



THE EVALUATION OF THE EFFORT'S CAPABILITY FOR PUPILS IN GRAMMAR SCHOOL DURING PHYSICAL TRAINING CLASSES

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Abstract

Objectives. Physical training, as an essential condition in human development, has always been developed by this field's practice and theory, and nowadays, in the evolution of society, it is considered as an integral part of general education, of the personality's building up process. As a dimension of human personality's harmonious development, it regards ensuring a functional balance between its integral parts, especially the physical and the practical one. Physical training must not be carried out parallel to, but as a part of a system acting with all its elements at a time, with concern to the full personality's development, stimulating and reinforcing its psycho-physical attributes.

Methodes. Our methodological undertaking meant to prove that by the functions and the outcome they produce, the means of physical training must acquire a much bigger weight in terms of establishing instructional strategies that foresee the improvement of effort's capability, of pointing out major issues which determine the selection and the usage of physical abilities, but also the establishment of the actual level of effort's ability indication for students in grammar school, in rural areas. The research methods and procedures used in this study are part of the actual methods of research and methods of elaboration, analysis and approach of data acquired through research. Using a relatively small but simple and long trained number of means specific to this field during physical training of pupils from rural areas, this contributes to raising the level of occurrence in terms of effort's capability. In view of gathering significant data, I considered necessary the establishment of a very representative test sample, of 50 male individuals, in the sense that students from the fifth up to the seventh grades were included. The physical training curriculum for grammar school reflects the conception which is at the foundation of the Romanian educational system' reform, with the purpose of achieving the goals presented in the Education Law, which refer to the complex development of children's personality.

Results. Using a quite small number of means specific to this field during physical training classes for pupils from rural areas, yet simple and long trained means, contributes to raising the level of occurrence in terms of effort's capability, as also shown by the evolution of the calculated arithmetic means, thus confirming research hypothesis. The education level of physical abilities specific to this age is confirmed by the growth in terms of interest for participating in athletic competitions, of self-affirmation, of will to compete with other pupils. Our research confirms the interaction between the education of the effort's capability and the individual physical abilities' indication level. The researched test sample has an inconsistent structure, its efficiency being quite modest. The low level of physical ability is the result of the lack of concern on behalf of the young people, as well as of the academics from inferior echelons.

Conclusions. using a quite small number of means specific to this field during physical training classes for pupils from rural areas, yet simple and long trained means, contributes to raising the level of occurrence in terms of effort's capability, as also shown by the evolution of the calculated arithmetic means, thus confirming research hypothesis. The education level of physical abilities specific to this age is confirmed by the growth in terms of interest for participating in athletic competitions, of self-affirmation, of will to compete with other pupils. Our research confirms the interaction between the education of the effort's capability and the individual physical abilities' indication level. The researched test sample has an inconsistent structure, its efficiency being quite modest. The low level of physical ability is the result of the lack of concern on behalf of the young people, as well as of the academics from inferior echelons. The evaluation and the calculation of results targeted not only the quantitative aspect but also the qualitative aspect in terms of pupils' physical evolution. The goal of physical training classes was not only to develop the effort's capability, but also to aim at other academic goals.

Key words: evaluation, effort's capability, pupils, grammar school

Introduction

Education, specifically physical training, comprises the young at its defining age, this being the most favorable stage in multilateral

development for human personality from an intellectual, physical and educational point of view. During the preparation process, the efficiency of

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the work performed depends on the capacity of adapting concrete conditions in which sports activity is organized. (Deacu, Finichiu, 2010)

The complex educational process determines the defining of human being considering all the basic forming aspects of the personality: physical, intellectual, moral, esthetic and civic. Physical training implies a set of actions with the purpose to determine both physical and psychological changes according to the educational ideal and the full educational development of individuals' personalities. It contributes to the functional development of the nervous system, ensuring the optimum conditions for carrying out intellectual activities. Moreover, physical training has a major role in building up and developing consciousness and moral conduct, in building-up positive features of will and character: such as courage, determination, tenacity, resolution. (Constantinescu, 2012) It also contributes to shaping physical qualities and habits which are to positively influence the precise and coordinated performance of movements imposed by handling tools, devices or machines, therefore contributing to carrying out professional education's assignments.

Research hypothesis and objectives.

Our research started with the following hypothesis: knowing the students' level of occurrence in terms of effort's capability, may affect the selection of methods and means used during physical training classes; the quality and the efficiency of the training process may be improved provided the training process is oriented towards goals' achievement, content, strategy and evaluation of physical and functional parameters. The objective of our theoretical and methodological enterprise was to test a larger number of individuals as possible, so as to gather substantial information; to process the data picked up through statistical and mathematical methods, which are to underlie an objective interpretation and to elaborate the conclusions drawn after research by pointing out the relationship between the content of the study and the content of the practical activity.

Methods.

The experiment took place from September up to November, school year 2011-2012, during physical training classes of pupils from the fifth – eighth grades, School of Arts and Crafts, Cerașu Village, Prahova County. The research methods and techniques used in this study are part of the actual investigation methods' category (particular methods – observation method, experimental method, etc.) and of the methods of processing, analysis and interpretation of data obtained through research (the mathematical method, the logical method, the graphical method, the statistical method).

In view of gathering significant data, I considered necessary the establishment of a very representative test sample, of 50 male individuals, in the sense that students from the fifth up to the seventh grades were included. The physical training curriculum for grammar school reflects the conception which is at the foundation of the Romanian educational system' reform, with the purpose of achieving the goals presented in the Education Law, which refer to the complex development of children's personality. The distribution by semesters of the evaluation tests is done by the academics, who have the responsibility of ensuring proper training and of carrying out minimum 2 or 3 tests each semester (according to the curriculum). The tests included in the national evaluation system are also accompanied by tests for current evaluation. Along the school year, for classes which include 2 sessions of physical training per week, students will be graded with a compulsory number of 6 grades, as follows: 2 grades for physical ability/quality – force; one grade for speed racing; one grade for athletic sports if the student chooses it; one grade for gymnastics – vault or an average between the two; one grade for sports play (Finichiu, M, 2010).

Students from classes for which the curriculum provides one session per week will be graded with a compulsory number of four grades each school year, as follows: one grade for physical ability/quality – force; one grade for an athletic test; one grade for gymnastics and one for sports play. On this ground was established the National System of Evaluation (NSE), where I selected the tests from for all three grammar school years of study. Evaluated skills: 1. Force a. arms' muscularity; evaluation tool – press-ups (number of repetitions). b. abdominal muscularity; evaluation tool – raising the trunk from supine in 30" (number of repetitions). c. Back muscularity; evaluation tool: raising the trunk reclining face down in 30" (number of repetitions). d. feet muscularity; evaluation tool: vault over the gymnastics bench for 30" (number of repetitions). 2. Travelling speed: a. speed racing 5x10m (seconds).

Results

The education level of physical abilities specific to this age is confirmed by the growth in terms of interest for participating in athletic competitions, of self-affirmation, of will to compete with other pupils. Our research confirms the interaction between the education of the effort's capability and the individual physical abilities' indication level. The researched test sample has an inconsistent structure, its efficiency being quite modest. The low level of physical ability is the result of the lack of concern on behalf of the young people, as well as of the academics from inferior echelons. Based on acquired information, by



calculating statistical indicators (Table 1), we have the possibility to specifically determine the fundamental tendency, knowing the maximum (Max) and the minimum (Min) values, the values with the highest frequency, but also knowing the extent to which the information acquired is distributed by objectively determining the data spreading degree, but also the efficiency of the arithmetic progression (X); I have calculated the most used dispersion indicators; amplitude (W), standard deviation (S) and unsteadiness coefficient (Cv%) (Dragnea, 1984).

Based on acquired data during press-up probe, which tested the endurance while intensifying humeral protractors of arms' muscularity, I came up with the following conclusion:

The best values of the calculated arithmetic progression were obtained by students in the fifth grade, according to their physical skills and they exceed the minimum scale established by SNE with a number of 2.23 repetitions; the calculated arithmetic progression for students in the sixth grade exceed the minimum scale with 2.09 repetitions, and that for students in the seventh grade exceed it with 1.72 repetitions.

- Amplitude and standard deviation suggest a normal distribution of results.

- The unsteadiness coefficient suggests a group with high degree of uniformity at this test.

- The value of the median increases along with the increase of the arithmetic progression for each age group

- The maximum and minimum values show the same tendency of increasing the value of the arithmetic progression; closeness between the minimum values from the fifth and the sixth grades is observed.

Based on acquired data during the test involving raising the trunk from supine in 30", while testing endurance when intensifying abdominal muscularity, I came up with the following conclusions:

- The arithmetic progression calculated according to the physical skills of students from the fifth grade was 17.08 repetitions, exceeding the minimum scale by 2.08 repetitions established by SNE; the arithmetic progression (19.31) calculated according to the performances of the sixth grade exceeds the minimum scale by 3.31 repetitions, and that of the seventh grade (19.89) by 2.89 repetitions.

- Amplitude and standard deviation suggest a normal distribution of results.

- The unsteadiness coefficient suggests a group with high degree of uniformity at this test, except for the fifth grade, where uniformity is average

- The value of the median increases along with the increase of the arithmetic progression for each age group

- The maximum and minimum values show the same tendency of increasing the value of the arithmetic progression.

Table 1. Calculated statistical indicators

		Press ups	Raising the trunk from supine – 30"	Raising the trunk reclining face down in 30"	Vault over the gymnastics bench for 30"	Speed racing 5x10m
5 th grade	X	6.23	17,08	18.33	8.82	21.06"
	S	0.51	15.27	0.99	1.31	0.28
	Cv %	8.18	13.88	14	14.96	17.37
	Med	6.25	17.51	18.62	9.06	20,53
	Max	7.5	21	24	12	19.12
	Min	5.6	15	17	7	22.15
	W	1.9	6	7	5	3.03
6 th grade	X	7.09	19.31	19.35	10.18	20.15"
	S	0.20	2.71	1.05	1.39	0.13
	Cv %	3.41	1.98	10.54	12.94	6.10
	Med	7.15	19.55	19.71	10.52	19.55
	Max	8.4	24	25	14	19.06
	Min	5.7	17	17	9	21.25
	W	2.7	7	8	5	2.19
7 th grade	X	7.72	19.89	20.11	11.81	19.56
	S	0.13	5.01	1.44	1.44	0.11
	Cv %	2.18	3.59	12.17	11.06	5.10
	Med	7.80	20.11	20.33	13.08	19.35
	Max	9.2	24	27	16	18.43
	Min	6.4	18	19	11	21.25
	W	2.8	6	8	5	2.32



Discussions

Starting from the results of Sen (2003), we tried to bring a new perception's the evaluation of the effort for pupils in grammar school capability during physical training classes and got the following issues. Using a quite small number of means specific to this field during physical training classes for pupils from rural areas, yet simple and long trained means, contributes to raising the level of occurrence in terms of effort's capability, as also shown by the evolution of the calculated arithmetic means, thus confirming research hypothesis. The education level of physical abilities specific to this age is confirmed by the growth in terms of interest for participating in athletic competitions, of self-affirmation, of will to compete with other pupils.

Based on acquired data during raising the trunk reclining face down in 30" probe, which tested the endurance while intensifying back muscularity, I came up with the following conclusion:

- the arithmetic progression calculated according to the physical skills of students from the fifth grade was 18.33 repetitions, exceeding the minimum scale by 2.33 repetitions established by SNE; the arithmetic progression (19.35) calculated according to the performances of the sixth grade exceeds the minimum scale by 2.35 repetitions, and that of the seventh grade (20.11) by 2.11 repetitions. one can observe a linear and proportional increase of the arithmetic progression from one grade to another as compared to the SNE;
- amplitude and standard deviation suggest a normal distribution of results;
- the unsteadiness coefficient suggests a group with average degree of uniformity at this test;
- the value of the median increases along with the increase of the arithmetic progression for each age group;
- the maximum and minimum values show the same tendency of increasing the value of the arithmetic progression. The minimum value is equal as far as results are concerned for the fifth and the sixth grades;

Based on acquired data during vault over the gymnastics bench for 30" probe, which tested the endurance while intensifying feet muscularity, I came up with the following conclusion:

- the best values concerning arithmetic progression calculated according to the physical skills of students from the fifth grade was 8.82 repetitions, exceeding the minimum scale by 2.82 repetitions established by SNE; the arithmetic progression (10.18) calculated according to the performances of the sixth grade exceeds the minimum scale by 2.18 repetitions, and that of the seventh grade (11.81) by 1.81 repetitions;

- amplitude and standard deviation suggest a normal distribution of results;

- the calculated unsteadiness coefficient suggests a group with high degree of uniformity at this test when it comes to results obtained by students from the 6th and the 7th grades and with average degree of uniformity when it comes to results obtained by students in the 5th grade;

- the value of the median increases along with the increase of the arithmetic progression for each age group;

- the maximum and minimum values show the same tendency of increasing the value of the arithmetic progression. The minimum value is equal as far as results are concerned for the fifth and the sixth grades. Based on acquired data during speed racing probe, which tested the travelling speed for a 50 m distance, I came up with the following conclusion:

- the arithmetic progression calculated according to the physical skills of students from the fifth grade was 21.06 seconds, exceeding the minimum scale by 1.14 seconds established by SNE; the arithmetic progression (20.15 sec) calculated according to the performances of the sixth grade exceeds the minimum scale by 1.25 seconds, and that of the seventh grade (19.56 sec) by 0.84 seconds. One can observe a linear and proportional increase of the arithmetic progression from one grade to another as compared to the SNE

- amplitude and standard deviation suggest a normal distribution of results;

- the unsteadiness coefficient suggests a group with high degree of uniformity at this test;

- the value of the median increases along with the increase of the arithmetic progression for each age group;

- the maximum values show the same tendency of increasing and equalization of the lowest performance of students from the 6th and 7th grades. Compared with the results obtained by Dulgheru (2014) in work A Comparative Study Regarding the Level of Developing the Physical Capacities Using Means Adapted to the Age we can say that our research has led to the following conclusions so we can say the interaction between the education of the effort's capability and the individual physical abilities' indication level.

Conclusions

1. Using a quite small number of means specific to this field during physical training classes for pupils from rural areas, yet simple and long trained means, contributes to raising the level of occurrence in terms of effort's capability, as also shown by the evolution of the calculated arithmetic means, thus confirming research hypothesis.



2. The education level of physical abilities specific to this age is confirmed by the growth in terms of interest for participating in athletic competitions, of self-affirmation, of will to compete with other pupils

3. Our research confirms the interaction between the education of the effort's capability and the individual physical abilities' indication level.

4. Physical exercises performed during physical training classes ensure pupils' integration in today's society.

5. The complexity of the reference field, which is physical training, through a large number of related connections imposes the achievement of continuous selection of the most useful and efficient methods and means used during physical training class, in view of increasing the level of occurrence in terms of effort's capability.

6. The physical training class guarantees the continuity of training, by establishing an optimal relation between the level of occurrence in terms of effort's capability and the assimilation of physical skills specific to this field, as well as a gradual analysis of physical effort.

7. The researched test sample has an inconsistent structure, its efficiency being quite modest.

8. The low level of physical ability is the result of the lack of concern on behalf of the young people, as well as of the academics from inferior echelons.

9. The evaluation and the calculation of results targeted not only the quantitative aspect but also the qualitative aspect in terms of pupils' physical evolution.

10. The goal of physical training classes was not only to develop the effort's capability but also to aim at other academic goals.

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