# DEVELOPEMENT OF COORDINATION CAPACITY FOR STUDENTS OF FACULTY OF PHISICAL EDUCATION AND SPORTS BY TEACHING ACROBATIC ELEMENTS IN THE ON LINE SISTEM

**Pața Oana Cristina** University "Ștefan cel Mare" of Suceava

# Keywords: teaching, developement, coordination, acrobatic elements, on line

#### Abstract

The paper aims to demonstrate the role of acrobatic elements taught on line, in the development of coordination with students of the Faculty of Phisical Education and Sports. By teaching on line static and dynamic acrobatic elements, the aim is to form specific gymnastics skills and analyze their role in developing coordination skills in second year students.

Adapting teaching to the online system involves a different approach to teaching, a limited space for performing the elements of school acrobatic gymnastics and different strategies for explaining and presenting them for learning.

By introducing in the lessons taught online the specific means of acrobatic gymnastics in school, their learning can be achieved by the students of the faculty of physical education and sports and the capacity of neuro-muscular coordination is developed in the second year students.

#### Introduction

The static and dynamic acrobatic elements that make up the content of gymnastics in school, are specific gymnastics skills that are taught at all levels of education, are of great diversity and motor complexity and meet important general objectives for school physical education, but also concrete operational objectives in lessons of physical education, in the direction of the development of general and specific motor qualities. Among the general objectives of physical education[1,9], the physical development of pupils and students would be the most important objective, to which is added the development of motor capacity, which involves the acquisition of specific skills in gymnastics, but also the development of general and specific motor qualities.

"The superior valorization of the acrobatic gymnastics imposes to the teachers-specialists a thorough training and a scientific, ascending, objective, planned, algorithmized, adapted methodical approach.

This involves the application of an upward, phased, structural operating system of the structural type. Through the wide range of services it can offer at the level of "support", "learning", "improvement", "choreography", it responds to the requirements, possibilities and individual characteristics of the various categories of aspiring gymnasts. "[2,8]

The current study aims to verify the level of development of coordination skills in the students of the Faculty of Physical Education and Sports, in terms of learning specific skills in gymnastics, respectively static and dynamic acrobatic elements, through the method of online teaching. It also aims to verify the level of understanding of the technique of acrobatic elements through explanations, demonstrations and presentation of intuitive materials (movies) in the online teaching system.

A novelty aspect of the study is given by the fact that students will be subjected to practice in the personal space, on an area of  $2 \text{ m}^2$ , as a result of mental representations of specific skills, elements, their technique, explained and presented simultaneously, in while watching a film that shows the skill to be learned.

In teaching the elements of acrobatic gymnastics, the first stage of the formation of the correct representation of the skill [3], of the acrobatic element to be learned by the students, is very important movement. At the basis of this stage are the explanations and the use of intuitive means (demonstrations, film images, video, photo, etc.), presented based on a model. Explanations must lead to correct representations that highlight the essential parts, key moments or main features of the movement to be mastered. Forming the correct image about movement has a very important role in the process of acquiring skills, because a well-presented and explained movement can be "halflearned".

In the conditions of online teaching, this first part of learning static and dynamic acrobatic elements was done properly, by presenting intuitive materials such as drawings, images and teaching films, but also by explaining the technique of specific skills, simultaneously with the presentation of films. The films presented, with gymnasts from the A.C.S. Profesport Suceava, proved to be extremely effective, contributing greatly to the first stage of learning, regarding the correct and clear representation of the skill (acrobatic element) to be learned.

Teaching gymnastics online has been a real challenge for both teachers and students, requiring a new adaptation of teaching and strategies for the transmission of knowledge and training of specific gymnastics skills to students of physical education and sports.

The formation of the representation of movements, in the case of static and dynamic acrobatic elements [1], can be done either by the teacher's demonstration or by intuitive materials, such as drawings, photographs, films, or others. The best representations of the elements in online teaching were represented by films with acrobatic elements, made by gymnasts of the A.C.S. Profesport Suceava, a private sports club where specific gymnastics activities take place. The films with gymnasts performing static acrobatic elements, were made in the gym of the Ştefan cel Mare University of Suceava and were presented during the online teaching, to the students of the Faculty of Physical Education and Sports.

In order to form a clear and correct representation of the movement to be learned, in addition to the explanation and the method of intuition was used by presenting these films with acrobatic elements. The students managed by watching the films with acrobatic elements, to form a correct image of the movement to be learned.

"Based on this mental image, the performers elaborate a mental project of action determined by the previous motor experience, by the motor skills, but also by the personal particularities of each one. The duration of this stage depends on the ability of each performer to understand. "[3]

The practice of the elements was done by each student in his own space, in front of the computer, on a small space, of only 2 m<sup>2</sup>ca due to the explanations formulated by us, but also as a result of watching the didactic films, with the static and dynamic acrobatic elements proposed to learning.

The content of acrobatic gymnastics in school includes simple static acrobatic elements, strength and balance, (balance, sitting on the shoulder blades, sitting on the head, sitting on the hands), mobility (rope and bridge) and dynamic acrobatic elements (rolling, rolling, overturning), jumps. [4]. Of these, only those that allowed students to perform them in their own space, of 2 m, in front of the computer, respectively, all the static and dynamic acrobatic elements, between

rolling, rolling, and overturning, were taught in the online system. slow, in students with better motor skills.

## **Materials-methods**

The hypothesis of the paper

The research work started from the hypothesis according to which, if they will be used in online teaching, at the students of the Faculty of Physical Education and Sports, intuitive methods and means, respectively simultaneous explanations with the presentation of didactic films, with gymnasts performing acrobatic elements and will be performed by students, on a personal space of 2m<sup>2</sup>, the learning of motor skills specific to gymnastics will be achieved in a correct and efficient way and the coordination capacity will be developed.

### ORGANISATION OF THE STUDY:

The subjects of the research were second year students, from the Faculty of Physical Education and Sports, "Ștefan cel Mare University of Suceava, from the Physical Education and Sports Education study program. The subjects that constituted the experimental group were chosen on the basis of the frequency of the practical works carried out online, being included in the study only the students who attended over 70% of the practical works carried out online. They are aged between 20 and 22 years, and the experimental group included a number of 8 girls and 7 boys.

The experiment took place in two major stages, online teaching and on-site teaching and verification. The place of the experiment was in the online environment, on the "Meet" platform, where the activity of teaching the means of acrobatic gymnastics was carried out and in the gym of the university, where the activity of verifying the competences acquired by the students in online activity.

The experiment took place during the first semester, of the academic year 2019-2020, and began with the initial tests of students, in gymnastics lessons, at the beginning of the first semester, in the second year of study. The students were tested in terms of the level of development of coordination skills, through specific tests and in terms of the level of the level of knowledge of simple static and dynamic acrobatic elements, [5] which were presented in the first year of study.

The experiment continued with the teaching of the specific contents of acrobatic gymnastics in school, in an online system, with the help of didactic films, which represented the teaching elements

performed by gymnasts of A.C.S Profesport Suceava. The students executed the elements on their personal space, in front of the computer, on an area of  $2 \text{ m}^2$ , according to the representations and explanations made online by us.

The experiment ended with the final tests, and the results were recorded in tables, were statistically analyzed and interpreted and led to the development of this research study.

The implementation of intuitive online teaching methods for firstyear students at the Faculty of Physical Education and Sports was done during the second semester of the 2019-2020 academic year. The content to be taught was systematized and presented in accordance with the pedagogical requirements imposed by on line teaching, regarding the transmission of theoretical and practical knowledge specific to the discipline Theory and practice in branches of gymnastics: artistic and acrobatic. The novelty element of the current study refers to the use in teaching of their own intuitive teaching materials, made with gymnasts working at the A.C.S. Profesport Suceava. By making explanations simultaneously with the presentation of films with the acrobatic elements to be learned, an efficient learning process of specific gymnastics skills was achieved.

# **Results and discutions**

The results of the research on the development of coordination in the students of the Faculty of Physical Education and Sports by teaching acrobatic elements on line.

STATISTICS INDICATORS WITH GYMNASTIC TESTS ON LINE												
	Balance			Sitting on		Bridge		Sitting on the				
			the		_		head					
				shoulders								
test	T.I.	T.F.	T.I.	T.F.	<b>T.I.</b>	T.F.	T.I.	T.F.				
Х	4.26	1.4	4.66	1.13	6	1.93	8.26	1.6				
S	0.99	0.87	1.01	0.80	0.73	0.77	1.33	1.08				
CV	0,232	0,621	0,21	0,70	0,121	0,398	0,161	0,675				

Statistics indicators with gymnastic tests on line

**GRAPH NO. 1.** Representation of the results of the experimental group at the on-line gymnastics tests



Statistic indicators with gymnastic tests on site											
TESTS	Sitting on the hand		The wheel		Floor exercices						
TIME	T.I.	T.F.	T.I.	T.F.	<b>T.I.</b>	<b>T.F.</b>					
TEST											
Χ	5.26	8.13	6.06	8.73	5.33	8.13					
S	1.062	1.20	1.06	0.85	0.69	1.024					
CV	0,201	0,147	0,174	0,097	0,129	0,125					

GRAPH NO. 2. Representation of the results of the experimental group at the on-site gymnastics tests



The analysis of the research results shows that the students of the experimental group progressed from the initial test to the final

test, succeeding in learning all the acrobatic elements in which they were tested.

In the gymnastics tests, where they were tested online, the number of mistakes made by each subject in the initial and final tests was taken into statistical analysis, and in the gymnastics tests carried out on site, it was appreciated with grades, the degree of learning of the elements within the test.

Both the results obtained in the online tests and the results obtained in the on-site tests, can be observed a progress of the subjects, from the initial testing to the final testing.

In the gymnastics tests taken online, the arithmetic mean obtained at the balance element, the facial scale, a progress of 2.86 errors was obtained, from the initial test to the final test, the students starting the vast majority from good results, since at the initial test. In the test on the shoulder blades, a better result was obtained than in the previous test, in the final test, the progress being 3.53 mistakes. In the "Lower Bridge" test, the progress was even higher than in the previous tests, of 5.07 mistakes, and in the stand test, the progress was the best, of 7.66 mistakes. It is observed from the progress rates, that the students of the experimental group made less by 7.66 mistakes on average in the final test, compared to the initial test in the "stand on head" test, while in the "Bottom Bridge" test they did with 5.07 less mistakes in the final test, and at the stand on the shoulder blades the progress was lower, but also the mistakes were less in the case of both tests.

In the tests evaluated on site and appreciated with grades, it is observed again that the subjects of the experimental group progressed, from the initial test to the final test, obtaining as follows: in the test sitting on hands, the average of the grades from the initial test was 5, 26, and in the final test of 8.13, the difference being 2.87 points in the final test compared to the initial test. At the lateral overturning, the difference was 2.67 points in the final test compared to the initial test, and in the ground exercise, the average of the grades was higher in the final test, compared to the initial test, with a difference of 2.80 points.

### Conclusions

In conclusion, it can be stated that in all gymnastics tests, both those held online and those held on site, students have made considerable progress from initial testing to final testing, which shows that the online teaching of acrobatic elements , through the methods and means

proposed by us, have contributed to a correct and efficient learning of specific gymnastics skills.

By using verbal and intuitive methods, in the on line system, [1], respectively by making the explanation simultaneously with the presentation of didactic films specially designed for this purpose, an effective teaching can be achieved to the students of the faculty of physical education and sports, determining a proper learning of static and dynamic acrobatic elements and implicitly a better development of the coordination capacity [6,7,10].

By teaching on site, the consolidation of simple static and dynamic acrobatic elements[7] was achieved and other more complex elements were taught, which were later perfected in bindings and combinations, being presented in the ground exercise. The marks obtained by the students at the final evaluation, at the ground exercise test with imposed elements, demonstrate the students' progress, in terms of developing the ability to balance, spatial orientation, neuro-muscular coordination, in the execution of acrobatic gymnastics elements. Regarding the use of intuitive teaching materials, such as films with acrobatic elements made by gymnasts, in online teaching to students of physical education and sports, it contributes optimally to the educational instructional process of teaching / learning motor skills specific to gymnastics, respectively of the acrobatic elements, but also to the development of the capacities of neuro-muscular coordination, balance and orientation in space, necessary for the execution of the combined elements and presented in the form of a ground exercise.

# Refrences

[1] Rață G., Rață Gh., Educația fizică i metodica predării ei, Editura Pim, Iași

[2] Popescu G., (2005), Gymnastics Training, Education, Development, Elisavaros Publishing House, Bucharest

[3] Nanu L., Drăgan T.M., (2010), Gimnastics Students Book, Publishing House, Galați University Press, Galați

[4] Pața O.C., (2015), Theory and practice in branches of artistic and acrobatic gymnastics, vol 2., "Ștefan cel Mare,, University Publishing House from Suceava

[5] Gonczi Raicu, M., Nicolin, M., (2002), Gymnastic, Mirton Publishing House, Timisoara [6] Niculescu I.I., (2009), Evaluation in motor education, Universitaria Publishing House, Craiova

[7] Pața O.C., (2014), Theory and practice in branches of artistic and acrobatic gymnastics, vol 1., "Ștefan cel Mare,, University Publishing House from Suceava

[8] Popescu, G., (2005), Gymnastics Training, Education, General Physical Development, Elisavaros Publishing House, Bucharest.

[9] Rață, G., (2004), Didactics of school physical education, Alma Mater Publishing House, Bacău.

[10]Săvescu I., (2007), Educația fizică și sportivă școlară-culegere de exerciții fizice - Metodologie, Editura Aius PrintEd, Craiova