

THE INCLUSION OF THE EDUCATOR IN PRESCHOOL MUSIC LESSONS, AS AN INFLUENCE ON MUSICAL DEVELOPMENT

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Abstract

The current paper presents a study on the relationship between music learning development, and the inclusion of a general preschool educator in music lessons, by children aged between 3 and 5 years old. Three study groups (n=51) consisting of existing preschool classes were differentiated by their exposure to a series of ten music lessons with or without the assistance of their habitual educator. One group had both lessons and educator assisting, a second group had lessons but their educator wasn't present. A third was used as a control group in order to define musical development that was only related with cognitive growth. Participant's performance concerning reproduction of learned rhythm patterns, melodic patterns and a familiar song were audio recorded in two recordings: once before the ten given lessons and the other after them. These were evaluated by professional music judges that had to choose the best recording of each individual child, without knowing if they were evaluating either from the first or second moment of recording.

The study concept was developed using existing research based on Vygotsky (1978) and Bronfenbrenner's (1979, 1989) theories of learning, and on the basis that effectiveness, emotions and feelings, have a prior role in knowledge construction (Damásio, 2001, Bowman, 2004, Johnson, 2006, 2007).

The paper concludes that as the study group with lessons and educator assisting scored higher in the final musical test, this is presented as evidence to the notion that musical knowledge is a cognitive construction deeply embedded in the social and emotional webs created by the child.

Keywords

Early childhood; music education; preschool educator; music teacher.

Introduction

At present, in Portugal, musical education for children, between 3 and 5 years old, is mainly supplied by preschool educators. However, many preschools have been employing music specialists to be responsible for music education.

In this paper we propose a model, already discussed in the case of primary schools (Mills, 1991), in which the music specialist and the preschool educator interact in the music teaching process.

Bronfenbrenner (1979, 1989) defines the Ecological Perspective of Human Development as "the scientific study of progressive and mutual accommodation through the course of life between an active human being in development and the changing properties of immediate scenarios involving her; this process is affected by the relationship between scenarios and the broader contexts in which the scenarios are included" (Bronfenbrenner, 1989:188).

Parallel to this idea, the Social Constructivist perspective stresses the importance of cultural mediation and social interactions in the learning process (Vygotsky, 1978). One of the concepts that seem to better express this idea of cultural mediation and social interactions is the concept of Zone of Proximal Development. According to Vygotsky's definition, the Zone of Proximal Development is "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (Vygotsky, 1978:86). With this concept, Vygotsky is emphasizing the social

organization that underlies learning, stressing the importance of the cooperation between the child and the adult or their peers, as a central element in the educational process.

Nowadays, in Portugal, more children are attending preschool institutions (Educação, Ministério da, 2000). Gordon (2000), though standing for a theoretical position which does not value the context in which each act of learning occurs, emphasizes something that seems to be quite important in this framework: the fact of assigning much of the responsibility of an informal education in early childhood, to parents and educators. According to Gordon, all children must pass through a phase of informal guidance both scheduled and not scheduled, provided by all of those responsible for the child's education, whether parents, relatives, educators or others. Zabalza also states that in general: "All children attend school after having learned a lot in their daily lives, after having lived (known, handled) many experiences in which they will generate, test and consolidate various patterns of thought, adaptation and problem-solving. Therefore, it exists and pre-exists an individual story that affects the four levels of the child's development (...) as part of the preschool stage development (the emotional, the sensory-psychomotor, the relational and intellectual)". Zabalza leaves this point to discussion saying: "There is also the question about the strategies that should be used to start the school journey exactly at the point of entry in preschool, trying to work with the child in such a way that they don't skip any stage of development in any of these areas." (Zabalza, 1992:73, translation by the authors).

The experiences lived by the children, referred to by Zabalza, are not lived in isolation, but in a context which has its own characteristics. Reflecting on Vigotsky and Bronfenbrenner's theories, we might perhaps say that the child, throughout their learning experiences, is influenced by the context in which they live. And it is our opinion that one of the most important elements in the context that surrounds the child, is the educator. The child develops strong emotional links by being daily with their educator.

Damásio (2001) is one of the leading researchers, which stresses the importance of the role that emotions and feelings play in several mental processes such as attention, memory, style and efficacy of the thinking process. This assumption indicates a theoretical position in which what is happening in the body is conceived as inseparable from what is usually called cognitive. From this point of view, emotions, feelings, memory, or attention, are all within what we call cognition, a perspective that today has been catalogued as a "Paradigm of Embodiment" (Bresler, 2004, Johnson, 2006). According to this perspective, mind and body form an inseparable continuous, which is simultaneously ecologically situated in a given social context. The body is not a separated construct of the mind, and the mind/body exists in the world through its experience. This experience is profoundly individual, situated and partial: e.g. belonging to an individual child, in a particular place, with its own characteristics that influences the entire process.

This theoretical assumption conceives the mind as an emerging entity, never to be separated from bodily experiences. Therefore, the incorporated mind and body emerge from the experience of the child in the world they live. How then can we neglect the role of the educator in the learning process? The educator is perhaps one of the strongest links between each child and the preschool institution. The emotional connection between children and their educators is emphasized in this paper because the child's learning process cannot be analyzed without taking into account the role of emotions and feelings in this process (Damásio, 2001). Primarily, because emotions are the first tool humans use to evaluate and describe each situation experienced in the world. And, secondly, the process of feeling of an emotion brings into awareness what the child experienced while a certain emotion, or emotional profile, occurs. These two processes are essential to evaluate our actions and plan future actions. Thus, each experience in the world, situated and contextualized, is marked, "catalogued", by a certain emotional profile, a range of emotions felt in the body/mind within its interaction with the world. According to this view, cognition is a process based on the emotions that mediate the relationships between mind/body and body/environment. Therefore, cognition is a process mediated by emotions and feelings.

According to this theoretical review we might perhaps predict that the inclusion of the preschool educator in the music classes is of major importance, because they act as an emotional bridge between

the child, the music specialist and the musical material, acting as an agent for really significant experiences in the child's musical education.

Aim of the research

The aims of this study is to understand and quantify musical developmental differences between children having music classes with a specialist and their habitual educator, and those only run by the specialist.

Object of the research

Participants in this study were 51 children, aged between 3 and 5 years, all belonging to the *Jardim de Infância dos Carvalhos* and *Senhora do Monte's* preschools; these educational institutions are both run by the *Agrupamento Vertical Padre António Luís Moreira de Sousa* in Vila Nova de Gaia, which was approached for approval to conduct this study. The participant children never had previous musical training.

Among the 6 institutions belonging to this group of schools that also have preschools, various procedures were made in order to choose the three classes that would be part of this research:

1) Classes that were not homogeneous groups, in terms of ages and number of children, were excluded;
2) We collected data through interviews with five preschool educators, in order to determine the characteristics, practices and routines of each educator concerning the area of music; it was also taken into account if these educators had had any kind of formal music training or just the standard music training they usually have in their academic pedagogical training. During the interviews, educators were also asked to sing a song so that the researchers could evaluate their vocal quality. After the analysis of these data, researchers found two classes with two similar preschool educators regarding not only their methodology of work, but also in their attitude in class and their voice quality. The third class (control group) was chosen for the same reasons, although the preschool educator had a better voice quality.

Methods and methodologies

All children were audio recorded at two times of assessment: one before two of the three classes started a series of ten sessions, and the other at the end. Only two of the three classes had ten sessions, with duration of thirty minutes each, taught by music specialists. These two classes were divided into two groups each (two groups had eight children and the other two nine) taking into account the age and sex of the children. The four groups were taught the same content, and the same learning strategies were used. The third class had the function of a control group.

In the class that was known as "*with educator*", the educator was present at all sessions; the music specialists provided them access to all material used during the music sessions, so that they could give continuity to the activities done in these sessions during the remaining school hours.

In the class called "*without educator*", the educator never attended or participated in the music sessions, and, therefore, they had no connection with the musical work.

The third class, the "*control group*", had no musical sessions conducted by researchers, and was used so that researchers could try to understand whether the age, associated with an informal knowledge, could influence the musical development of children.

All classes, except the control, were given an introductory session where researchers had the opportunity to present themselves, singing for the children. This session was also the first recording of data collection, where children were asked to sing the song "O Balão do João" (fig. 7) that was recorded and then was examined after the ten sessions were completed. Written approval was requested to all children's parents for the realization of this research.

In the end of collecting the data, three independent judges, who either work with or study music, were asked to listen, evaluate and chose the best recording from the recordings of each child. Judges had no knowledge about the order of the recording they were evaluating.

Activity plan for the ten music sessions

During the music sessions that were given to the children, the music specialists concentrated on tasks in which children usually have difficulties. When researchers were planning the sessions, special attention was given to the purposes and guiding principles stated for preschool children existing in several documents of the Portuguese Education System (Educação, Ministério da, 1997):

- a) Find a warm and affectionate relationship with the children, through affection and a choice of repertoire that might be meaningful to the children, never forgetting the educational content that has to be taught to the students;
- b) Integrate all students in the activities of the group, seeking for all children to participate wilfully and with pleasure, in a healthy way of interacting with others;
- c) Develop the capacity of expression, through imitation activities, working on creativity, and through play activities that include body movement, and in active listening using a wide selection of examples so that children could feel motivated and willing to participate.

No importance was given to only one method or technique of teaching/learning; the researchers tried to reconcile a variety of methodologies such as Willems (1970), Dalcroze (1998), and Gordon (1993, 2000). Musical sessions had a pre-established sequence, and were based on the intention to provide opportunities for the children to experiment and experience sound, through an active pedagogy. The sessions included rhythmic and melodic pattern imitation, always seated in playful activities, which included song, movement, body expression and musical instruments. No theoretical concept instruction was given in these activities.

table 1: strategies for the ten musical sessions

<i>Musical contents</i>	<i>Objectives</i>
<i>Rhythm</i> - Pulse - Short and Long sounds - Rhythmic Patterns - Duple Meter - Triple Meter - Combined Meter	- To play or move according to the tempo of a song or musical piece - To recognise and imitate short and long sounds - To imitate rhythmic patterns referring to songs - To imitate rhythmic patterns in duple meter metric - To imitate rhythmic patterns in triple meter metric - To imitate rhythmic patterns in combined meter metric
<i>Melodic</i> - Tonality - Modality - Melodic Patterns - Songs	- To sing in the same tone heard - To sing in the same mode heard - To sing melodic patterns - To sing melodic phrases with or without words
<i>Timber</i> - Sounds from small percussive Orff instruments - Sounds from different ensembles	- To recognize different timbers of different instruments individually or in different ensembles.
<i>Articulation</i> - <i>Legatto</i> and <i>stacatto</i>	- To imitate <i>legatto</i> or <i>stacatto</i> sounds, and also apply them to songs, rhythmic patterns and melodic chants.
<i>Dynamic</i> - <i>Forte</i> and <i>piano</i> sounds - <i>Crescendo</i> and <i>diminuendo</i>	- To imitate <i>fortes</i> and <i>piano</i> sounds, <i>crescendos</i> and <i>diminuendos</i> , and also apply them to songs, rhythmic patterns and melodic chants.
<i>Agogic</i> - <i>Accelerando</i> and <i>Ritardando</i>	- To use <i>accelerando</i> and <i>ritardando</i> to learned songs, rhythmic patterns and melodic chants.

Individual tasks performed by children during the evaluation

There were two recorded moments of assessment: one before the first musical session and another at the end of the ten musical sessions. The evaluation was made using a scale from 1 to 4, where 1 was *Very Bad* and 4 was *Very Good*. The judges also had to choose their preferred recording, between the two recordings of each child. The musical tasks performed by children were the following:

1. Rhythm - Each child was asked to listen and then to imitate rhythmic patterns that were previously recorded: a rhythm of duple meter, one with triple meter and two combined rhythmic patterns. The objective for this task was to imitate as accurately as possible the rhythmic patterns:



fig. 1: duple meter rhythmic pattern



fig. 2: triple meter rhythmic pattern



fig. 3: combined meter rhythmic pattern 1



fig. 4: combined meter rhythmic pattern 2

2. Melodic - Each child was asked to listen and sing melodic patterns: two of them were major patterns, and two were minor patterns. The objective for this task was to imitate as accurately as possible the melodic patterns:



fig. 5: major melodic patterns 1 and 2



fig. 6: minor melodic patterns 1 and 2

3. Song – Each child was asked to sing the traditional song "O Balão do João":

O Balão do João

Traditional song



fig. 7: song "O Balão do João"

The objective for this task was to sing the song:

- I. tuned without changing the tonality;
- II. making no interval mistakes;
- III. keeping the beat from start to the end;
- IV. with the correct rhythm;
- V. associating the correct lyrics to the rhythm.

Neither tonality nor tempo were imposed. The evaluation was made again using the scale ranged from 1 to 4 for each objective; the judges chose their favourite recording from the two recordings for each child. These individual tasks were performed with all children with a separation between the recordings of about two and a half months, this being the required time for the thirty-four children to have ten music sessions.

Results of the research

After the evaluation made by the three judges, the results were analyzed in three ways:

- 1 - First Recording Evaluation: comparative analysis between the classes;
- 2 - First and Second Recording Comparative Evaluation;
- 3 - Preferred recordings for each judge.

There was also done a comparative assessment between the first and second recording evaluation for each child. References to this task will be only mentioned in section: Discussion and Conclusions.

1 - First Recording Evaluation: comparative analysis between classes

The values shown below are the average percentages of positive levels (3 and 4) given by the three judges to each class. On the rhythmic task, table 2, the best performance in the first evaluating recording belongs to the “*with educator*” class.

table 2: rhythmic tasks performance

	Class “ <i>without educator</i> ”	Class “ <i>with educator</i> ”	“ <i>Control group</i> ”
Duple Meter Rhythmic Pattern	13,8%	35,3%	21,6%
Triple Meter Rhythmic Pattern	41,1%	43,1%	35,2%
Combined Meter Rhythmic Pattern 1	19,6%	13,7%	21,6%
Combined Meter Rhythmic Pattern 2	39,1%	47,1%	21,6%

On the melodic major tasks the class with best results in the first recording was the “*control group*”. Among the classes that had music sessions the best one was the class “*without educator*”.

table 3: major melodic patterns task performance

	Class “ <i>without educator</i> ”	Class “ <i>with educator</i> ”	“ <i>Control group</i> ”
Major Melodic Pattern 1	54,9%	41,2%	88,6%
Major Melodic Pattern 2	54,9%	43,1%	70,6%

On the melodic minor tasks, all classes had very balanced results in the first recording. However, it is noteworthy that all classes had best results when singing in major tones.

table 4: minor melodic patterns task performance

	Class “ <i>without educator</i> ”	Class “ <i>with educator</i> ”	“ <i>Control group</i> ”
Minor Melodic Pattern 1	31,4%	25,5%	29,4%
Minor Melodic Pattern 2	29,5%	27,5%	29,4%

Regarding the song, in the first recording the “*control group*” was the best at all levels. In respect to the other two classes, the “*with educator*” class stands out.

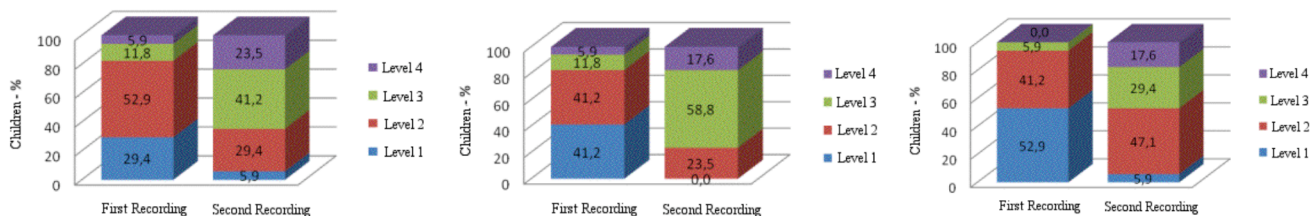
table 5: song task performance

Objective:	Class “ <i>without educator</i> ”	Class “ <i>with educator</i> ”	“ <i>Control group</i> ”
Sings the song tuned without changing the tonality	41,2%	47%	62,7%
Sings the song making no interval mistakes	25,5%	53%	58,8%
Sings the song keeping the beat from start to end	43,1%	64,7%	78,5%
Sings the song with the correct rhythm	60,8%	66,7%	78,4%
Sings the song associating the correct lyrics to the rhythm	54,9%	68,6%	74,5%

2 - First and Second Recording Comparative Evaluation

The results observed for each judge on each task, and each class were compared. For each class and task, positive and negative levels were compared. Researchers and judges considered as positive levels 3 and 4, and as negative levels 1 and 2. The average was calculated based on the development of each class in each task, focusing only on the passage from a negative to a positive level. Also considered was the preferred recording for each child for each of the judges. As an example, the graphics and tables for the first task assessed (duple meter rhythmic pattern) are shown below.

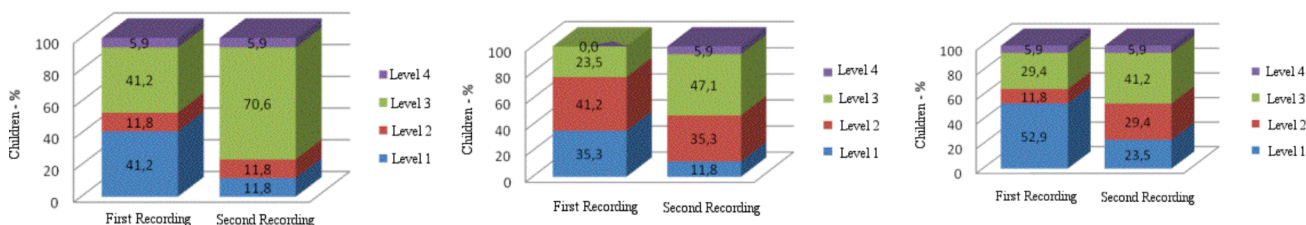
2.1 Rhythmic Patterns



a) class “without educator”, duple meter rhythmic pattern, judge 1

b) class “without educator”, duple meter rhythmic pattern, judge 2

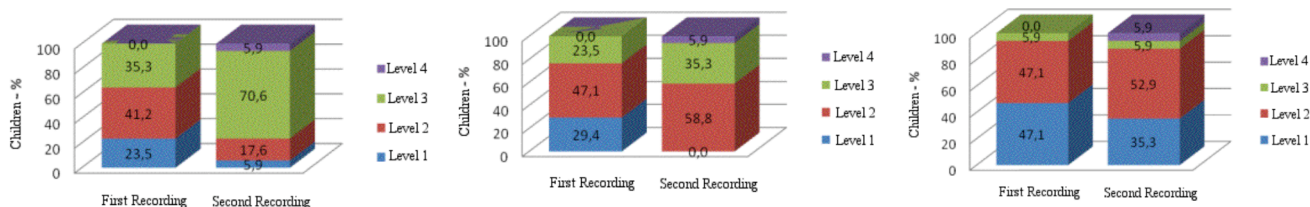
c) class “without educator”, duple meter rhythmic pattern, judge 3



d) class “with educator”, duple meter rhythmic pattern, judge 1

e) class “with educator”, duple meter rhythmic pattern, judge 2

f) class “with educator”, duple meter rhythmic pattern, judge 3



g) “control group”, duple meter rhythmic pattern, judge 1

h) “control group”, duple meter rhythmic pattern, judge 2

i) “control group”, duple meter rhythmic pattern, judge 3

fig. 8: duple meter rhythmic pattern task performance

table 5: average percentage of the positive levels in the two recordings by respective class

	Class “without educator”			Class “with educator”			“Control group”		
	1 st re - cording	2 nd re - cording	Diffe- rential	1 st re - cording	2 nd re - cording	Diffe- rential	1 st re - cording	2 nd re - cording	Diffe- rential
Duple Meter Rhythmic Pattern	13,8%	62,7%	48,9%	35,3%	58,8%	23,5%	21,6%	43,2%	21,6%
Triple Meter Rhythmic Pattern	41,1%	72,5%	31,4%	43,1%	70,5%	27,4%	35,2%	47%	11,8%
Combined Meter Rhythmic Pattern 1	19,6%	41,2%	21,6%	13,7%	39,2%	25,5%	21,6%	19,6%	- 2%
Combined Meter Rhythmic Pattern 2	39,2%	43,1%	3,9%	47,1%	56,9%	9,8%	21,6%	39,2%	17,7%

2.2 Melodic Patterns

table 6: average percentage of the positive levels in the two recordings by respective class

	Class “without educator”			Class “with educator”			“Control group”		
	1 st re - cording	2 nd re - cording	Diffe- rential	1 st re - cording	2 nd re - cording	Diffe- rential	1 st re - cording	2 nd re - cording	Diffe- rential
Major Melodic Pattern 1	54,9%	62,8%	7,8%	41,2%	68,6%	27,4%	88,6%	58,8%	- 5,9%
Major Melodic Pattern 2	54,9%	60,8%	3,9%	43,1%	66,3%	24,1%	70,6%	60,8%	- 9,8%
Minor Melodic Pattern 1	31,4%	60,8%	15,7%	25,5%	52,9%	27,5%	29,4%	41,2%	11,8%
Minor Melodic Pattern 2	29,5%	35,3%	5,8%	27,5%	56,9%	29,4%	29,4%	27,5%	- 1,9%

2.3 Song “O Balão do João”

table 7: average percentage of the positive levels in the two recordings by respective class

	Class “without educator”			Class “with educator”			“Control group”		
	1 st re - cording	2 nd re - cording	Diffe- rential	1 st re - cording	2 nd re - cording	Diffe- rential	1 st re - cording	2 nd re - cording	Dife- ren- cial
Sings the song tuned without changing the tonality	41,2%	58,8%	29,4%	47%	76,5%	30,3%	62,7%	68,3%	5,9%
Sings the song making no interval mistakes	25,5%	52,9%	27,4%	52%	76,5%	23,5%	58,8%	64,7%	5,8%
Sings the song keeping the beat from start to the end	43,1%	86,3%	43,1%	64,7%	96,1%	31,4%	78,5%	86,3%	9,8%
Sings the song with the correct rhythm	60,8%	96%	35,3%	66,6%	100%	33,3%	78,4%	84,3%	5,9%
Sings the song associating the correct lyrics to the rhythm	54,9%	92,1%	37,3%	68,6%	93,8%	25,5%	74,5%	82,3%	7,8%

3 - Preferred recordings for each judge

The choice of the preferred recording by the judges is evident in almost all assessment tasks, as can be observed in table 8. The class with higher average percentage was the “with educator” one, as this class was the one that showed more improvement in the second recording.

table 8: average percentage preference for the second recording

	Class “without educator”	Class “with educator”	“Control group”
Duple Meter Rhythmic Pattern	86%	76%	69%
Triple Meter Rhythmic Pattern	74%	80%	70%
Combined Meter Rhythmic Pattern 1	74%	74%	53%
Combined Meter Rhythmic Pattern 2	57%	76%	53%
Major Melodic Pattern 1	49%	80%	61%
Major Melodic Pattern 2	53%	84%	65%
Minor Melodic Pattern 1	57%	80%	47%
Minor Melodic Pattern 2	78%	69%	41%
Song “O Balão do João”	82%	96%	76%

Discussion and Conclusions

Concerning the Duple and Triple Meter Rhythmic Patterns, the class that showed most progress was the “without educator” one. Although this class, in comparison with the class “with educator”, had shown a worse performance in the first recording, it managed to get better results in the second recording. The researchers considered that perhaps this was because the rhythmic material they had given to the educator to continue the music class work was insufficient.

Concerning the Combined Meter Rhythmic Pattern 1, the class “without educator” had a slightly higher development rate; however, comparing these results with those achieved by the “with educator” class, one can observe that the difference is minimal, as in both classes nearly half of the children rose to an higher level. We may then conclude that the work was productive but insufficient, since in both classes not even half of the children achieved a positive level.

In respect to the Combined Meter Rhythmic Pattern 2 the class with a higher development rate was the “with educator”; it is noteworthy that, in this class, half of the children obtained a positive level. It is our belief that the differences shown in results between these two Combined Meter Rhythmic Patterns tasks was due to the fact that the second task started and finished in a triple meter; perhaps of significance was that all children got better results in the Triple Meter Rhythmic Pattern.

In all Melodic Patterns, Major and Minor, the class “with educator” got better results in the second recording, even though this was the class with the worst results in the first recording. The class “without educator” had a higher number of positive results at the first recording, but, in the second recording, there was an average of about 25% of children who dropped level, while in the class “with educator” the percentage of decline was only around 10%. The work with the Melodic Patterns in music sessions was always done using neutral syllables, which was not mentioned as a methodology of work by educators at the interviews. During the ten music sessions, and through various informal conversations with the educator of the class “with educator”, we noted that in general educators do not sing songs without words or do not sing melodic patterns; educators mentioned that they always use songs with words; using songs without words, or melodic patterns, was only taught by the music specialists during the ten sessions, and, therefore the class that took real advantage of this methodology was the “with educator”, that had their preschool educator always included in the musical classes. From this we conclude that perhaps this is the reason why the class “with educator” obtained better results in this task since the educator of this group was encouraged to follow up, and repeat, the activities proposed by researchers over the sessions, in their classes. Also, the inclusion of the educator encouraged children to participate more actively in the music class.

In the intonation of the song task the “with educator” class showed more progress in virtually all the evaluated objectives. This group obtained better results in the two recordings; however, it was the class “without educator” who got a higher differential of positive levels from the first to the second recording. This larger difference does not put the class “without educator” in a higher level in relation to the class “with educator”. It should be noted that this greater differential was perhaps due mainly to a greater

progress in performing the song with a good singing tone quality and an accurate intonation. During the research, the researchers came to realize that this aspect was neglected by their educator (the one that was attending music classes) and so, during the sessions, researchers made a strong effort on this point. However, in the third set objective of the song task, namely “Sings the song keeping the beat from start to the end”, the class “*without educator*” had a significant higher percentage level, which may be explained by the fact that this class was very dynamic in the activities involving body movement. Regarding the “*control group*”, it can be observed that in nearly all tasks more children dropped to a lower level, and fewer children rose to an higher one, in comparison with those that had music sessions. The “*control group*” had worse results in all evaluation tasks. It is also noteworthy, that the “*control group*” was the one that got best results in the first recording both in Major Melodic Patterns and Song. When analyzing the gap between the two assessment recordings of the “*control group*” there is a clear regression in the Combined Meter Rhythmic Patterns, and in the Major and Minor Melodic Pattern 2. This group only got more than half of children with a positive level in the second recording in these tasks. From this result, and also from what was observed, we may perhaps conclude, that the music environment to which children are exposed is usually restricted to listening and singing songs in Major tones, which restricts children from more diverse musical experiences.

In summation and comparing the two classes that had music sessions with the “*control group*”, it seems important to emphasize, first of all, the importance of having music classes with a professional specialist. This aspect seems crucial in music learning activities performed by children between three and five years old. Indeed, the class that got lower results was the “*control group*”, where there were more cases of regression. We therefore note that our study gives a strong indication that chronological development is not directly related to musical growth over the length of the study time period.

Regarding the comparison between the two classes that had music sessions, it seems that it can be concluded, for the sample presented in this paper, that the wider and better the relationship between the music professional and the preschool educator, the greater are the moments that children have to achieve meaningful learning experiences that can provide a real musical development.

As a final note it is worth saying that the results of this research should be repeated with a larger sample size, so that educators could have a better representation of what was proposed. Nevertheless, we hope that this was a meaningful contribution to the advancement of learning and teaching music to preschool children. Through including the educator in the specialist educator’s class “experiences, both the casual and the systematized, can be integrated in order to provide a full development of each subject. The child does not only progress through several experiences. They participate in these experiences at an emotional, cognitive and operational level, so that the school experience brings to the child a doubly significant value” (Zabalza, 1992:75, translation by the authors).

List of References

- Bachman, M.L. (1998) *La rítmica Jaques-Dalcroze: Una educación por la música y para la música*. Madrid: Ediciones Pirámide.
- Bowman, W. (2004) Cognition and the body: Perspectives from Music Education. In: Bresler (Ed.). *Knowing bodies, Moving Minds*. Netherlands: Kluwer Academic Publishers, 29-50.
- Bronfenbrenner, U. (1979) *The Ecology of Human Development*. Cambridge: Harvard University Press.
- Bronfenbrenner, U. (1989) Ecological Systems Theory. *Annals of the Child Development*, 6, 187-249.
- Damásio, A. R. (2001) *O Erro de Descartes: Emoção, Razão e Cérebro Humano*. Mem Martins: Publicações Europa-América.
- Educação, Ministério (1997) *Legislação, Educação Pré-Escolar*. Lisboa: Departamento de Educação Básica, Núcleo de Educação Pré-Escolar.
- Educação, Ministério (1997) *Orientações Curriculares para o Pré-Escola*. Lisboa: Departamento de Educação Básica, Núcleo de Educação Pré-Escolar.
- Educação, Ministério da (2000) *Early Childhood Education and Care Policy in Portugal = A Educação Pré-Escolar e os Cuidados para a Infância em Portugal*. Lisboa: Departamento de Educação Básica.

- Gordon, E. (2000) *Teoria da Aprendizagem Musical – Competências, Conteúdos e Padrões*. Lisboa: Fundação Calouste Gulbenkian.
- Gordon, E. (2000) *Teoria da Aprendizagem Musical para Recém-Nascidos e Crianças em Idade Pré-Escolar*. Lisboa: Fundação Calouste Gulbenkian
- Gordon, E. et al. (1993) *The Early Childhood Music Curriculum – Songs and Chants Without Words Book One*. Chicago: GIA Publications, Inc.
- Johnson, M. (2006). *Mind Incarnate: From Dewey to Damásio*. *American Academy of Arts and Sciences*, 46-54.
- Johnson, M. (2007) *The Meaning of the Body: Aesthetics of Human Understanding*. Chicago: Chicago University Press.
- Mills, J. (1991) *Music in Primary Schools*. Cambridge: Cambridge University Press.
- Willems, Edgar (1970). *As Bases Psicológicas de Educação Musical*. Bienne: Edições Pró-Musica.
- Zabalza, M. (1992). *Didáctica da Educação Infantil*. Rio Tinto: Edições Asa.
- Vygotsky, L. (1978). *Mind in Society: The Development of higher psychological processes*. Cambridge, MA: Harvard University Press