

**COMPARATIVE STUDY ON THE COORDINATIVE ABILITY  
OF PRIMARY SCHOOL PUPILS IN THE RURAL VS. URBAN  
ENVIRONMENT ( SECOND GRADE)**

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**Key words:** coordinative capacity, primary school, primary grades, physical education.

**Summary**

The paper deals with a constative study, i.e. the manifestation of coordinative ability in small schoolchildren. The applied tests and events constitute means of detecting several types of coordination. The subjects of the study are children in primary school (second grade), aged 7-9 from two schools, one in the countryside, the other in the city. Nine tests were administered in order to test the coordinative ability, in the halls of the two school, with the following results:

- Coordinative ability displays different manifestation indices in children from the rural environment as compared to children in the urban environment.
- The environment and lifestyle of most children has led to the reduction of their motor activity, as they live in small spaces and lack the proper playing conditions.
- The environment prompts the child to steadily adapt to new motor situations, thus stimulating new processes of motor acquisition. The children become aware of their progress and can measure function of their environment. They are animated by a number of motivational factors which arouse their curiosity and prepare them for play and study, stimulating performance.
- Learning is in turn affected by this difficulty, especially as far as writing is concerned. His relationship with the adults and other children is also impaired.
- Restricting the vital space, by urbanisation and the invasion of concrete results in disturbances in the motive development of children in the urban environment.

- The environment compels children to constantly adapt to new motor situations, thus stimulating new processes of motive learning. Children are thus animated by a series of motivational factors, arousing their curiosity, preparing them for play and study, stimulating performance at all levels.

Nowadays we are witnessing a phenomenon of acceleration in terms of physical and mental development of the young generation, which compels us to reconsider the characteristics of the age 7-9.

Specialised literature treats coordination as an "orderly activity of various organs and systems of the body, conditioned by the excitation and inhibition occurring in the central nervous system" (Georgescu F. , 1971: 97). Shepard R. J.(1994: 7 ) defines coordination as "an integral process of actual management of the movement in accordance with the purpose, the environment conditions, the athlete's state and his personal characteristics".

Therefore, the coordinative ability is the core of ability which is considered the "spine of motiveness" (Epuran M., 1996: 239). M. Epuran considers that skill as a factor of physical performance with a direct bearing upon the efficient valuation of the other motive skills: speed, strength, endurance. The author opines that the study of ability, due to its complexity, has not gone over the analytical stage yet (Epuran M., 1996 : 239).

### **The objective of the paper**

The main purpose of our research is the determination of coordinative ability in second grade pupils in the rural and urban environments.

This paper is part of an ampler study focusing on the coordinative capacity of pupils in the first to fourth grades, in two different environments: the countryside and the city.

### **Working hypothesis**

As there are discrepancies between the existing theoretical knowledge and the practice proper on the topic of research, it is imperative to carry out a study of the rural vs. urban environment able to develop the need to exercise in children at this age.

### **Subjects and method**

The subjects of this study are represented by the pupils of the primary school in Movilita, the county of Vrancea, and School no. 12 Galați,

enrolled in the primary education system. Two classes in the rural environment and two classes in the urban environment were tested, with a total number of 89 pupils, 42 girls and 47 boys, aged 7- 9. A number of 9 tests were operated in order to test the coordinative ability, in the halls of the two schools mentioned above ( 20/40 m), employing the following measurement instruments: the stopwatch and the geometric protractor.

### Tests and events applied

1. The test of sensory-motive coordination;
2. The Matorin test;
3. The Romberg test;
4. The Tapping test - variant I;
5. The Tapping test –variant II;
6. The “square” test;
7. Leading the basketball (with the able hand), while running and changing the motion direction ;
8. Determining the ability of movement coordination –the figurative way ;
9. Marking leap.

### Centralization of the data obtained

1. Table of results obtained by the pupils in the rural and urban environments

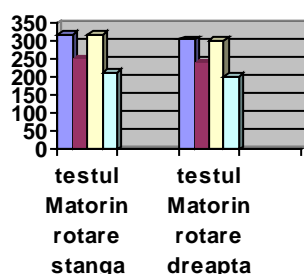
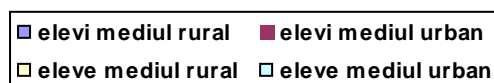
2nd grade	Sensory-motive coordination	Matorin test left/right	Romberg test	Tapping test var 1	Tapping Test var 2	Square test sec/errors	Leading the ball	Figurative way	Marking leap
Boys rural classes	17,16	319,04/306,17	19,83	114,17	19,02	17,86 2,01(errors)	17,89	6,36 (errors)	1,79
Boys urban classes	20,42	254,27/242,13	16,15	112,57	34,09	20,83 4,05(errors)	20,08	4,21 (errors)	1,91

2. Table of results obtained by the pupils in the rural and urban environments

2nd grade	Sensory-motive coordination	Matorin test left/right	Romberg test	Tapping test var 1	Tapping Test var 2	Square test sec/errors	Leading the ball	Figurative way	Marking leap
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Girls rural classes	15,17	318,20/ 304,07	20,25	122,35	20,21	18,06 2,81(erro r)	18,53	6,06 (errors )	1,73
Girls urban classes	21,13	214,12/ 202,51	14,65	113,09	34,16	27,99 4,09(erro rs)	23,07	5,03 (errors )	1,84

### Interpretation of the data obtained



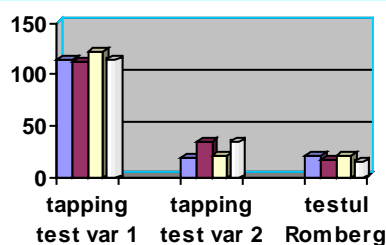
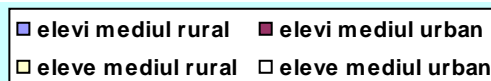
The value of the Matorin test rotation left/ right was 319°/306° for the rural environment pupils, the assessment and qualitative evaluation scale is the GOOD qualification (B).

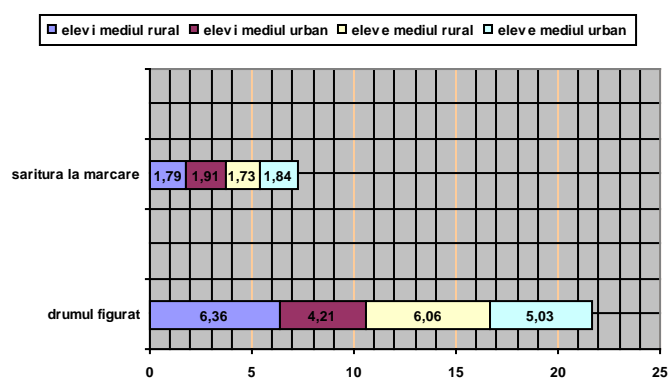
For the same test, both boys and girls in the urban environment were given the SUFFICIENT qualification (S), the value of the test being 254°/243°(boys) și 214°/202°(girls). The GOOD qualification (B) was also obtained by the girls in the rural environment, where the Matorin test measured 318°/304°.

In the two tests aimed at determining rhythmicity, pupils in the rural environment obtained satisfactory results, both boys and girls registering higher values than in the urban environment. Besides, the approximate steadiness in the movement frequency in the last squares, i.e. 4 (var 1) and 3 (var 2) evinced the stability of nervous processes for boys/ girls in the rural environment.

In the classes in the urban environment, a reduction of the number of points was noticed from a square to another, which is indicative of insufficient stability.

In the Romberg test, the pupils in the rural environment obtained higher values in the test of balance, being again superior to the pupils in the urban environment.





The errors centralised in the coordination test of hand movements in the “figurative way” are lower for boys/ girls in the urban environment. The duration of 45 ” is easier to cover the trajectory by pencil, and a better hand coordination not conditioned by time is observed in urban environment pupils. This is the only test in which pupils in the urban environment got better results than the ones in the rural environment.

In the marking leap, even if the rural environment pupils had a better result, the difference was not too wide between the classes, the error ranging between  $\pm 1.76$  cm over line 0 for the rural environment pupils and  $\pm 1.87$  for the urban environment pupils. Also, the differences were not too significant in the sensory-motive coordination test (tab .1/2) , where the value of the test was  $\pm 16.16$  for the rural environment pupils, appreciated with the good qualification,  $\pm 20.77$  for the ones in the urban environment, who got the same qualification.

### Conclusions

Coordinative ability is differently represented in children belonging to the rural environment as compared to children living in the

urban environment. The different living standard of most children has led to diminishing their motive activity, as they live in confined spaces, and without proper playing conditions.

Coordinative ability is the central nucleus of skill, considered the spine of motiveness. And motiveness is the form in which intellect and life are manifested.

A child with a poor visual-motive coordination will have difficulties in adapting to the requirements of the environment (difficulties in motion, dressing, adapting to collective games with his mates, modelling, drawing). Learning is in turn affected by this difficulty, especially as far as writing is concerned. His relationship with the adults and other children is also impaired.

Restricting the vital space, by urbanisation and the invasion of concrete results in disturbances in the motive development of children in the urban environment.

The environment compels children to constantly adapt to new motor situations, thus stimulating new processes of motive learning. Children are thus animated by a series of motivational factors, arousing their curiosity, preparing them for play and study, stimulating performance at all levels.

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**Titlu:** Studiu comparativ între capacitatea coordinativă a elevilor din mediul rural și urban la clasele primare (clasa a-II-a).

**Cuvinte cheie:** capacitate coordinativă, clase primare, educație fizică.

**Rezumat:** Lucrarea tratează într-un studiu cu caracter constatativ, manifestarea capacității coordinative a copiilor de vârstă școlară mică. Testele și probele aplicate se constituie în mijloace de depistare a mai multor tipuri de coordonare. Subiecții studiului sunt elevi în clasele

primare (a-II-a) vârsta 7-9 ani din doua școli ,una din mediul rural, iar cealalta din mediul urban.

**Titre:** Comparaison le coordination capacité aux élèves dans les régions rurales et urbaines classes primaires (classe II).

**Mots clés:** coordination capacité, primaire, l'éducation physique abrégé travail.

**Resume:** A traité dedans un constatativ d'étude de caractère, les coordination capacité des enfants d'événement de petit écolier. Les essais et les épreuves l'ont appliqué est le moyen de la détection de plusieurs types de coordination. Les sujets d'étude sont des étudiants dans l'âge primaire de catégories (à II) 7 à 9 ans de deux écoles, un des secteurs ruraux, et l'autre dans des secteurs urbains.