IMPROVING THE EXPLOSIVE FORCE OF THE UPB STUDENTS BY MEANS SPECIFIC TO JUDO

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Abstract

The main factor that determines the explosive force is the mobility of the nervous processes. Acquiring by the students the operational training structures, specific to judo contributes to increasing the efficiency of their application in the Physical Education lessons.This study attempts to prioritize the judo specific means for developing the explosive force among the UPB students in the physical education lesson.Improving the development of the explosive force in physical education lesson is a determining factor in studens't performance. The methodology of learning and of perfecting the technique, rely on the processes gathered by the biomechanical and methodical-pedagogical study of the student's actions. The development of the explosive force can be achieved by means of elaborating the appropriate dynamic stereotype (movements education in maximum speed mode). The use of methodological structures in the training process, with the imprint of our contribution to improving the content and the efficiency of the methodology used, will improve the explosive force. Thus, I consider appropriate the prerequisite for taking into account specific criteria on prioritizing the judo means in the Physical Education lesson from the UPB.

Keywords: *explosive force, specific means, judo, Physical Education lesson*

JEL classification: I12, I19, I20

Introduction

This study aims to investigate the effects of practicing judo on the explosive force by using in the Physical Education lessons from the UPB means specific to judo. To achieve this we will need a broad and multidisciplinary documentary informing in order to establish the methodological and theoretical bases for this topic. This contribution is achieved through a selection in the perception field and an intensification of the selection linked to the stimuli perception, ultimately ensuring greater clarity and understanding of the phenomenon. In selecting the exercises specific to judo and in their use in the Physical Education lessons we will take into account the instructional -educational objectives of the learning process in its various stages (Hantau,I.2005).

Due to their nature selective, the judo specific elements can greatly influence the development of the explosive force of the students. To render the exercises as efficient as possible they should be strictly selected and comply with the

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individual, morphological, functional and psychological peculiarities of the students. Only a thorough knowledge of the physical peculiarities of the collective and of the students' individual peculiarities can lead to a more efficient training process (Ardelean,T.1991). The exercises and the exercise structures are not a goal in itself; they are means for training and developing the skills and abilities, the motor qualities, and for achieving higher development indexes in the body's morphological and functional development (Pradet,M.2000).

1. The purpose of the work

The purpose of this study is to conduct a study on the level of development of the explosive force among the students in the UPB by using the means specific to the judo in the physical education lessons. This paper tries to open new directions for guiding the Physical Education lessons in the UPB.

2.Hypothesis

This study started from the hypothesis that if the students will acquire the operational training structures specific to judo, this will contribute to increasing the efficiency of their application in the Physical Education lessons, and to developing the students' explosive force.We have left the hypothesis that explosive force development is a determining factor in student performance by means of judo. We assume that the use of judo's specific means in physical education lessons is moderating variables in the sense of developing explosive force in UPB students.

3.Methods

The following research methods were used for the proper study: the bibliographic study method, the (direct) observation method, the experimental method, the statistical-mathematical method.

4.The content of the experiment

In our experiment, we used independent variables under experimental control.

I intervened in preparing the students from the experimental group with judo means to improve the explosive force and I developed a program for its development.

Operational training structure was used, namely:means specific to explosive force development:squats with partener, movement in guard position, jumps over partner.

a. Place and duration of the research

The experimental research was carried out on a number of 20 students belonging to the Transport Faculty of UPB. The experimental research project was carried out during the two semesters. The testing took place within the physical education hall of U.P.B. in 2013-2014, and the two weeks were not included in the training program.

b. Subjects

In the composition of the experimental group participating in the research it was chosen the random selection of 20 subjects, representing students of the Faculty of Transportation, from U.P.B.

c. Presentation of the test

Subjects intervened during the two semesters with the application of the independent variable, which was carried out in the physical education lessons in the university hall. The subjects were initially and finally tested by a vertical jump test. They are measured in centimeters depending on how by far jumped the subject.

d. Results

The test results are presented below:

Table 1

Explosive force									
Experimental group									
TESTARE	Media aritmetica	Mediana	Mod	Abaterea Standard	Abaterea Medie	Er.Std.	Dispersia	Ampl.	Coef. variatie
Experiment T.I.	45,00	47,00	53,00	7,43	6,20	1,66	55,26	25,00	16,52
Experiment T.F.	48,65	50,00	48,00	6,56	5,12	1,47	42,98	21,00	13,48
t-TEST									
Valoare t calculata		**8,03**							
Valoare t critic		**2,09**							

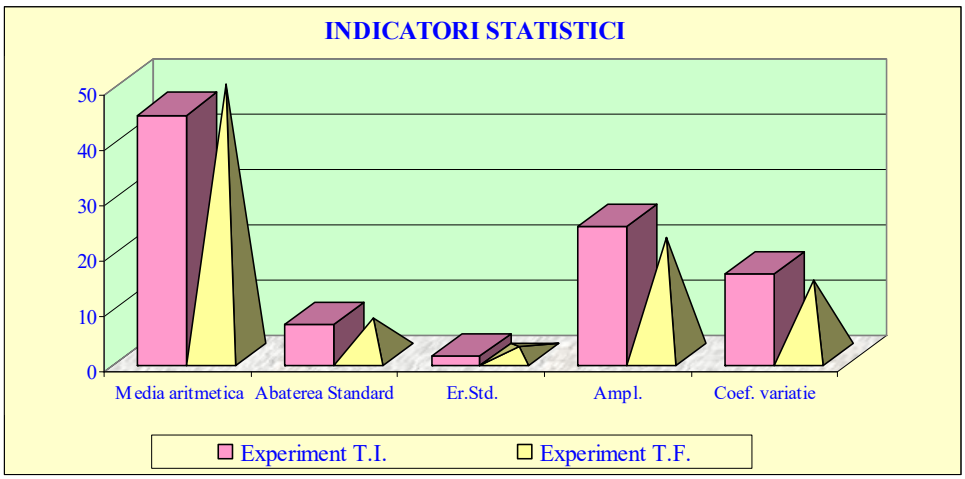

Figure 1

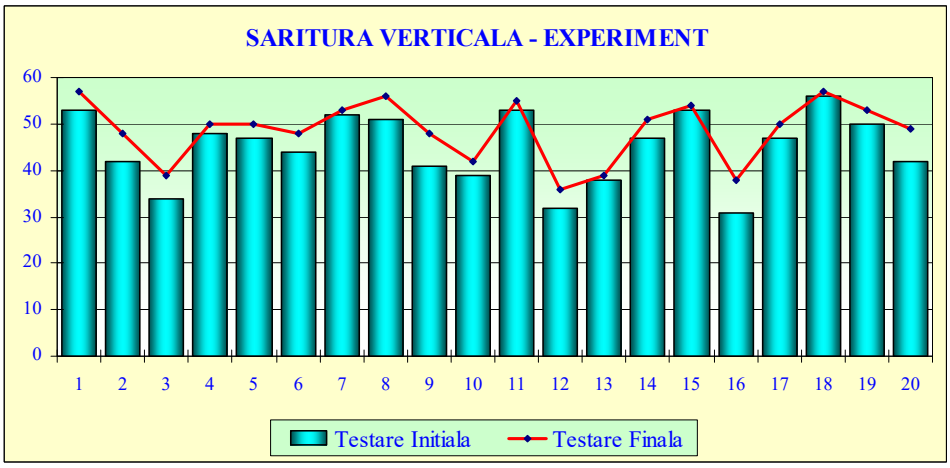

Figure 2

- Arithmetic mean - we see an increase from 3.65 cm from initial testing to final.
- The median - has changed from 47.00 cm to 50.00 cm in final testing.
- The module - from 53.00 cm at first test dropped to 48.00 cm at final test
- The standard deviation - decreases from 7.43cm to initial test at 6.56cm in final testing.
- The medium deviation - decreases from 6.20 cm in initial testing to 5.12 cm in final testing.
- The standard error - decreases from 1.66 cm at first test to 1.47 cm at final test.

- The dispersion - decreases from 55.26 cm in initial testing to 42.98 cm in final testing.
- The amplitude - decreases by 4.00cm between the two tests (initial and final)
- The coefficient of variation - has a decrease from 16.52cm to 13.48cm at the final test - a relatively homogeneous sample.

By calculating the t - bilateral test, for verifying the null hypothesis the value of t is 8.03. Comparing it with the value in the Fischer table, for the 0.05 confidence threshold, it is found that the calculated t has a value greater than the t-table of 2.09. Therefore, the null hypothesis is rejected, the difference between the two being significant.

The final results in the two tests reveal significant increases in final testing by applying to the judo specific training program.

- 19 students achieved better results at the final test than at the initial test.

- A single student obtained the same result between the two tests.

- The best value increase was 16 cm.

e. Conclusions

Following the study, the obtained results show that the specific means of judging in the physical education lessons with UPB students produce significant increases in the explosive force at the experimental group students, having significantly improved values at the end of the research. The methods used to rationalize and algorithmize the means of preparation, the compilation of a database, the tables, and the graphs, can make the students' training process more objective. The level of development of the explosive force on the experimental group, ascertained by the results recorded in the two initial and final tests, confirms the correctness of elaboration of the conception and the methodology of organizing the development and evaluation of the conducted study.

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