

Original Article

## The Meaning of Musical-Rhythmic Education in The Training of Wellness Aerobics Coaches

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DOI: 10.29081/gsjesh.2020.21.1s.07

**Keywords:** *professional training, aerobics coach, music, rhythm, coordination*

### Abstract

The work considers the category of “rhythm” in the aspect of physiological laws, defines the place of coordination, as a psychomotor quality, for the implementation of any activity. The significance of musical rhythmic education for the process of training an aerobics coach in a university education system is substantiated. The system of classes of this discipline is aimed at developing students’ skills of complex coordination, which defines an integrated management of the coach’s actions and the actions of his students. The content of musical rhythmic education is presented from the standpoint of psychophysiological processes. Means of the discipline under discussion are referred to the areas of physical education (basic gymnastics, rhythmic gymnastics, aerobic gymnastics) and arts (music, dance, musical outdoor games). There are presented general and particular tasks of musical rhythmic education.

### 1. Introduction

The training of aerobics coaches-methodologists involves the formation of a wide range of professional skills. Along with general pedagogical skills, an aerobics specialist must also have specific, musical, rhythmic/motor skills, which are a prerequisite for conducting classes. These include the following skills:

- conducting exercises in accordance with the musical rhythmic composition;
- performing rhythmic calculation in accordance with the musical size;
- timely submission of commands and special gestures to start and end exercises;
- implementation of methodological notes and instructions in accordance with the rhythm of the movements performed.

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The basis of these skills it is represented by the sense of rhythm, which can be developed among those who do not possess it, and improved by those who have spontaneously shown it from birth.

The very concept of “*rhythm*”, translated from Greek, means flow (*rhythmos*, from *rheō* – flow, current). *Rhythm* represents as a certain form of movement, manifested in the alternation of any elements (sound, speech, motor, light, etc.) with a certain sequence and frequency. That is, the rhythm is expressed in the periodic repetition of the parts (segments) of a phenomenon. Take, for example, the day – the change of day and night; or astronomical year – winter, summer, spring, autumn; or the work of the functional systems of the human body – the rhythm of breathing, heartbeat, etc. In all these processes there is a periodization of any phenomena/actions. Note that the time course of these phenomena can be either the same or different (Aftimiciuc & Jurat, 2016).

The well-known psychologist Teplov (1966) noted that “Rhythm assumes, as a necessary condition, this or that grouping of irritations following one after another, some division of the time series”. These groups can be either identical or unequal (by 2-3 members). An example can be the uniform running and running for a jump. In the first case, we observe the same division of the time series, in the second – different by means of the size of the running step. But in both the first and second versions of the run, we observe the rhythm, the rhythmic structure of the run.

The study of the category “rhythm” dates back to ancient times and today it is not bypassed in various fields of science, culture, education, production. At all times, the concept of rhythm is interpreted as the main component of order and organization. The initial source factor was not the “rhythm in general”, but the rhythm of labour movements, that is, a substantial rhythm caused by the internal logic of the labour process. From the rhythm of labour subsequently developed the artistic rhythm – musical, poetic, dance, etc., which represents also an expression of a certain content (Stoyanov, 1985). And the sense of rhythm, as a subjective reflection of objective rhythm, from the very beginning arose and developed only in the process of one or another substantial activity, being a reflection of one of the aspects of this activity. Since any activity (organic, mechanical, speech, etc.) has its own inherent rhythm of construction, any violation of any phenomenon leads either to a failure of this process or to a complete cessation of all activity.

It is impossible to develop a “sense of rhythm at all”. You can develop a sense of rhythm in certain labour/motor processes. The human being is born with a varying degree of possession of a sense of rhythm. However, if this feeling is not brought up initially and properly (through the game, poems, songs, and dances) you can deprive a person of the ability to coordinate their actions (not necessarily the motor). This, in turn, will subsequently cause the problem of adaptation of this individual in society, which will not allow him to be sociable, feel comfortable in crowded places where you need to show a sense of rhythm (discos, various festivals and celebrations, sports contests, meetings).

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The solution to this problem is facilitated by musical and rhythmic education. The basic tasks of this discipline are to foster a sense of rhythm and the formation of coordination on its basis (Fig. 1).



**Figure 1.** *The conceptual model of coordination formation*

## **2. Material and methods**

The rhythm category is given special status for an aerobics specialist. All its actions, including the motor component, depend on the laws of rhythm. The aim of the research is to study the phenomenon of rhythm to improve the training of aerobics coaches. In accordance with this, it were studied materials on the theory of music, physiology of rhythm, the theory and methodology of aerobics, and the professional training of a coach.

The realization of this goal assumed the use of the following methods of theoretical research: abstract and axiomatic methods, analysis and synthesis, induction and deduction, idealization, comparison and generalization.

## **3. Results and Discussions**

The entire content of musical rhythmic education is based on psycho-physiological processes. They, in turn, are built on the reflex manifestations of the pulse and breathing, which are closely related to the moderate musical tempo, the main rhythmic unit of which is the quarter duration. Levy (1992) noted that the rhythm, which is considered one of the foundations of music, belongs to “all life functions without exception – from cell contraction, from breathing and heartbeat to the highest processes occurring in the brain”. He focuses his attention on the patterns of relationships of specific rhythms with positive and negative emotions. Levy claims that there is a two-way connection between positive emotions and a high degree of rhythm, on the one hand, and negative emotions, and rhythmic disorganization, on the other. The author also points to the most important physiological basis for the connection of rhythm with “*systems of pleasure*” and “*systems of displeasure*”. Rhythmicity, he notes, is characteristic of “pleasure systems” primarily because their activity is connected with the desire to repeat irritations. As for the “*negative*” systems, there is no tendency to rhythm, since the function of these systems is to remove the stimulus as soon as possible or to move

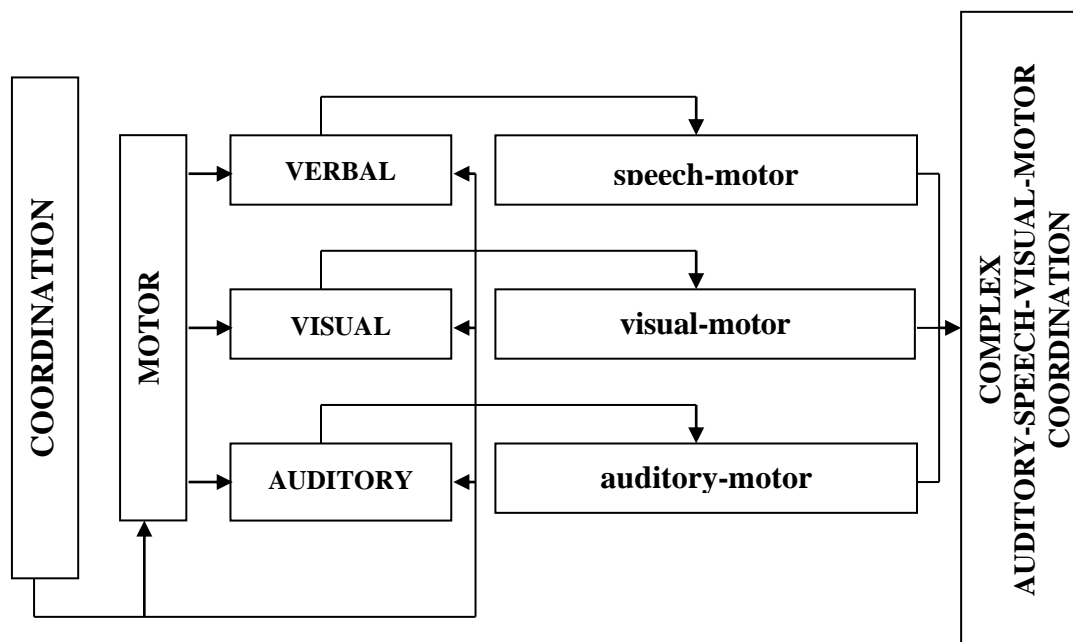
away from it. In other words, “pleasure systems” cause activities aimed at maintaining, continuing their work, “*systems of displeasure*” – activities that stop their own work. This way, the development of a sense of rhythm by means of music contributes to the emergence of positive emotions, which allows you to form the correct rhythm of a particular, in our case, professional, activity (Aftimichuk & Kuznetsova, 2015).

Perception of rhythm is never just auditory. It always represents an auditory-motor process (Husband, 1934). Most people are not aware of these motor reactions until attention is specifically paid to them. Attempts to suppress motor reactions either lead to the appearance of the same reactions in other organs, or entail the cessation of rhythmic experience.

Experiencing rhythm in its very essence is active. You can’t just “hear the rhythm”. The listener only experiences the rhythm when he “co-produces”, “makes”, which is expressed in a peculiar experience of activity, “feeling of activity”.

Thus, the perception of music has an active, hearing-motor character, which represents such a psychomotor ability of a person as coordination

Translated from the Latin language, *coordination* (*co* – together and *ordination* – ordering) means interconnection, coordination, alignment to an according order. In motor activity, *coordination* represents the simultaneous coordinated work of all parts of the human body and the systems of his body.



**Figure 2.** Types of complex coordination

Coordination, as a psychomotor quality, is present in various fields of human activity. And from that, how much it is complete, this quality will depend on the

developed mental state of the individual, its ability to coexist in society.

To a certain extent, the level of development of coordination affects the style and manner of performing any activity and human behaviour, which is very important when perceiving this very activity or behaviour in general. This especially applies to the specialists in physical education, and in particular to the coach in health-improving aerobics (Aftimichuk, 2015), who in his professional activity should possess and use the whole set of complex (integrative) coordination, suggesting the following types of it (Fig. 2).

Conducting a lesson in health improving aerobics, the coach needs not only a coordinated combination of his muscular efforts to musical accompaniment, a logical transition from one motor task to another, but also close monitoring of the physical activities of those involved so that they get on time, if necessary, methodical guidelines. Only in this case, the effect of the lesson will manifest itself immediately.

Such an integrated management of their actions and those involved is manifested in the ability to integrated coordination, which is brought up in musical rhythm classes. For this discipline “Musical-rhythmic education” uses the means of various types of physical culture and art (table. 1):

**Table 1. Means of various types of physical culture and art**

DOMAIN		METHODS
<i>Physical culture</i>		
1.	<i>Basics gymnastics</i>	– drill exercises; – attention concentration exercises; – general developmental exercises
2.	<i>Artistic gymnastics</i>	– various steps, jumps, balances, turns; – work with objects (hoop, ball, rope)
3.	<i>Aerobic gymnastics</i>	– set of exercises
I. <i>Arts</i>		
1.	<i>Dance</i>	– choreography; – dance elements; – dance songs
2.	<i>Music</i>	– means of expressiveness of music: rhythm, tempo, register, dynamics, accents, syncops, pauses, rhythmic pattern, melody
3.	<i>Musical outdoor games</i>	– to develop the sense of rhythm; – to develop the sense of pace; – to determine the pitch (register); – to determine the dynamics of sound (dynamic shades); – to define a staccato and legato in the sound of a melody (jerky and fused melody); – to identify and remember the melody

All the methods presented above have their own internal integration, which is manifested in the cumulative effect of classes, where some tools complement the others in order to consolidate the skill acquired during the lesson.

The last two methods are integral components of the training of a coach in health-improving aerobics, since their potential allows us to solve the problems of forming its practical and methodological level. This is manifested in the specifics of conducting health aerobics classes, which are carried out under musical accompaniment, which is the dominant in determining both the intensity of the exercises and the load in general (Aftimichuk, 2017). At the same time, a specialist in this field needs to have a *musical feeling* and *musical memory*, to subtly feel the finished musical phrases in order to correctly build motor phrases and whole compositions.

In addition to the main tasks, musical and rhythmic education solves the following particular problems:

- education of random access memory in all forms of its appearance (auditory, visual, motor, speech);
- mastering the basics of movements in combination with a musical rhythm, claps, clicks and other types of sound manifestations;
- the formation of skills demonstrating motor tasks to the musical accompaniment;
- the formation of skills to make coordination rhythmic ligaments, exercises, combinations of exercises;
- the formation of the basic professional and pedagogical skills of conducting the lesson;
- the education of moral, strong-willed, aesthetic qualities, a general culture of behaviour, broadening the horizons.

#### 4. Conclusions

Therefore, we can state that “Musical-rhythmic education”, as an educational discipline, represents an integral part of the professional training of coaches in health aerobics, which helps to improve the level of their practical and methodological integrative skills. Unfortunately, the programs of courses, seminars and conventions that train instructors in the health-improving aerobics do not provide this type of training, and, as practice shows, first year students who do not have preliminary gymnastic or choreographic training, or cannot undergo further selection for work in fitness clubs, or are not competent enough to conduct classes.

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