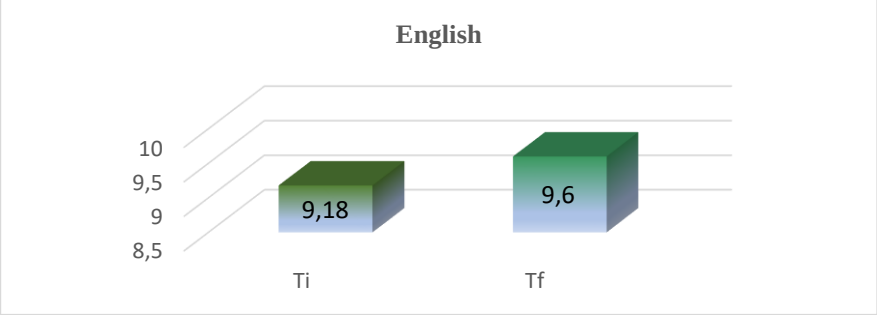

Fig. 6. The evolution of school performance in English

Conclusions. Based on the development of this research, with all the related stages: the study of the literature, the organization of research and the interpretation of results obtained by statistical processing, we came to the conclusion that the development of coordination skills has benefits both physically and mentally.

Given the results presented above, we can say that positive developments in student outcomes can be observed both for coordination skills and for the disciplines selected for analysis.

Thus for the coordinating capacities very good results obtained:

- 23 students, nine of whom are girls and fourteen boys, for coordinating their movements through the basketball test;

- 22 students, including ten girls and twelve boys for the sense of rhythm, through the tapping test;

- 28 students, of which twelve girls and sixteen boys, for the spatio-temporal orientation through the hexagon test.

The students who obtained very good results, highlighted by marks of ten in the selected subjects are as follows:

- Communication in Romanian - sixteen students, including ten girls and six boys;

- Mathematics and environmental exploration - nineteen students, including eleven girls and nine boys;

- English - nineteen students including eleven girls and eight students;

These results show that most students who have outstanding results for coordination skills, have very good results in other subjects, hence the fact that an optimal development of coordination skills have major influences on school performance.

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