



IMPROVING THE UPB STUDENTS' FLEXIBILITY BY USING MEANS OF JUDO

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Abstract

Improving the mobility development in the physical education class is a determining factor in the students' performance. The psychology and methodology of learning and of technique perfecting is supported by the processes in the biomechanical and methodical-pedagogical study of the student's actions. The fact that the students acquire the operational structures of training, specific to judo contributes to increasing mobility and the efficiency of their application in the physical education lessons. This paper aims to investigate the physical activity of the UPB students by using methodological structures of training specific to judo in the physical education lessons. The research methods that were the basis of this study is based on are the following: the bibliographic study, the observation method, the experimental method, the statistical and mathematical method. Starting from the belief that using the means of judo in the physical education lessons from the U.P.B. represents a condition for meeting the objectives we can create the motivational prerequisites for attracting the students and thus they will contribute to developing the motor qualities. The results obtained from the data analysis certify that use of the judo elements in the physical education lessons has a positive influence on the motor skills development and implicitly on the students' flexibility.

Keywords: *physical potential, specific means, judo, physical education lesson, flexibility*

JEL classification: *I12, I19, I20*

1. Introduction

This study aims to investigate the effects of practicing judo on the motor qualities 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. Due to their nature selective, the judo specific elements can greatly influence the development of the motor qualities and implicitly of the students' flexibility (Hantău I., 2005). To render the exercises as efficient as possible they should be strictly selected and comply with the individual, morphological, functional and psychological peculiarities of the students (Epuran M., Horghidan V., 1994). Only a thorough knowledge of the physical and psychological 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

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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 (Harre D., 1987). The motor skills are conditioned by the cardiorespiratory the system, nervous system and the muscular system; its basic subcomponents are the endurance, the strength, the speed, the coordination, the balance, the sense of rhythm, the motor intelligence, and the mobility or flexibility (Pradet M., 2000). Sports skills education is only achieved by using means specific to a sports branch (judo), in correlation with a proper guidance from a specialized teacher.

2. The Purpose of the Paper

The purpose of this paper is to conduct a study on the development of mobility among UPB students using judo specific means in the physical education lessons.

3. Hypothesis

We started from the hypothesis stating that the development of mobility by the means of judo is a determining factor in students' performance. We suppose that using the judo specific means in the physical education lessons represents moderating variables, meaning that they develop the mobility of the UPB students.

4. Research Methods

In order to conduct the study properly we used the following research methods: the bibliographic study method, the (direct) observation method, the experimental method and the statistical-mathematical method.

5. Experiment Content

We employed in our experiment independent variables, under experimental control. We introduced judo means in the training of the students from the experimental group in order to improve mobility and we elaborated a program to develop it. We used training operational structures, such as:

- a. specific means for developing and training speed;
- b. specific means for developing power;
- c. specific means for developing resistance.
- d. specific means for developing mobility.

5.1. Place and Duration of the Research

The experimental research was conducted on a total group of 20 students belonging to the Faculty of Transports from the UPB. The experimental research



project was carried out over two semesters. The two tests were held in the U.P.B. physical education hall during first and second semester of 2013-2014 academic year and the two weeks were not included in the training program.

5.2. Subjects

In making up the experimental group participating in the research we opted for the random selection of 20 subjects who are students from the UPB's Faculty of Transports.

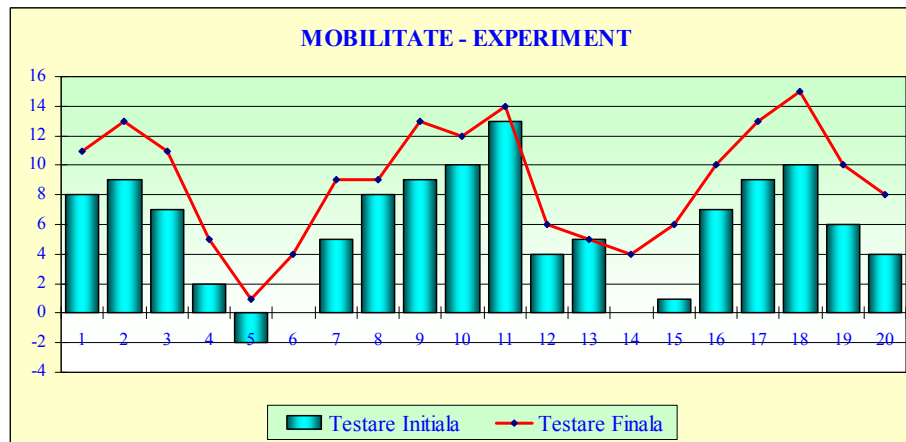
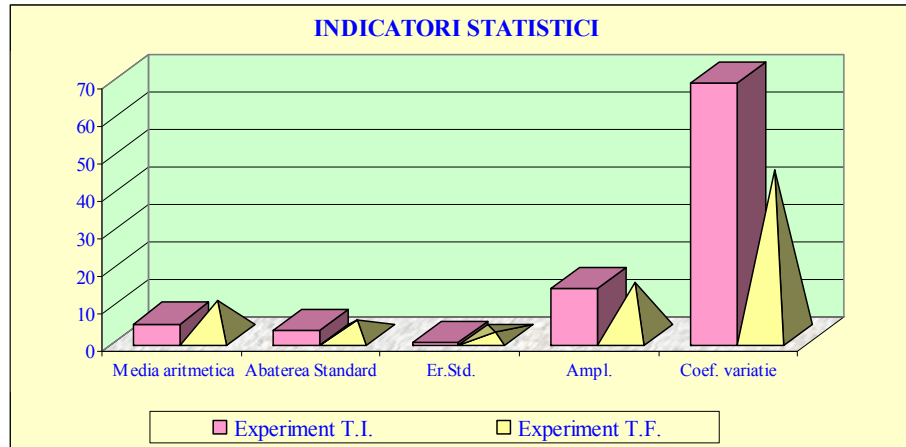
5.3. Research Design

We applied on the subjects for the two semesters the independent variable; the testings were held during the physical education lessons in the university physical education hall. The subjects were tested at the beginning and of the experimental presented time with a flexibility test consisting in bending the trunk forward from a sitting position and stretching the hands as far as possible. We measure it in centimeters accordingly on how far the subject could stretch out. We mention that the knees are stretched, we keep them in this position for two seconds and we measure on a graduated scale.

6. Results

The testings' results are presented in what follows:

FLEXIBILITY									
EXPERIMENTAL GROUP									
TESTING	Arithmetic Mean	Median	Module	Standard Deviation	Medium Deviation	Std. Er.	Dispersion	Ampl.	Variation Coeff.
T.I. Experiment	5.75	6.50	9.00	4.00	3.28	0.89	15.99	15.00	69.54
T.F. Experiment	8.95	9.50	13.00	3.93	3.26	0.88	15.42	14.00	43.87
t-TEST									
The calculated value of the t		10.51							
Value of the critical t		2.09							



- The arithmetic mean– increased from 5.75 cm at the initial testing to 8.95 cm at the final testing.
- The median – we find an increase of 3 cm between the two testings (initial and final).
- The module – increased from 9.00 cm at the first testing to 13.00 cm at the final testing.
- The standard deviation – decreases from 4.00 cm at the initial testing to 3.93cm at the final testing.
- The medium deviation – decreases from 3.28 cm at the initial testing to 3.26cm at the final testing.
- The standard error – decreases from 0.98cm at the initial testing to 0.82cm at the final testing.



- The dispersion – decreases from 15.99cm at the initial testing to 15.42cm at the final testing.
- The amplitude – decreases with 1cm between the two testings (initial and final).
- The variation coefficient – at the initial testing was of 69.54 cm and at the final testing of 43.87cm – the sample is relatively homogenous.

By calculating the t –the bilateral test, to verify the null hypothesis, we find that its value is of 10.51; thus for a reliability threshold of $p < 0.05$, the calculated t is higher than the critical t value, of 2.09 which suggests that the null hypothesis is rejected, the difference being significant.

7. Conclusions

Following the study conducted, the results we obtained demonstrate that the judo specific means employed in the physical education lessons with students from the UPB determine significant increases of the mobility with the students of the experimental group, these having at the end of the research significantly improved values. The methods which were used based on the rationalization and algorithmization of the training means, the making up of a database, tables and graphs, can render objective the students training process. The development of the mobility for the experimental group rendered objective by the results recorded in the two testings, both the initial and final one, confirms the correctness of the conception elaboration and of the methodology for the organization, the development and the assessment of the study conducted.

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