

STUDY ON THE EFFICIENCY OF PHYSICAL EDUCATION ON UNIVERSITY STUDENTS

PLOESTEANU CONSTANTIN

“Lower Danube” University of Galati, Romania

Abstract

It can be accepted that there is interference between the rigidity of lessons/classes of physical education in school/high school and the independence regarding the practice of physical exercise in physical education lessons in faculties/student life. It has been tried to demonstrate which were those differences by considering the individual's personality in point of his physical health, to have classes of practice according to the intensity and density of the physical effort, fact which provides a physical and harmonious development of the individual or to accept to have lessons based on independence and leisure. It is an approach that tries to formulate some answers to questions such as: does physical education allow a harmonious physical development with reference to the cardio-respiratory function and the muscular one or is it enough to practice, to accept physical education among the students for its recreational function? In this experiment we observed the students' motivation, their ways of adapting to the tasks that were integrated and done for physical health. We have considered the integration of the students in a program so as to develop their cardio-respiratory and muscle function.

Key words: *physical education, health, efficiency*

Introduction

Running helps developing cardio-respiratory endurance and feet muscles endurance, but not full muscle strength. That is why it is necessary to use/train and do bodybuilding exercises freely and/or by using gym equipment. In order to have the desired effects of muscle development, training with light weights will have to be carried out with a large number of iterations. Working with weights at the gym helps strengthening certain inhomogeneous muscle groups by increasing the endurance of the abdominal muscles, back muscles, arms and legs muscles. Exercise is manifested in a wide range of extremely varied forms. Facilitating a normal evolution of the morphological and functional processes, in order to have a harmonious physical development happens by stressing the body through exercises of muscle strength.

The application of didactic training programs has the effect of building a concept of education, where education through movement is predominant mainly in human evolution and development from birth to senescence. In this context, students will have the opportunity to gain a profit of physical and mental health, to be taught, so that they may choose, on a differentiated basis, the scientific practice of programs of physical education and sports, addressed in an interdisciplinary and interdependence relationship, for a lifelong health.

The benefits of physical education and sport must be regarded in the light of the process of growth, development and maturation of the human body. Physical education and sport is a mass activity for the benefit of everyone, and the investment in the budget for physical education classes is meant to have a social impact at the population level, and to recover the capital invested. The premise of the proposed experiment is to direct and develop the classes of physical education in order to train health skills and communication techniques among students for their entire life. The science of motility, the physical education and sport is able to provide permanently, at the level of its subsystems, a proper and harmonious physical development, due to the permanent development of the motor capacity.

Purpose of the research: To obtain a concept, a didactic and scientific approach, which will be a correct approach toward the manner of using the practical lessons of physical education in college, in order to acquire abstract and concrete skills, specific to motor activities and other related activities, guided to obtain physical and mental health.

Tasks

- introduce and apply the research methods;
- monitor and record the evolution of performances;

- process, interpret and foreground the results.

Hypotheses of the research:

- it is assumed that the application of a program for the physical education classes with the students will improve the multilateral development;
- if the means employed will contribute to a better motor performance among students;
- to what extent the accepted and deployed program will influence and respond to the increase in the interest and pleasure to do exercise, for the physical health of the individual/student.

Tests and Rules

- Endurance 3000 meters, running in moderate tempo. We have taken into account a range of 6 minutes / km = 18 minutes.
- Heart rate, after the 3000 meters test, run in moderate tempo.
- Long jump without momentum.
- Throwing a medicine ball of 1 kg, with 2 hands above (back of) the head.
- Jump on the equipment, bench, with detachment of both feet from the ground.

Materials and methods

Subjects:

- Experimental: 2nd year in dental medicine.
- Control group 1: 1st year in dental medicine.
- Control group 2: 1st year in engineering (IPMI).

Place: gym / stadium

Duration of the research: 10th of October 2015 – 10th of December 2015.

Experimental curriculum

We have designed a curriculum in which the experimental group has 50-minute classes twice a week, having decided with the students that the standard schedule must be conducted two times per week in a 1-hour session. The control group 1 has had the same schedule, the content of the means being the one from the student curriculum, i.e. the activity being used more for leisure and less focused on intensive motor development, but control group 2 has worked according to the timetable, i.e. that is on the 100 minute module.

In order to achieve an optimal level of physical condition, running is not enough. No singular exercise can create an acceptable physical condition. That's why, in planning our experiment, in addition to running for cardio-respiratory endurance we have inserted programs with exercises for the abdominal muscles, legs, arms, back muscles.

Objectives

1. To develop a general / multilateral physical training focused on the cardio-respiratory component and on bodybuilding.
2. To involve the student in his own process of professional training and development, important for developing the individual capacity of making decisions in formulating responses, for setting one's own level of physical training for health.
3. To acquire knowledge instruments, referring to the importance of exercise in relation to the heart rate, the distance and time, the lifted weights.
4. The transfer of results must have a creative impact on the student, so as to make him become aware that the science of motility acquires new knowledge about the health phenomena and processes.

Means:

- distance running, according to possibilities, of 300 – 800 meters in moderate tempo;
- aerobic runs on sub-maximal distances of 300 – 600 meters, pulse 150 b/min, breaks of 3 - 5 minutes;
- runs of 2,4,6,3, minutes, pulse 140 b/min, recovery between reps of 2 – 3 minutes;
- aerobic run of 2000 – 4000 meters, running pulse of 140 b/min, breaks and full recovery;

Our aim was to prove that the recovery after the effort in the last part of the experiment could be carried out in 90 seconds, this being the return set for departing in a new effort.

- programs of exercises for bodybuilding during the preparation of the body for effort and for postural balance of the spine;
- use of fitness equipment and stationary bicycle in performing some motor actions of general muscle development

- recovery actions carried out by practice of table tennis. It is a good opportunity to attract students and to use it between exercises with weights.

We have aimed at an execution with accessible weight in order to cope with the long-term effort.

Results of the research

The results of the research present the differentiation of educational concept in the field of physical education and sport among the students, having a study of comparison between sports as leisure, as it is in most of college classes and sports to ensure the development of motor skills for physical and mental health. The value of the physical and functional parameters, in this latter case with reference to the heart rate, allows us to assess the intensity of the effort, and offers us data about the nature of the effort, depending on what the proposed objectives are.

Results of the initial test of the groups included in the research

Table 1

Tests Indicators		3000 (min)	HR (p/min)	LJWM (m)	TMB (m)	Jump on equipment (m)
Arithmetic Means	Experim.	32	190	1.82	7.18	0.40
	Control 1	33	190	1.79	7.10	0.41
	Control 2	33	190	1.80	7.13	0.41

Final results of the groups included in the research

Table 2

Tests Indicators		3000 (min)	HR (p/min)	LJWM (m)	TMB (m)	Jump on equipment (m)
Arithmetic Means	Experim.	18	140	1.98	9.80	0.49
	Control 1	33	190	1.79	7.12	0.41
	Control 2	32	190	1.81	7.14	0.40
Standard deviation	Experim.	1.11	0.66	0.88	2.44	1.77
	Control 1	3.68	11.18	2.23	8.86	3.12
	Control 2	3.87	10.21	2.88	7.68	2.87
Coefficient of variation	Experim.	3.16	3.63	1.16	3.12	2.44
	Control 1	7.88	14.69	4.88	12.42	5.66
	Control 2	8.12	14.24	5.35	11.18	5.14

In the case of physical tests, the value of the final average at the group level, compared to the final average level of the control groups, shows the progress of the experimental group, and the final coefficient of variation for the experimental group is lower than the final coefficient of variation

for the control group, which expresses an increasing homogeneity of the experimental group. The achieved results demonstrate that within the researched scientific approach, the body of students in the experimental group have adapted to the physical effort corresponding to the requirements of physical development, the motor and functional increases being quite large compared to those of the control groups. It confirms the natural adaptation, the increase in the functional capacity and the resistance to physical efforts.

Chart of Final Results

Se observă în exprimarea grafică că la finele experimentului pedagogic sunt valori cu creșteri în cadrul grupei experiment la toate probele.

It can be seen that in the diagram at the end of the pedagogic experiment we have values with increases in the experimental group at all tests.

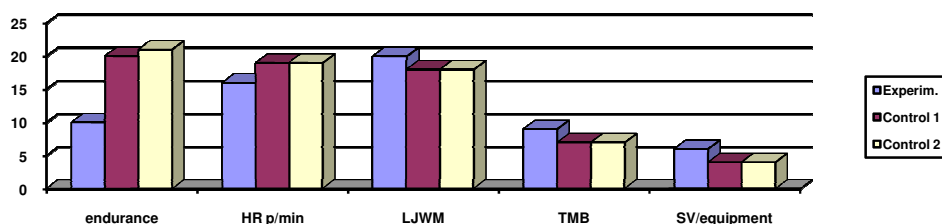


Fig.1. Diagram of the final results of the groups included in the research

These results are determined by the phenomenon of the positive transfer of motor qualities, manifested according to the content of the combinations of exercises specific to the experimental group, while checking the working hypotheses.

Conclusions

This concept is a response for the physical education teachers/educators in high school to regard exigency in such a way to make pupils/students do physical movement, by following the curriculum and certain joint programs. In this case it takes communication to do exercise for health, be it for leisure purposes.

It is necessary to learn certain skills, in some cases depending on the motor abilities, as it has been demonstrated in the scientific approach with the students in the 1st year in dental medicine.

To integrate students in a program of sustainable human preparation, for a healthier lifestyle.

To properly integrate cardio-respiratory efforts in the endurance running and in drills with weights.

To contribute to building the capacity of individual practice of physical exercise for health.

To achieve a healthy lifestyle through a differentiated training program for wellness.

References

1. Bota C. (2000), *The International Conference for Communication and Essays in the Field of Physical Education and Sports*, Galați
2. Gârleanu D. (1983), *Lessons for Children and Juniors*. Sport – Turism, Bucharest.
3. Ionescu N.A. (1989), *The Somatic and Functional Growth of the Young Generations Correlated with the Development of Their Physical Abilities*. Collection of Scientific Acts no. 2, Bucharest,
4. Neacșu E. (1990), *Training and Learning*. Științifică, Bucharest..
5. Teodorescu L., (1989) *Conceptual Reconsiderations and Reevaluations in the Science of Physical Education and Sports*. EFS Magazine no. 6-8, Bucharest.