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Music as means of optimizing the physical education lesson in pre-university education

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Abstract

We started this research from the hypothesis stating that by knowing the way in which the music is used during the physical education lesson, we can find a way to improve it. The research was conducted throughout the academic year of 2010-2011, in 9 middle-schools and 8 high-schools from Bacau County, Romania. In order to obtain complete information on the researched theme, we used one of the fundamental techniques of inquiry, the questionnaire, which comprised closed questions and predetermined answers. After finishing the research, we can say that music should be present in every physical education lesson, especially in the ones teaching gymnastics.

Keywords: physical education lesson, music, pre-university education;

1. Introduction

In today's education system, Physical Education has a new significance and dimension, substantially modified from the ones promoted by the traditional teaching practices. Accentuating the formative character of the instructive-educational process imposes giving more attention to the methods, means and forms of organizing the pupils' activity during the class that are capable of stimulating the pupils in becoming more active during the educational action.

The musical accompaniment, according to T. Dobrescu (2006), represents an acoustical-aesthetic component, associated to the motor behavior, with a role in directing, regulating, organizing and constructing movement structures, having a specific importance and interpretation, with implications on the education of rhythmicity and psycho-motor skills. Motor musicality represents the ability to ensure a certain concordance between the motor act and the particularities of the means of expressing music: beats measurements; duration and particularities of the musical phrase; tempo, intensity, and sound height variations, particularities of the musical piece (Macovei S., 1999).

The use of music during the Physical Education lesson is also a great help for the teacher. It ensures the tempo, the rhythm, and the intensity of the movements, thus the teacher is correcting less of the exercises performed by the pupils. Taking all of these into account, more methodical recommendations will also be able to be made. (Dobrescu, 2007)

Music is and should be present during the PE lessons because of its multiple uses. The use of music in the PE lesson assumes its concordance with the movement (Greder, F., 1995). It allows for the pupils to be trained

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according to the objective set by the teacher for the lesson, as stated by R. Jaquement and C. Tiersbier (1993). Hence, the music can contribute to the completion of the specific lesson links objectives. A. Luca (2000) asserts that the music we use should be in accordance with the pupils' age, with their preferences, but also with their technical training level.

2. Material and method

The starting point in choosing this theme was our personal belief that the use of music during the physical education lesson is a step towards improving it, and a deep study of this matter could be an argument for generalizing this methodology.

We started this research from the hypothesis stating that knowing the opinions regarding the role and place of the music in the physical education lesson, constitutes a starting point for an improving intervention.

The research methods we used were: the study of the specialized literature, the inquiry (questionnaire), the statistical-mathematical method, and the plotting method.

The research was conducted throughout the academic year of 2010-2011, in 9 middle-schools and 8 high-schools from Bacau County, Romania.

The inquiry was made on a number of 119 subjects, 46 teachers (26 middle-school, and 20 high-school teachers), and 73 pupils (40 middle-school, and 33 high-school pupils).

In order to obtain complete information on the researched theme, we used one of the fundamental techniques of inquiry, the questionnaire. It comprised 6 closed questions and predetermined answers for each of the category of subjects.

3. Results

Results for the teachers' questionnaire

The first question of the questionnaire asked the teachers to specify whether the presence of music in the PE lesson is important. At this, 93.48% of the questioned subjects gave an affirmative answer. The negative answers (6.52%) belonged to a number of male high-school teachers who did not have any knowledge of the values of musical accompaniment, and its uses for the PE lesson. (Figure 1)

The fact that most subjects considered music a mean to improve the PE lesson proves that they are aware of its beneficial uses.

The second question aimed to emphasize the teachers' opinions regarding the effects of musical accompaniment on the instructive-educational process.

![Figure 1. The importance of using music during the lesson](image-url)
We can see that 31 subjects (67.39%) said the music creates a pleasant ambiance during the lesson and facilitates the rhythmical development of movement. Other teachers said the music stimulates movement (63.04%), and it influences the creative imagination (47.83%), others have emphasized the role of music in forming the motor habits and skills (39.13%), in helping dissipate the feeling of fatigue and stimulating positive feelings and emotions (28.26%) (Table 1).

The answers to the question, “Do you use music during your PE lessons?” show that music is actually a useful tool for attaining the lesson objectives. More than half of the respondents (52.17%) often use musical accompaniment, especially during gymnastics-oriented lessons, 30.43% (14) of the teachers use it sporadically, at certain points during the lesson, and 17.39% (8 teachers) do not use it at all. (Figure 2)

After observing the answers of the groups, we can see that their PE lessons have a music content of over 50%, which shows its accessibility. At middle-school level, 6 teachers (23.08%), 2 female teachers and 4 male teachers do not use music at all during their lessons, while at high-school level we encounter this situation only in two cases (10%).

After analyzing the answers to the question regarding the use of music in the structure of the PE lesson, we can see that: music was used especially in the warm-up part of the lesson (57.17%), in the part of the lesson where there is a selective influence of the musculoskeletal system (47.83%), in the cool-down part (30.43%), in the learning, consolidating, and perfecting the motor skills and habits part (26.09%), in the reflex development part (13.04%), and strength development part (10.87%).

Thus, we can say that at both middle-school and high-school level, music is used during the first two parts, and
during the cool-down part (Table 2).

Table 2 - The use of music during the PE lesson

<table>
<thead>
<tr>
<th>Education level</th>
<th>No. of subjects</th>
<th>Group organization</th>
<th>Warm-up</th>
<th>Selective influence of the musculoskeletal system</th>
<th>Reflex development</th>
<th>Learning, consolidating, perfecting the motor habits</th>
<th>Strength development</th>
<th>Cool-down</th>
</tr>
</thead>
<tbody>
<tr>
<td>Middle-School</td>
<td>26</td>
<td>2</td>
<td>3.68%</td>
<td>11.71%</td>
<td>4.61%</td>
<td>3.68%</td>
<td>3.68%</td>
<td>3.68%</td>
</tr>
<tr>
<td>High-School</td>
<td>20</td>
<td>5</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>46</td>
<td>7</td>
<td>6.8%</td>
<td>10.42%</td>
<td>7.27%</td>
<td>7.27%</td>
<td>7.27%</td>
<td>7.27%</td>
</tr>
</tbody>
</table>

Regarding the music genre the pupils prefer to hear during their PE lessons, the teachers noticed that disco is number one in the children's preferences, with 71.74%, followed by other musical genres than the ones in the predetermined answers 43.48%, classical music 28.26%, techno 21.74%, rock 19.57%, and finally traditional Romanian music 2.17%. (Figure 3)

Through the last question we tried to find whether the schools in which we conducted our inquiry had any sound systems. From the answers we received, we gathered that 56.52% of the schools where we conducted our inquiry are equipped with the necessary devices for using music during the PE lesson, while 43.48% are ill equipped. If we observe this subject on education levels, we can see that high-schools are better equipped that middle-schools. (Figure 4)

Figure 3. Musical genres preferred during the PE lesson

Figure 4. How many of the schools are equipped with sound systems

Regarding the music genre the pupils prefer to hear during their PE lessons, in first place was other musical genres than the ones in the predetermined answers with 45.21%, rock with 38.36%, disco with 34.25%, techno with 26.03%, classical music with 17.81%, and traditional Romanian music with 13.70%. (Figure 3) If we analyze their preferences on education levels, we can observe that while middle-school pupils prefer mainly club and disco music, the high-school students prefer rock and disco music. We can also observe that in the latter category 24.24% prefer classical music, in comparison to only 12.5% of the middle-school pupils. The situation is reversed when it comes to traditional Romanian music, which is preferred by 22.5% of the middle-school pupils, and only 3.03% of the high-school students. The pupils' answers are close to the teachers', which shows that the teachers know the preferences
of their pupils, and can select the class music based on that. (Figure 3)

The inquired pupils wish to perform on a musical background the various exercises of the lesson, as follows: walking, running, and jumping - 49.95% (54.55% of the high-school students, and 42.5% of the middle-school pupils), strength drills - 38.36% (39.39% high-school, 37.5% middle-school), and for relaxation - 39.99% (54.55% high-school, 40% middle-school). The music is less used for the selective influence of the musculoskeletal system drills (30.14%), and for the acrobatic and rhythmic gymnastics. The girls prefer to listen to music while they perform strength development drills (31.71%), and the boys, while they perform suppleness development drills (12.5%).

Half the pupils (50%) did not give any answer to the question "During which part of the lesson do you work with musical background?". The others said the music is used especially during the warm-up part of the lesson, accompanying the rhythmic themes and games (23.29%), and the walking, running, and jumping drills (20.55%). In descending order, there were also strength development drills (15.07%), gymnastics technical elements and relaxation drills (13.70%), selective influence of the musculoskeletal system drills (10.96%), and finally, rhythmic gymnastics drills.

If we analyze the situation according to education levels, we can observe that music is used more during high-school than middle-school PE lessons, which can be explained by the fact that the latter are ill-equipped. The fact that the pupils put the rhythmic themes and games first on their list of preferences shows that their teachers show a preoccupation for educating the children's motor rhythmicity and musicality, which are essential for the psycho-motor development.

4. Conclusions

After conducting this research, we were able to draw the following conclusions:

1. One of the means that can contribute to the improvement of PE lesson is music, through its concordance with the movements, which confirms our initial hypothesis.

2. After finishing the inquiry, we can say that music should be present in every physical education lesson, especially in the ones teaching gymnastics. This is confirmed by 93.48% of the inquired teachers, who attribute many uses to music: it creates a pleasant ambiance (67.39%), it stimulates the movement (63.04%), it stimulates the creative imagination (47.83%), it facilitates the development of motor skills and habits (39.13%), it helps dissipate the feeling of fatigue and it stimulates the exposure of feelings and emotions (28.26%).

3. The use of the music during the lesson is wanted by 75.34% of the inquired pupils, who believe that it creates a good mood (57.53%), a pleasant working environment (52.05%), and it engages them in work without feeling tired (47.95%).

4. The pupils want the music of different genres to be present especially during the warm-up part of the lesson, and during the cool-down part.

5. Regarding how music is used in the schools where we conducted our research, we could see that it is not used during the PE lesson according to its potential.

6. We believe it could be useful if during the educational process of the pupils (of both genders) the teachers would put more emphasis on the use of music during their PE lessons, especially during practical classes, and during pedagogical training.

7. We propose that during the perfecting courses and special inspections in schools, an emphasis should be put on the importance and multiple uses of music, as means of improving the pre-university education PE lesson.

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