Musical Activities Intendent to Develop Harmonic Hearing

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Abstract: - Since birth, the child’s hearing is entailed to select from among the sounds perceived, those that interest him/her. The overlapping of musical and non-musical sounds requires an analysis and involuntarily selection. In the long run, phonematic hearing evolves and thus, further adding the interest in music, are formed the melodic hearing (consecutive sounds) as well as the harmonic one (simultaneous sounds). We will deal with the forming of the harmonic hearing both in the general education and in the musical, more efficient one.

Key-Words: - musical education, melodic hearing, harmonic hearing, choral singing.

1 Introduction
The musical hearing as well as the phonematic (verbal) one, represent a specialization of physiological hearing, that lies at their base. Thus, forming and perfecting musical hearing has a generalizing character, meaning that, based on increasing the capacity of differentiation of the pitch of musical sounds (the different frequencies) and the rhythmic structures, it is one of the basic aims to achieve musical education. The development of the auditory analyzer (the afferent route) through continuous drills is a necessity to develop one child’s intellect and for these to precede the drills for cultivation of voice (efferent route). The music is learned by singing it and listening to it. That’s why the musical hearing will grow by various melodic and rhythmic drills, according to the three main factors:

a) the degree of natural endowment with musical hearing;
b) the organization and equipping of the environment (the classroom) with musical instruments, auditions, which require the specialization of the physiological hearing in a musical sense;
c) the methodological activities to form and perfect the musical hearing: listening to beautiful and accessible works to children, the recognition of the fragments heard, the accomplishment of oral musical dictations, harmonic-polyphonic intonation exercises according to their possibilities of recognition.

It must be added that there are special cases in which we meet children with absolute hearing (very rarely), but also children with impairment of the musical hearing (dystonic) which can be recovered under a correct and careful guidance. The musical hearing is a system structured in two subsystems: melodic hearing and harmonic hearing.

The melodic hearing is that psycho-physiologic mechanism, simpler than the harmonic one. It can be trained by listening to structures and reproducing linear homophonic rhythmic-melodic structures. Any person who possesses normal hearing (in medical terms), can reach through education to perceive and live emotionally a melody. The organized training, by the educational process, of the melodic hearing follows an ascending line beginning in kindergarten and continuing in school. Hearing helps at the same time to control correct intonation (singing).

That's why absolute compliance of the sounds pitch is required. Melodic hearing is functional both externally (sonorous) and internally (silently), as a capacity of imagining and living the music without exterior, acoustic support, anchored in memory. It may be decomposed in language components, associated with thinking (awareness) in terms of rhythmical, timbral, dynamic, intonational, tonal, modal hearing.

The harmonic hearing forms and develops from the school-age and consists in identifying the characteristic elements by overlapping two or three sounds or sound lines. It calls for distributive attention to detect vertical sonorosity in harmonic
or polyphonic singing. The canonical vocal intonation, with ison or instrumental accompaniment is coordinated by this type of hearing.

2 Findings
Thus, within the musical education activities of preschool children, it is formed by any musical audition (with vocal songs, on several voices or instrumental accompaniment songs).

Then, after familiarization with the universe of sounds, children may themselves sing and monitor in an auditory manner simultaneous sounds by interpretation with sounds echoing, with ison, instrumental accompaniment, both in songs and musical games. These ways of training and consolidation of harmonic hearing will be continued in the musical education at elementary school. In addition, at the third and fourth grades, there will be taught canonical singing (strict imitation). Except the regular classes, it will be exploited in choral ensemble classes, when musical programmes are prepared for festivities and competitions. The choral fragments can be in unison or harmonized in 2 and 3 voices, with or without piano accompaniment.

According to the musical skills and abilities acquired, there may be set up vocal-instrumental folk bands and, light music bands or musical games. From the fifth to eighth class, students have already formed skills of harmonic singing (2, 3 voices with or without accompaniment), hearing having the maximum responsibility for intonational precision.

In musical education lessons students may sing in 2 voices (in canon, with harmonization, with ison) or even with instrumental accompaniment. In auditions, they may determine elements of expressiveness, timbral, structural ones. In choral ensemble classes, formed skills can be used by organizing various vocal bands (groups, choruses) or vocal-instrumental bands (folk music, light music, musical games), or by addressing a repertoire of greater difficulty, with interpretations of great musical refinement. As stages of study, we recommend:

1. harmonic-polyphonic drills of intonation and audition;
2. the intonation of the melodic line of a voice, simultaneously with the intonation of the other by the teacher, exemplifying for all voices;
3. work using fragments, mixing all voices and/or the accompaniment according to the type of band or the chosen repertoire.

Considering the musical education and experience gained, during the specialized classes in theological and pedagogical schools, the study is much simplified because the students know musical notation and this thing is done by following the score and not by ear. In musical education, the harmonic hearing is formed during the instrument, in theory, orchestra and chorus classes. We will analyze them in turn. The first contact with the universe of sounds is carried out during the instrument classes. Harmonic hearing is formed more quickly to students who are studying piano, when they start to play with both hands (the first grade). The students who study string and wind instruments, it is formed when they start to work with the assistant music master. The auditory control on the interpretation and then timing and mixing with piano music, will strengthen the auditory distributive attention (harmonic hearing). Starting with the fourth grade (advanced) and the sixth grade (beginners) the pupils study in theory the accord and the harmonic ranges from the second grade (advanced) or the fifth grade (beginners). The intonation and their recognition will be achieved in each class, working with students collectively, individually or in groups.

Recognition can be oral or written, and we will resort at first to exercises for intonation and for solfaing at 2 and 3 voices (consecutively and simultaneously). In the first year of study, it is good to work with ison (ordinary or rhythmic), responsorial or in canon. All these skills will help students to form an auditory distributive attention, mandatory to future musicians. During the activities of choral or orchestral, harmonic hearing mixed with the melodic one, will help pupils to achieve a correct and expressive interpretation. The experience gained in instrument or theory classes will be entirely used and the intoning precision being supported by the fact that the students sol-fa and don’t intone by ear, as in general education.

Here are, in short, several ways of achieving musical harmonic hearing for different categories of students.

3 Experiment
To demonstrate the need for a coherent and continuous musical education, we undertook an experiment that consisted in the organization of
different activities that aimed the formation and training the harmonic hearing through interpretation (polyphonic, harmonic) and audition, for one or two third and fourth grades, general education system.

The witness class has not benefited from a continuous and the experimental class had a rigorous programme of complex musical practice.

For the third grade we have proposed a canon singing in two groups (polyphonic) of the song "Moș Martin" by Florin Comisel (the practical collective test) and the recognition of the musical instruments by listening to some fragments from “The Animals’ Carnival” by Camille Saint-Saëns (the individual written test). For the sixth grade we have proposed a singing on two voices (harmonic) of the song "On Camp" by Alexandru Pascănu (the practical collective test) and recognition of the musical instruments after listening to “Bolero” by Maurice Ravel (the individual written test). After interpreting the results one can notice a considerable difference in quality at the experimental class.

### Table 1. Evaluation matrix of the interpretative skills achieved during singing a song in canon in 2 groups and the recognition of the mode of interpretation/audition (the third grade)

<table>
<thead>
<tr>
<th>No. Crt.</th>
<th>Assessed Skills</th>
<th>Practical Test</th>
<th>Observation of the individual behaviour/ written test/multiple choice test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Group</td>
<td>Individually</td>
</tr>
<tr>
<td>1.</td>
<td>Singing in 2 voices in canon (polyphonic)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>v</td>
<td>-</td>
</tr>
<tr>
<td>2.</td>
<td>The recognition of the modes of interpretation/audition</td>
<td>-</td>
<td>v</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>v</td>
</tr>
</tbody>
</table>

### Table 2. Results

<table>
<thead>
<tr>
<th>No. of children (-20)</th>
<th>Assessed Skills</th>
<th>Witness Grade (control)</th>
<th>Learning Percentage</th>
<th>Experimental Grade</th>
<th>Learning Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marks</td>
<td>9-10</td>
<td>7-8 5-6 3-4</td>
<td></td>
<td>9-10 7-8 5-6 3-4</td>
<td></td>
</tr>
<tr>
<td>The Third Grade</td>
<td>1</td>
<td>4 5 7 4</td>
<td>45%</td>
<td>7 9 4</td>
<td>85%</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>5 5 6 4</td>
<td>50%</td>
<td>8 9 3</td>
<td>90%</td>
</tr>
</tbody>
</table>

### Table 3. Evaluation matrix of the interpretative skills achieved during singing a song harmonized in 2 voices and the recognition of the mode of interpretation/audition (the sixth grade)

<table>
<thead>
<tr>
<th>No. of children (-20)</th>
<th>Assessed Skills</th>
<th>Witness Grade (control)</th>
<th>Learning Percentage</th>
<th>Experimental Grade</th>
<th>Learning Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marks</td>
<td>9-10</td>
<td>7-8 5-6 3-4</td>
<td></td>
<td>9-10 7-8 5-6 3-4</td>
<td></td>
</tr>
<tr>
<td>The Sixth Grade</td>
<td>1</td>
<td>3 5 7 5 35%</td>
<td>8 8 4 85%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>3 3 8 6 30%</td>
<td>8 9 3 95%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 4. Results

### 4 Conclusions

In school, musical education is continued and completed with the activity of choral singing (choral ensemble). This activity takes place with the participation of students with musical abilities, eager to enrich their musical knowledge and skills.

The possibilities of achieving musical parts are multiple. According to the number of members and their musical evolution, there may be created various bands: large chorus and choir (2-4 equal voices), vocal group (unison, 2-3 equal voices).

The repertoire may be composed of religious, historical, lyrical, folk songs, songs for children, works from universal choral creation (large choral bands), pieces of light or popular music (vocal group). According to the school’s material resources and to the repertoire, these pieces may be accompanied by piano, toys or musical instruments, especially the percussion. Thus, through the activity of understanding and memorizing the parts are developed the intellectual abilities of students, and through the collective activity and thematic content, are cultivated and consolidated the positive character traits. The aesthetic education is carried
out taking advantage of the musical –poetic beauty of songs, their interpretation and the development of harmonic-polyphonic hearing.

References: