**ISSN 2602-0440, ISSN-L 2602-0440**

# WAY OF ACTION FOR LEARNING AND STRENGTHENING THE SPECIFIC MOTRIC CONTENT OF AEROBIC GYMNASTICS, WITHIN THE PHYSICAL EDUCATION LESSONS OF HIGHER EDUCATION

## Modalităţi de acţionare pentru învăţarea şi consolidarea conţinutului motric specific gimnasticii aerobice, în cadrul lecţiilor de educaţie fizică, din învăţământul superior

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**Abstract.**
*Background*. The motor learning in the aerobic gymnastics is characterized, in general, by the laws and the stages of learning the motor acts , by all means, with some particular features, which are due to the particularities of this sport. The system in which the motor content specific to the aerobic gymnastics acts for the learning, strengthening and improving contains succesive stages during which the different types of exercises are shared in a sensible way, the didactic principles of learning being respected. The rational staggering of the series of exercises is gradual and realized in interdependent conditions, by progressively raising the complexity. All of these are meant to contribute to the quick and correct representation of the movement, being based on the positive transfer of some movements' characteristics to the others similar in structure.

*Objectives*.The objectives of the reaserch consists of choosing the most efficient methodes and ways for learning the motor content specific to the aerobic gymnastics, during the courses of physical education.

*Methods.* We have used the following methods of research in order to create this study: the improving experiment, the statistic-mathematic method and the graphic representation. The experiment was developed during the period October 2016- may 2017. The sample used was made up of 60 students of The University of Bucharest, who attended the course of aerobic gymnastics, and the lessons of the two groups took place separately. Regarding the witness group, classic, traditional methods were used, while for the experimental the differential treatment and the independent activity. For the independent activity, individual patterns were used (as number of series and repetitions), they were performed at least threefold a week. The evaluation of the progress realized by means of the proposed program is based on tests, applied at the beginning and the end of the program.

*Results.* In both groups, the final results are better than the initially recorded results at the begging of the experiment, yet regarding the experimental group, was observed a significant increase between the initial and the final testing on all the investigated parameters, comparative to the control group, where the rate of increasing is lower.

*Conclusion.* The superiority of the results as the experimental group proves the efficiency of the applied program and of the different activities which I have been used for my students, as well as the fact that the fathoming of the exercises proposed in „The Program of independent activity" is necessary, because the simple gathering of an amount of movements is not enough, but one has to deepen the phenomenon until fully understanding it. It is necessary to be understood why a certain movement follows another, why the combinations are composed of a specific enchainment of exercises, and how, by understanding the meaning of these chain, one can made their own combinations.

**Keywords:** learning, aerobic gymnastics, physical education, students

## Introduction

The motor learning process implies the distinctive manifestation of some factors which obtaining performance depends on, through the values that it shows up.

Within the framework of motor learning, there are two categories of conditions that intervene. Some of them are internal, which are represented by the capacities of the individual who is subject to the learning process, and others external, controlled by specialists.

*The internal factors of learning are:*

-motivation

-interests

-the knowledge processes: perception and sense of observation, representations, memory, imagination, thinking (convergent and divergent), attention.

**ISSN 2602-0440, ISSN-L 2602-0440**

The external factors of learning are:
-the training and personality of the specialized framework
-the organization of the learning activity
-the interrelationships between the team

The motor learning in the aerobic gymnastics is characterized, in general, by the laws and the stages of the learning of the motor acts , by all means, with some particular features, which are due to the particularities of this sport. The system in which the motor content specific to the aerobic gymnastics acts for the learning, strengthening and improving contains a successive stages during which the different types of exercises are shared in a sensible way, the didactic principals of learning being respected. The rational staggering of the series of exercises is gradual and realized in interdependent conditions, by progressively raising the complexity. All of these are meant to contribute to the quick and correct representation of the movement, being based on the positive transfer of some movements' characteristics to the others similar in structure.

**The purpose of the research** consists of choosing the most efficient methods and ways for learning the motor content specific to the aerobic gymnastics, during the courses of physical education.

**Research tasks:**
-the choice and selection of the tests and parameters to investigate
-the elaboration of the program which is to be subject to the experiment
-the selection of the techniques, number, succession and their duration during lessons and the examination of their efficiency
-the embodiment of the methodology regarding the validation of hypotheses
-the correction of the evaluation system expanding the objectivity through individualization and self-sufficiency elements
-the elaboration of a specific system of grading /evaluation
-the presentation, analysis and interpretation of data
-the elaboration of conclusions

**Methods of research**

We have used the following methods of research in order to create this study: The documentation, the improving experiment, the statistic-mathematic method and the graphic representation.

**Organization of the research**

The experiment was developed during the period October 2016- may 2017. The sample used was made up of 60 students of The University of Bucharest, who attended the course of aerobic gymnastics, and the lessons of the two groups took place separately. Regarding the witness group, classic, traditional methods were used, while for the experimental the differential treatment and the independent activity. For the independent activity, individual patterns were used (as number of series and repetitions), they were performed at least threefold a week. The evaluation of the progress realized by means of the proposed program is based on tests, applied at the beginning and the end of the program.
The examination of the progress accomplished by the proposed program is done based on the motor tests, performed at the beginning and at the ending of the experiment, as well as through a specific trial, which consists in the execution of an aerobics program, designed by students, presented in the form of competition.

The trial consists in the presentation of a complex of exercises consisting of 64 measures music 2/4 and which contains:
***A – basic aerobic steps***
-jumping jack
-knee

**ISSN 2602-0440, ISSN-L 2602-0440**

-kick
-lunge
***B. – link steps***
-march
-jog
-skip
-step-touch

**Results**

- The learning, consolidation and improvement goals of the skills and motor abilities or of the motor qualities of development were realised by using various *methods of training*. The most used ones were:
    a. The continuous method
    b. The fractionary method (with intervals)
    c. The circuit method
    d. The competition method
- The specific techniques used in the training of the students included a large and varied number of exercises whose influence on the motor capacity is complex. The very means with which it was operated were:
    1. Basic means
        - Means for special processing of the walking device
        - Means for harmonious physical development
        - Means for education of the moving aesthetic
    2. Technical means, which follow the forming of the general outlines of the techniques (e.g. fragmentation, global or auxiliary)
    3. Exercises for the development of the effort capacity
    4. Exercises for breathing and relaxation
- The motor evaluations presented above allow us to observe the following improvements of these indicators, at the final evaluation, after applying the intervention plan

Table 1. – Motor indicators

| | .1 | .2 | .3 | .4 | .5 | .6 | .7 | .8 | .9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Group | F.Abs | F.Back | F. Arms | Mobility | Balance | Coord. | Tenacity | Length | Speed | Resistance |
| Experimental | 30.17 | 23,74 | 102,23 | 22,52 | -66,67 | 33,36 | 52,34 | 5,78 | -1,72 | 32,63 |
| Witness | 9,93 | 10,17 | 42,55 | 10,17 | -37,06 | 8,01 | 27,97 | 2,18 | -0,77 | 26,30 |

- The system of the motor indicators largely covers up the range of the motor components (skills, habits and qualities), considered to be a predominant finality of the systematic practice of aerobics. Thus, segmentary force indicators are included (back, abdomen, arms, tenacity), mobility and coordination indicators (which imply the muscular flexibility), speed of movement and force on speed and resistance basis.
- In both groups, the final results are better than the initially recorded results at the begging of the experiment, yet regarding the experimental group, was observed a significant increase between the initial and the final testing on all the investigated parameters, comparative to the control group, where the rate of increasing is lower.
- The trial consisted on the making of an aerobic exercise in 32 measures, music 2/4, executed by an ensemble formed of 6 performers in the form of competition.
- The subjects of the two groups were given as a term to conceive, based on the motor, theoretical and methodological knowledge, an aerobic program, executed in the form of competition by an ensemble of 6 students. Therefore, each group (experimental-witness) organized each five programs (ensembles) which

**ISSN 2602-0440, ISSN-L 2602-0440**

were presented in the form of competition. After the unfolding of the competition, the following marks were obtained:

Table no. 2. Evaluation of the groups

| EXPERIMENTAL GROUP | MARK | WITNESS GROUP | MARK |
|---|---|---|---|
| Ensemble no.1 | 7,50 | Ensemble no.1 | 4,50 |
| Ensemble no. 2 | 8,30 | Ensemble no. 2 | 6,70 |
| Ensemble no. 3 | 6,40 | Ensemble no. 3 | 5,40 |
| Ensemble no. 4 | 6,30 | Ensemble no. 4 | 3,20 |
| Ensemble no. 5 | 7,80 | Ensemble no. 5 | 6,20 |
| **Average experiment group** | **7,46** | **Average witness group** | **5,20** |

## Conclusions

The superiority of the results as the experimental group proves the efficiency of the applied program and of the different activities which I have been used for my students, as well as the fact that the fathoming of the exercises proposed in „The Program of independent activity" is necessary, because the simple gathering of an amount of movements is not enough, but one has to deepen the phenomenon until fully understanding it. It is necessary to be understood why a certain movement follows another, why the combinations are composed of a specific enchainment of exercises, and how, by understanding the meaning of these chain, one can made their own combinations.

This acknowledgement leads us to the same conclusion, meaning that individual training is superior to frontal, traditional training.

The superiority of the results obtained by the experimental group is also explained by the maintenance of the measures of methodological class that were taken or implemented in the training strategies:

- the practice of the principles of difference and awareness of the activity, each subject was aware of the shortages and the individual tasks that were given to them. In each of these situations, operational structures were settled, which were also practiced in the free time.
- the predominantly application of the participatory and formative methods also had collateral effects, for example: the increase of interest for understanding the phenomena, acquiring skills with methodological character, stimulation of individual and group creativity

With these methodological measures, we can say that they capitalized or they increased the pedagogical and psychological valences the most, targeted by our research purpose.

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