

## WAYS FOR ACHIEVING THE COMPETENCES OF PHYSICAL EDUCATION IN SCHOOL BY THE CONTENT OF THE GYMNASTICS IN 5th AND 6th GRADES

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**Abstract:** The new curriculum is designed as a balance between core curriculum and school curriculum and contributes to decentralization and flexibility in curricular decisions at school level. The aim of our study is the finding opportunities to improve technology new teaching by developing training models operational, intermediate and final for practicing gymnastics lessons, models to coincide with the biomotrical and mental possibilities of the pupils in the 5th and 6th in order to conduct general and specific skills of physical education. Achieving general skills and competencies of physical education by means of gymnastics in the current curriculum has been successful to experiment group, boys and girls, within two years of practice due to the rationalization and optimization of resources for basic gymnastics, acrobatic and jumps, and thanks to achieve consistent patterns of practical training. Permanent was intended to achieve specific competences deriving from themes and are related to the school physical education competences.

### **Introduction**

In terms of curricular reform is a new curriculum for 5th and 6th grades is drafted from the perspective of the transition from model curriculum design centered on objectives - to the model focused on competences (School curriculum for classes 5th – 8th, Physical Education and Sports, București, 2009, p.2).

The new curriculum is designed as a balance between core curriculum and school curriculum and contributes to decentralization and flexibility in curricular decisions at school level.

Our study aims is to highlight the contribution of basic gymnastics, acrobatic, jumps to achieve general skills and competencies

specific to the classes Fifth and Sixth, as a preparation decisive in achieving the final model of the graduate secondary school. Important aspect of this study presents finding ways to improve the means of gymnastics by morpho-functional, motor and mental particularities of the pupils in the 5th and 6th grades whereas the achievement of general skills and specific causes a change of orientation of components and factors of the educational process: content, methods, means and organization.

To achieve a better health of children, their physical harmonious, learning skills and abilities necessary for various activities and achieve performance in school sports is imperative thorough knowledge of the morphological and functional particularities of the pupils from 5th and 6th grade, who are in full somatic and vegetative growth.

At this age there is an intensification of somatic growth and development of functional capacity of the body. Body weight is generally small compared to the length. Children grow quickly in height, muscle stretches, and development remains behind. Develop visual and acoustic-vestibular analyzers favors improvement of gymnastics movements. Increased heart rate makes it difficult to adapt to intense efforts, which require careful dosing. Morpho-functional development level of the respiratory system is insufficient and constitutes a factor of limited exercise capacity, but it can be improved with the development of the lungs and respiratory muscles by gymnastic exercises.

A good understanding of these anatomic, physiological and mental particularities will underpin to plan the specific content of physical education learning units in gymnastics.

### **Material-method**

The aim of our study is the finding opportunities to improve technology new teaching by developing training models operational, intermediate and final for practicing gymnastics lessons, models to coincide with the biomotric and mental possibilities of the pupils in the 5th and 6th in order to conduct general and specific skills of physical education.

By rationalizing and optimizing the basic gymnastics, acrobatic and jumps, while developing motor skills specific by a continuous increase efficiency lessons in terms of volume, intensity and complexity of the exercise, by performing formative aspect of lessons, assessing systematic and continuous level reached biomotric quantitative

accumulation is achieved gradually achieving favorable physical education skills provided in the current curriculum.

In our study which aims at making skills using state of school physical education in the school curriculum gymnastics I used several research methods in different stages. We present these methods depending on the steps followed in the study appearance: bibliographic, pedagogical observation, educational experiment, statistical and mathematical, graphics.

Assessment test for ground exercise or isolated acrobatic elements and jumping at gymnastics devices: for 5th grade - jump in support crouched on the gymnastics crate transversaly, followed by descent right jump and for 6th grade - jump in support crouched on the gymnastics crate transversaly, followed by straight jump with extension.

Gymnastics lessons were held in the gym of the Secondary School "Miron Costin" Suceava with size 50m / 30m.

The gym is equipped with five fixed ladders, 10 gymnastics mats, elastic trampoline, semi-elastic trampoline, two gymnastics crates, a computer connected to the internet, 30 sticks, three medicine balls, 30 bottles of sand (0.5 kg), gym six banks, three devices with traction bars, 2 panels basketball, field sports game handball, field sports game volleyball court, tennis field.

In the experiment group are 22 boys and 18 girls coming from class 5th B. The control group is numerically equal to sample experiment and consists of students of class 5th A (22 boys and 18 girls).

The stages of the study were determined by climatic conditions were the determining factor favoring the lessons and gymnastics in both samples in 5 grade between 24.11.2014 - 03.06.2015 and in 6 grade between 23.11. 2015 - 18.3.2016.

### Results and discissions

Technical preparation level to the ground exercise, isolated acrobatic elements - boys

The experiment group, 5th grade

|           |      |      |      |      |      |      |      |      |      |      |    |
|-----------|------|------|------|------|------|------|------|------|------|------|----|
| Mark      | 9.00 | 9.10 | 9.20 | 9.30 | 9.40 | 9.50 | 9.60 | 9.70 | 9.80 | 9.90 | 10 |
| Frequence | 1    | 1    | 2    | 1    | 2    | 2    | 1    | 3    | 4    | 1    | 4  |

$$\bar{X} = 9.60$$

$$I = 9.00 - 10.00$$

Above  $\bar{X}$  – 12 cases, below  $\bar{X}$  – 9 cases, equal  $\bar{X}$  – 1 case.

The experiment group, 6th grade

|           |      |      |      |      |      |      |      |    |
|-----------|------|------|------|------|------|------|------|----|
| Mark      | 9.30 | 9.40 | 9.50 | 9.60 | 9.70 | 9.80 | 9.90 | 10 |
| Frequence | 2    | 2    | 6    | 3    | 4    | 1    | 2    | 2  |

$$\bar{X} = 9,61$$

$$I = 9.30 - 10.00$$

Above  $\bar{X}$  – 12 cases, below  $\bar{X}$  – 10 cases.

The average index of progress = 0.01.

The control group, 5th grade

|           |      |      |      |      |      |      |      |
|-----------|------|------|------|------|------|------|------|
| Mark      | 8.40 | 8.50 | 8.70 | 8.80 | 8.90 | 9.00 | 9.10 |
| Frequence | 1    | 2    | 4    | 4    | 6    | 4    | 1    |

$$\bar{X} = 8.81$$

$$I = 8.40 - 9.10$$

Above  $\bar{X}$  - 11 cases, below  $\bar{X}$  – 11 cases.

The control group, 6th grade

|           |      |      |      |      |      |      |      |
|-----------|------|------|------|------|------|------|------|
| Mark      | 8.50 | 8.60 | 8.70 | 8.80 | 8.90 | 9.00 | 9.10 |
| Frequence | 2    | 2    | 3    | 8    | 3    | 2    | 2    |

$$\bar{X} = 8.80$$

$$I = 8.50 - 9.10$$

Above  $\bar{X}$  – 7 cases, below  $\bar{X}$  – 7 cases, equal  $\bar{X}$  – 8 cases.

The average index of progress = 0.01.

The average difference at final testings – 6th grade between experiment and control groups were 0.81 for experiment group.

Technical preparation level to the ground exercise, isolated acrobatic elements - girls

The experiment group, 5th grade

|           |      |      |      |      |      |      |    |
|-----------|------|------|------|------|------|------|----|
| Mark      | 9.30 | 9.40 | 9.50 | 9.60 | 9.80 | 9.90 | 10 |
| Frequence | 1    | 1    | 4    | 4    | 3    | 1    | 4  |

$$\bar{X} = 9.68$$

$$I = 9.30 - 10.00$$

Above  $\bar{X}$  – 8 cases, below  $\bar{X}$  – 10 cases.

The experiment group, 6th grade

|      |      |      |      |      |      |      |    |
|------|------|------|------|------|------|------|----|
| Mark | 9.40 | 9.50 | 9.60 | 9.70 | 9.80 | 9.90 | 10 |
|------|------|------|------|------|------|------|----|

|           |   |   |   |   |   |   |   |
|-----------|---|---|---|---|---|---|---|
| Frequence | 2 | 1 | 4 | 2 | 3 | 2 | 4 |
|-----------|---|---|---|---|---|---|---|

$$\bar{X} = 9.68$$

$$I = 9.40 - 10.00$$

Above  $\bar{X}$  – 11 cases, below  $\bar{X}$  – 7 cases.

The average index of progress = 0.

The control group, 5th grade

|           |      |      |      |      |      |      |      |      |
|-----------|------|------|------|------|------|------|------|------|
| Mark      | 8.40 | 8.50 | 8.60 | 8.70 | 8.80 | 8.90 | 9.00 | 9.10 |
| Frequence | 3    | 4    | 5    | 2    | 1    | 1    | 1    | 1    |

$$\bar{X} = 8.63$$

$$I = 8.40 - 9.10$$

Above  $\bar{X}$  – 6 cases, below  $\bar{X}$  – 12 cases.

The control group, 6th grade

|           |      |      |      |      |      |      |      |
|-----------|------|------|------|------|------|------|------|
| Mark      | 8.40 | 8.50 | 8.60 | 8.70 | 8.80 | 8.90 | 9.00 |
| Frequence | 3    | 2    | 4    | 3    | 2    | 2    | 2    |

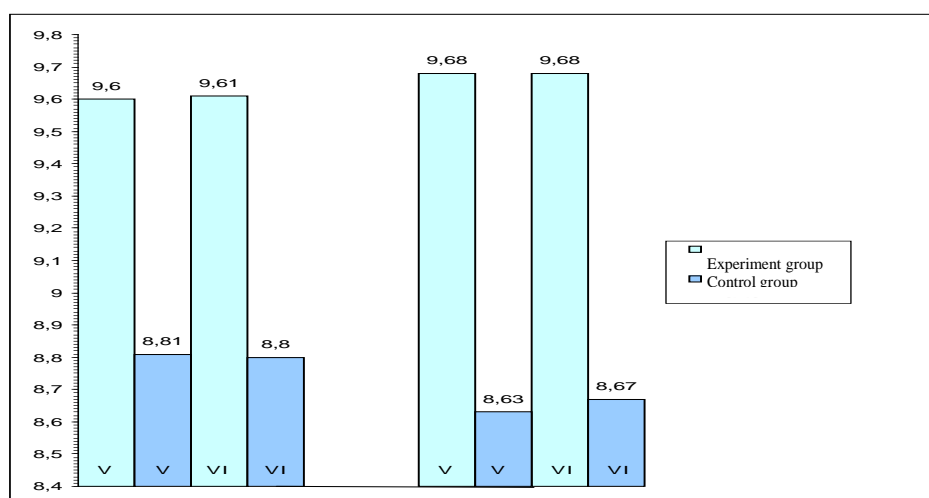
$$\bar{X} = 8.67$$

$$I = 8.40 - 9.00$$

Above  $\bar{X}$  – 9 cases, below  $\bar{X}$  – 9 cases.

The average index of progress = 0.04 due to the degree of difficulty has higher than in 5th grade.

The average difference at final testings – 6th grade between experiment and control groups were 1.01 for experiment group.



Graphical representation of average results obtained in the ground exercise, freely chosen (boys, girls)

### Jumps – boys

#### Experimental group, 5th grade

| Mark        | 8.90 | 9.00 | 9.10 | 9.20 | 9.30 | 9.40 | 9.50 | 9.60 | 9.70 | 9.80 | 9.90 | 10 |
|-------------|------|------|------|------|------|------|------|------|------|------|------|----|
| Frequencies | 1    | 1    | 1    | 1    | 2    | 1    | 4    | 2    | 2    | 2    | 1    | 4  |

$$\bar{X} = 9.55$$

$$I = 8.90 - 10.00$$

Above  $\bar{X}$  – 11 cases, below  $\bar{X}$  – 11 cases.

#### Experimental group, 6th grade

| Mark      | 9.00 | 9.10 | 9.30 | 9.40 | 9.50 | 9.60 | 9.80 | 9.90 | 10 |
|-----------|------|------|------|------|------|------|------|------|----|
| Frequence | 1    | 2    | 1    | 4    | 4    | 4    | 3    | 1    | 2  |

$$\bar{X} = 9.53$$

$$I = 9.00 - 10.00$$

Above  $\bar{X}$  – 10 cases, below  $\bar{X}$  – 12 cases.

The index somewhat weaker (-0.02) due to higher degree of difficulty than in 5th grade.

#### Control group, 5th grade

|           |      |      |      |      |      |      |      |
|-----------|------|------|------|------|------|------|------|
| Mark      | 8.40 | 8.50 | 8.60 | 8.70 | 8.80 | 8.90 | 9.00 |
| Frequence | 1    | 3    | 3    | 3    | 4    | 4    | 4    |

$$\bar{X} = 8.75$$

$$I = 8.40 - 9.00$$

Above  $\bar{X}$  – 12 cases, below  $\bar{X}$  -10 cases.

Control group, 6th grade

|           |      |      |      |      |      |
|-----------|------|------|------|------|------|
| Mark      | 8.70 | 8.80 | 8.90 | 9.00 | 9.10 |
| Frequence | 3    | 5    | 5    | 5    | 4    |

$$\bar{X} = 8.90$$

$$I = 8.70 - 9.10$$

Above  $\bar{X}$  – 9 cases, below  $\bar{X}$  – 8 cases, equal with  $\bar{X}$  - 5 cases.

The average index of progress = 0.15

The average difference at final testings – 6th grade between experiment and control groups were 0.63 for experiment group.

Jumps, girls

Experimental group, 5th grade

|           |      |      |      |      |      |      |      |      |      |
|-----------|------|------|------|------|------|------|------|------|------|
| Mark      | 9.00 | 9.20 | 9.30 | 9.40 | 9.50 | 9.60 | 9.70 | 9.80 | 9.90 |
| Frequence | 1    | 1    | 1    | 3    | 2    | 4    | 2    | 2    | 2    |

$$\bar{X} = 9.55$$

$$I = 9.00 - 9.90$$

Above  $\bar{X}$  -10 cases, below  $\bar{X}$  – 8 cases.

Experimental group, 6th grade

|           |      |      |      |      |      |      |      |    |
|-----------|------|------|------|------|------|------|------|----|
| Mark      | 9.30 | 9.40 | 9.50 | 9,60 | 9.70 | 9.80 | 9.90 | 10 |
| Frequence | 1    | 1    | 4    | 3    | 2    | 3    | 1    | 3  |

$$\bar{X} = 9.67$$

$$I = 9.30 - 10.00$$

Above  $\bar{X}$  – 9 cases, below  $\bar{X}$  -9 cases.

The average index of progress = 0.12 due to the degree of difficulty has higher than in 5th grade.

Control group, 5th grade

|           |      |      |      |      |      |      |      |
|-----------|------|------|------|------|------|------|------|
| Mark      | 8.50 | 8.60 | 8.70 | 8.80 | 8.90 | 9.00 | 9.10 |
| Frequence | 3    | 2    | 3    | 2    | 4    | 3    | 1    |

$$\bar{X} = 8.78$$

$$I = 8.50 - 9.10$$

Above  $\bar{X}$  – 10 cases, below  $\bar{X}$  – 8 cases.

Control group, 6th grade

|           |      |      |      |      |      |      |      |
|-----------|------|------|------|------|------|------|------|
| Mark      | 8.40 | 8.50 | 8.60 | 8.70 | 8.80 | 8.90 | 9.00 |
| Frequence | 2    | 3    | 2    | 3    | 2    | 2    | 4    |

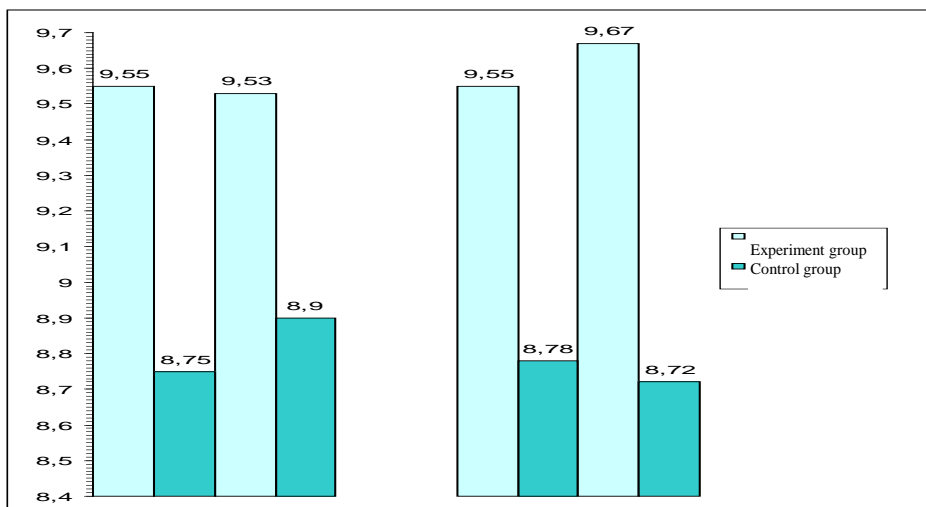
$$\bar{X} = 8.72$$

$$I = 8.40 - 9.00$$

Above  $\bar{X}$  – 8 cases, below  $\bar{X}$  – 10 cases

The average index of progress = 0.06 due to the degree of difficulty has higher than in 5th grade.

The average difference at final testings – 6th grade between experiment and control groups were 0.85 for experiment group.



Graphical representation of average results obtained on jumps (boys, girls)



### **Conclusions**

Achieving general skills and competencies of physical education by means of gymnastics in the current curriculum has been successful to experiment group, boys and girls, within two years of practice due to the rationalization and optimization of resources for basic gymnastics, acrobatic and jumps, and thanks to achieve consistent patterns of practical training. Permanent was intended to achieve specific competences deriving from themes and are related to the school physical education competences.

Better technical results at the experiment group, both girls and boys obtained in the ground exercise (acrobatic elements isolated) and jumps were due and specific physical preparation on the development of strength, speed, coordination and of specific resistance.

It has achieved a new type of relationship in joint work of pupils under the careful guidance of the teacher who played the proponent for pupils activity, and they became active in learning process to understand the value of training their own self-assessment results.

Independent practice exercises for major muscle groups developing strength, mobility of the spine, the hip-femoral and scapular-humeral joints increased efficiency physical education lessons in gymnastics themes.

Pupils participation in evaluating the level of the body physiological functions I was aware and I convinced them the favorable effects of the movement that influenced the strengthening of health.

Two hours of physical education per week are not enough to ensure a proper sports and physical preparation and the introduction of one hour of sports activities based on pupils demands could be a good solution.

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**MODALITĂȚI DE REALIZARE A COMPETENȚELOR  
EDUCAȚIEI FIZICE ȘCOLARE PRIN CONȚINUTUL  
GIMNASTICII LA CLASELE a V-a – a VI –a**

**Cuvinte cheie: competențe, gimnastică, gimnaziu, educație fizică**

**Rezumat:** Noul curriculum școlar este conceput ca un echilibru între curriculum nucleu și curriculum la decizia școlii și contribuie la descentralizarea și flexibilitatea deciziilor curriculare la nivelul unităților școlare. Scopul studiului nostru îl constituie găsirea posibilităților de perfecționare a tehnologiei didactice noi prin elaborarea de modele de instruire operaționale, intermediare și finale pentru practicarea gimnasticii la lecții, modele care să concorde cu posibilitățile biomotrice și psihice ale elevilor din clasele a V-a și a VI-a în vederea realizării cu succes a competențelor generale și specifice ale educației fizice. Realizarea competențelor generale și a competențelor specifice ale educației fizice prin mijloacele gimnasticii prevăzute de actuala programă școlară a fost încununată de succes la eșantionul de experiment, băieți și fete, în doi ani de instruire datorită raționalizării și optimizării mijloacelor gimnasticii de bază, acrobatice, ritmice și a săriturilor la aparate, precum și datorită realizării consecvente a modelelor de instruire în activitatea practică. Permanent s-a urmărit realizarea competențelor specifice ce decurg din teme și sunt în corelație cu competențele generale ale educației fizice școlare.