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Experienced Emotions through the *Orff-Schulwerk* Approach in Music Education - A Case Study Based on *Flow Theory* -

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ABSTRACT

Orff-Schulwerk is one of the most holistic and creative approaches in Music Education, and during Music classes, teachers are expected to regularly combine a wide range of sources, including speech, music, creativity, movement and dance.

In this paper we propose to identify different experienced emotions boosted by *Orff-Schulwerk'* activities in a Music Education context. Students (*N*=50), aged between 10 and 12 years old, were audio and video recorded, while attending their weekly Music Education class during one academic year (9 months). In addition, in the end of each class, each student was asked to answer one questionnaire, in order to understand their perspective on their lived emotions. All classes were structured according to three main categories: "General", "Music and Movement" and "Music Laboratory".

The empirical process was based on Csikszentmihalyi's *Flow Theory* (1975, 1990, 1997, 2002), and the consequent adaptation of the *FIMA* (*Flow Indicators in Musical Activity*) and *AFIMA* (*Adapted Flow Indicators in Musical Activity*), both developed by Custodero (1998, 1999, 2002a, 2003, 2005). After analyzing the collected data using *AFIMA* conclusions were drawn. As emotions and cognition are closely linked in music (Cook & Dibben, 2010, Krumhansl, 2002; Sloboda, 1999, 2005; Sloboda & Juslin, 2001; Juslin & Sloboda, 2010), data enabled us to put in evidence several correlations regarding the *Orff-Schulwerk* approach and the students lived emotions during Music Education classes. *AFIMA* enabled us to establish that through an *Orff-Schulwerk's* approach children lived many positive emotions, which demonstrated to be significant in the way they acquire musical knowledge.

I. INTRODUCTION

Throughout infancy and early childhood children's music experiences usually begin with informal music activities of their immediate family members. For most children, formal Music Education will start either in kindergarten or elementary school. According to Sloboda (2005) it is at this stage of development that the exposure and engagement with music can lead to wider disparities in the ability to do a variety of musical tasks. Unfortunately, under the actual Portuguese Education system, for most students' enrolled in the 5th and 6th grade, this will be their first and last formal compulsory musical experience during their school time, as they only start learning music at the age of 10, and just for a two-year period. Therefore, Music classes are seen as something not very important or even interesting, and many children have mix feelings towards their music education process. Departing from our musical background (Orff-Schulwerk approach certification courses and programs) and previous research (Cunha, 2005, 2011) this study aims to identify in Music classes based on Orff-Schulwerk approach, the students lived emotions during this teaching period of their lives.

Supported by positive, cognitive and social Psychology ideas and theories (Csikszentmihalyi, 1975, 1990, 1997, 2002; Fiedler & Bless, 2001; Huppert & Whittington, 2003), the methodological approach (*AFIMA - Adapted Flow Indicators in Musical Activity*) developed and applied by Custodero (1998, 1999, 2002a, 2003, 2005), revealed at this stage to be very convenient for obtaining information and data analysis. The current stage of this longitudinal ongoing research adds information to a preliminary study by Cunha & Carvalho (2011), where it was observed different examples of *Flow Indicators in Musical Activity* (*FIMA*). In this study we reveal the existence of a strong connection between the activities of the *Orff-Schulwerk*'s approach and the positive emotions lived in class by the students.

II. BACKGROUND

A. Orff-Schulwerk

Orff-Schulwerk is a creative music and movement approach developed by Carl Orff and Gunild Keetman. Music teaching and learning processes, supported by a wide range of sources, provides a means for awakening the potential for "being musical", meaning to be able to understand and use music and movement as forms of expression. Natural behaviours are firstly directed into responding to and making music. Carl Orff's idea about Music Education was always to put the practical work in the foreground. Children or adults have "musical potential", but need to experience, act, enjoy, feel and interact in order to get a musical cognitive and affective development (Kugler, 2011).

In the *Orff-Schulwerk* approach, musical concepts are learned through singing, dance, movement and the playing of percussion instruments (Orff *Instrumentarium*). Orff emphasized the use of simple percussion instruments (including body percussion), while building upon human natural singing voice. He also emphasises the links of music with movement, dance and speech in what he nominated "Elemental Music" (Teachout, 2009).

Further intents of *Orff-Schulwerk* approach are the development of a foundation for lifelong enjoyment of music in a supportive atmosphere. Students learn music by experiencing and participating in different musical activities, stimulating not only the concepts of music like rhythm, pitch or tempo, but also the aesthetic qualities of music (Cottone, 2010).

Improvisation, composition and natural sense of play are encouraged and make students to be involved on a lifetime of knowledge and pleasure through personal musical experience. Learning is only meaningful if it brings satisfaction to the learner, and satisfaction arises from the ability to use acquired knowledge for the purpose of creating. When exposed to the Orff approach, we are encouraged to create music (Klemp, 2009). In the same way, we learn a language, or how to read and to write, music should be a later natural outgrowth of these experiences. Orff-Schulwerk approach is about learning music putting together forms and motives that can be develop into complexity. Attaining a higher level is fundamental and timeless, and creativity has a central role. Connectivity between multiple sources, aspects and parameters (such as rhythm, melody, movement and language) is a requirement. In an Orff classroom children sing, move and play Orff instrumentarium. They improvise rhythms, melodies and movements. Music is always experienced in all of these media and improvisation is an integral part of every class. The work is multi-layered, offers rewards for students at various stages of development, and is a magically satisfaction for all participants (Lui, 2011).

The pedagogical materials used in the Orff-Schulwerk classes include rhymes, poems, games, songs, dances and instrumental pieces. Those drawn from the cultural heritage of the participants are considered fundamental. According Johnson (2006), evidence of the Schulwerk's success is clearly demonstrated by its worldwide usage. As an alternative to "authoritative" and "prescribed" approaches to Music Education, Orff-Schulwerk provides, although a under teacher directed process, a mutually collaborative interaction between the instructor and the students, based on freedom of ideas and celebrating creative expressions. Orff Schulwerk's encourages improvisation and creativity (Teachout, 2009). Music educators trained within this approach are instructors and facilitators, which guide students through several phases of development: Exploration; Imitation; Improvisation and Composition (Campbell, 2008).



Figure 1. *Orff-Schulwerk* schematic representation, based on HOSA - Hong Kong *Orff-Schulwerk* Association presentation.

In sum, *Orff-Schulwerk's* approach is a total active involvement in "music making" that incorporates speech, singing, movement, dance and instrument playing in a

creative environment. It is really a holistic Music Education (Goodkin, 2004).

B. Flow Theory

More than twenty centuries ago Aristotle observed that, more than anything, men seek happiness. Nowadays, in behavioural science Mihaly Csikszentmihalyi made similar observations based on connections between daily activities and positive aspects of life involvement like joy, gratification, comfort, satisfaction, success, relish or pleasure.

Csikszentmihalvi (1975) started his observations and studies on artists and creative types. Based on his now-famous ESM - Experience Sampling Method (a particularly inventive way to make happiness a measurable phenomenon) he noted that the act of creating seemed at times more important than the finished work itself and he was fascinated by what he called the "flow state", in which the person is completely immersed in an activity with intense focus and engagement. Moments in which our mind becomes entirely absorbed in the activity so that we "forget ourselves" and begin to act effortlessly, with a heightened sense of awareness of the here and the now. Indeed, Csikszentmihalyi (1988) has even given it a name for an objective condition - "Flow" based on four essential components (Control; Attention; Curiosity and Intrinsic Interest). "Optimal experience/flow state" occurs when someone is in self-control, goal-related and identified with meaningful actions.

According Csikszentmihaly (1990) "optimal experience / flow state" is a "state" between "Boredom" and "Anxiety", produced when there is equilibrium between "Challenges" and "Skills". The best moments usually occur when a person's body or mind is stretched to its limits in a voluntary effort to accomplish something difficult and worthwhile. Therefore, by balancing high levels of Skill and Challenge, we are able to generate high output of ideas, productivity, satisfaction and forward momentum.



Figure 2. *Flow Theory* schematic representation (Csikszentmihaly, 1990: 74)

Cziksentmihalyi (1990) defines "flow channel" as a state in which people are so involved in an activity that nothing else seems to matter. The experience is so enjoyable that people will continue to do it even at great cost, for the sheer sake of doing it. He identifies a number of different elements involved in achieving "optimal experiences/flow states":

- Clear goals on every step of the way;
- Immediate feedback to one's actions;
- Balance between challenges and skills;
- Action and awareness are merged;
- Distractions are excluded from consciousness;
- There is no worry of failure;
- Self-consciousness disappears;
- The sense of time becomes distorted;
- The activity becomes an end in itself.

Csikszentmihaly's exhaustive case studies, controlled experiments and subsequent findings (1975, 1988, 1990, 1997, 2002) gained still more popular interest and he is today considered one of the founding figures of positive Psychology. Flow Theory has become the focus of research in distinct areas of human life like artistic and scientific creativity, dance, learning processes, publicity or sports. In Music / Music Education field, researchers adopted Flow Theory as a solid reference in multiple empirical researches in subjects like musical learning, musical cognition, musical creativity or musical performance studies (Araújo, 2008; Bakker, 2005; Bersh, 2009; Byrne et al., 2003; Bloom & Skutnick-Henley, 2005; Custodero, 1998, 1999, 2000, 2002a, 2002b, 2003, 2005; Custodero & Stamou, 2006; DeNora, 2000; Fritz & Avsec, 2007; Kraus, 2003; MacDonald et al., 2006; O'Neill, 1999; Pachet, 2004; Rhoda, 2009; Sheridan & Byrne, 2002; Silva, 2008; Sloboda et al. 2001; Troum, 2008).

III. AIMS

The main objective of this paper is to share results obtained from an ongoing longitudinal study on music pedagogy and music cognition. At this stage, we will bring to light the different lived emotions referred by the students (*AFIMA*) at the end of several *Orff-Schulwerk's* approach activities in a Music Education context.

This study also intends to contribute to a research area where there is still scarce information on the *Orff-Schulwerk's* approach and children's music learning process.

IV. METHOD

Following our previous study (Cunha & Carvalho, 2011), based on video/audio recordings in the classroom (FIMA), the data here reported represents a second stage of analysis of the on going longitudinal research. In the end of each Music class students were asked to answer one questionnaire in order to include their perspective on their lived emotions. All Music classes in this study were planned according to the Music Education official program guidelines, set by the Portuguese Education Ministry, in the 2010 / 2011 academic year. Classes were always based on the Orff-Schulwerk's approach, and were structured in three main different categories: "General", "Music and Movement" and "Music Laboratory". "General" classes are considered moments where the teacher assumes total orientation, and where practical activities are performed (singing, playing body percussion / Orff instrumentarium) and where theoretical topics are explained (e.g. music notation; music theory; music history). Students are invited to contribute with their ideas during the entire practical work. "Music and Movement" are semi-guided classes led by the teacher, in which students work on musical parameters throughout given songs / pieces / movement and dance forms / choreographies. Students' are allowed more freedom and

participation than in "General" classes. Finally, in the "Music Laboratory" classes, the teacher only suggests the initial idea (e.g. a rhythmic, a melodic or an harmonic phrase, a speech, a painting, a story, some comics, etc.), defines the timings for the activity, organizes it into different groups (maximum of 6 students randomly chosen) and provides for each group the same pedagogical materials (e.g. Orff instrumentarium). Then, departing from a given idea, students work freely and improvise rhythms, melodies, harmonies, movement and choreographies. At the end of the established time, they present their work to their colleagues, and then all classmates make an evaluation / discussion. This kind of class organization allows students to feel completely free to create, to explore and to interact with and supported by music, using practical and theoretical topics previously learned in "General" and "Music and Movement" classes.

In *Orff-Schulwerk'* classes students are always the central part of the process, particularly on "Music and Movement" and "Music Laboratory" classes, where they are able to unify theory and practice, fantasy and reality, imagination and discipline, emotions and thoughts. In this way, being aware of the emotions lived by the students in each of the activities, collected by *AFIMA*, is extremely important to understand how musical knowledge increases, since for being inside music, emotional involvement is a requirement (Sloboda, 1999).

Participants

This study involves 50 students aged between 10 and 12 years old, from a Portuguese public general school (5^{th} and 6^{th} grade classes in Music Education context). For all the 5^{th} grade students this would be their first year of formal Music Education.

Procedures and measures

In the end of each Music class each student was asked to answer one questionnaire. The data was collected over 25 Music classes of the full academic year. The questionnaire was constructed based on a previous existing one (*AFIMA* – *Adapted Flow Indicators Musical Activity*), which was developed and applied according *ESM* – *Experience Sampling Method* in several studies by Custodero (1998, 1999, 2002a, 2003, 2005). In total 637 questionnaires were answered by the students and served as data, which was then analysed. The results were treated using statistical analysis of "Affective Indicators" (*AFIMA*).

The analysis of the global data was obtained during twenty-five sessions divided in three pre-defined categories: thirteen "General" classes, six "Music and Movement" classes and eight "Music Laboratory" classes.

In order to clarify some activities / strategies developed in each class, it will be presented short descriptions (and examples) for each one of the three mentioned classes categories. In a "General" class (example) the teacher guides the students with the intent to work / learn rhythmic notation. All members of the class (including teacher) are organized in a big circle (typical *Orff-Schulwerk* principle). Teacher begins improvising a simple "body percussion sound" and the entire group is invited to repeat. Then, each of the students assumes the "leadership" and creates "body percussion sounds", which all the group repeat in "question / answer" mode. Next, students work in pairs. The challenge here is to discover the "spoken" rhythm of their own given names and associated them with "body percussion sounds". Pairs present their creative work and all group repeat and make a verbal appreciation. In the second part of the class, and using unconventional symbols (lines, dots or / and other symbols), each student will try to write the rhythm that was created. At the end of this task, the teacher introduces basic conventional music notation (crotchet, quavers and respective rests) and asks the students to rewrite their rhythm according the conventional notation. The final step of the class is to present individual work. After the work has been discussed, students and teacher choose, and then play, a final body percussion of spoken phrases or pieces, which have the most interesting and imaginative rhythms and gestures that were created. The class ends with a collective appreciation and reflection.

In a "Music and Movement" category, we present an example of a class where students worked a song called using different tempo (Adagio; Andante; Moderato; Allegro). Like in "General" class, the group is organized in a big circle, and the teacher begins to do a simple "body percussion sound", which the entire group repeats. After the "leadership" rotation, the teacher uses body percussion sounds and introduces the rhythm of the song. The next step is to combining spoken words of the song and body percussion. Students repeat, and then contribute with their own ideas (e.g. "Let's do the song as if we were very happy... and now if we were very sad... like if we were babies... or very old..."). After trying all students' ideas, teacher introduces progressively the melody of the song, using his voice combined with body percussion that students repeat and learn by imitation. According the lyric of the song, movement / dance is integrated in the sequence, and the song becomes a dance too. After some practice, student's ideas are once again considered, and the class sings and moves in different musical forms until someone proposes do it in different tempo. At this stage of the class, teacher explains the different basic tempo (Adagio, Andante, Moderato, Allegro), invite students to try the song / dance in these different *tempo*. The different forms suggested before by the students are now combined with tempo chances in a final practical work / performance. A collective appreciation and reflection ends the class.

A "Music Laboratory" class example can be described as follows: students are invited to bring to class proverbs in order to convert them in a piece. Working groups are organized and the teacher asks them to create a musical, choreographic or drama piece using voice, body percussion, movement and / or dance and Orff Instrumentarium, based on the proverbs previously chosen. The most important rule is that the music should have a leading role and should be combined with speech / movement / dance / drama. Teacher provides Orff Instrumentarium in the middle of the classroom, and each group can try and experience the sound possibilities of the instruments. Each group must do a written register (score) of their musical ideas using conventional musical writing. The "gradual changes" (Crescendo, Diminuendo) must be included in the piece. Groups work autonomously over a specified period of time (e.g. 20 minutes) for later presenting their pieces, followed by an analysis / reflection of the outcome. In the end of the class, the teacher asks the students about their own work, the work of their peers and the relevance of *Crescendo* and *Diminuendo* concepts in music / choreography / dance performances.

V. RESULTS AND DISCUSSION

The results of this study have specific relevance for music educators interested on Csikszentmihalyi's "flow paradigm" and music teachers using *Orff-Schulwerk's* activities in a Musical Education context.

In Table 1 it is presented the global statistical results of the analysis of all components of *AFIMA*'s "Affective Indicators".

Grading parameter	Neither	Somewhat	Quite	Very	
"Positive lived emotions"					
Нарру	19 (2,98%)	44 (6,90%)	220 (34,54%)	354 (55,57%)	
Cheerful	25 (3,92%)	51 (8,00%)	218 (34,22%)	343 (53,85%)	
Excited	31 (4,87%)	68 (10,68%)	269 (42,23%)	266 (41,76%)	
Involved	18 (2,82%)	47 (7,37%)	249 (39,08%)	319 (50,07%)	
Alert	14 (2,19%)	61 (9,57%)	302 (47,40%)	256 (40,18%)	
Satisfied	13 (2,04%)	46 (7,22%)	197 (30,92%)	381 (59,81%)	
Successful	11 (1,72%)	61 (9,57%)	255 (40,03%)	309 (48,50%)	
"Negative lived emotions"					
Sad	-	0	0	0	
Irritable	-	0	0	0	
Bored	-	0	1 (0,15%)	3 (0,47%)	
Distracted	-	3 (0,47%)	1 (0,15%)	0	
Drowsy	-	0	7 (1,09%)	0	
Frustrated	-	0	0	0	
Failure	-	1 (0.15%)	0	0	

Table 1. Qualitative Statistics of the global "Affective Indicators"

Regarding the lived emotions presented in the table 1, which occurred during the *Orff-Schulwerk* Music approach activities, the analysis of the global data refers to the tree classes' categories previously mentioned and can be summarized as followed:

- 1. The majority of the students clearly lived "positive emotions" in all music classes;
- 2. Higher levels (Quite and Very) of "Affective Indicators" are directly correlated with positive lived emotions, e.g. *Happy, Cheerful, Involved* and *Satisfied* were mentioned with maximum level (Very) by more than 50% of the students;
- 3. Globally, more than 40% of all students lived positive emotions at maximum level (Very) in the taught activities. The "Somewhat" level of positive emotions was only referred by 10% of the students. Less than 5% of the students mentioned "Neither";
- 4. The "negative lived emotions" only attained 1%. The higher level (Very) appears only three times (0,47%) on the negative emotion *Bored*. The most negative emotion is *Drowsy* lived by 1,09% of the students, presented in the "Quite" level. Three students (0,47%) felt "Somewhat" *Distracted*, and only one (0,15%) referred *Failure* in "Somewhat" level.

In Table 2 we show the statistical analysis regarding "general" classes produced the using of "Affective Indicators".

Grading parameter	Neither	Somewhat	Quite	Very	
"Positive lived emotions"					
Нарру	18 (5,90%)	36 (11,80%)	115 (37,70%)	135 (44,26%)	
Cheerful	25 (8,19%)	34 (11,14%)	113 (37,04%)	133 (46,60%)	
Excited	31 (10,16%)	47 (15,40%)	125 (40,98%)	98 (32,13%)	
Involved	16 (5,24%)	33 (10,81%)	120 (39,34%)	128 (41,96%)	
Alert	14 (4,59%)	41 (13,44%)	130 (42,62%)	111 (36,39%)	
Satisfied	13 (4,26%)	32 (10,49%)	99 (32,45%)	159 (52,13%)	
Successful	11 (3,60%)	40 (13,11%)	139 (45,57%)	114 (37,37%)	
"Negative lived emotions"					
Sad	-	0	0	0	
Irritable	-	0	0	0	
Bored	-	0	1 (0,32%)	3 (0,98%)	
Distracted	-	3 (0,98%)	1 (0,32%)	0	
Drowsy	-	0	7 (2,29%)	0	
Frustrated	-	0	0	0	
Failure	-	1 (0,32%)	0	0	

Table 2. Qualitative Statistics of the "Affective Indicators" in "General" classes

In this category of classes and based on the "Affective Indicators" obtained in table 2, it is possible to highlight the following aspects:

- 1. "Positive lived emotions" always appear in "Quite" and "Very" levels in a range of 32% to 52% of the students;
- 2. Level "Neither" presents higher and most significant values in this category (e.g. 10, 16% *Excited* 8.19% *Cheerful*; 5,90% *Happy*) and all "negative emotions" referred in this study appear in these classes. These results seem to reveal that activities developed in "General" classes provide the less favorable moments for the students involved in this study.

The "Affective Indicators" of "Music and Movement" classes are presented on "Table 3".

Grading parameter	Neither	Somewhat	Quite	Very	
"Positive lived emotions"					
Нарру	-	4 (2,89%)	43 (31,15%)	91 (65,94%)	
Cheerful	-	7 (5,07%)	33 (29,91%)	98 (71,01%)	
Excited	-	8 (5,79%)	47 (34,05%)	85 (61,59%)	
Involved	-	5 (3,62%)	40 (29,98%)	93 (67,39%)	
Alert	-	4 (2,89%)	64 (46,36%)	75 (54,34%)	
Satisfied	-	2 (1,44%)	35 (25,36%)	101 (73,18%)	
Successful	-	3 (2,17%)	43 (31,15%)	92 (66,66%)	
"Negative lived emotions"					
Sad	-	0	0	0	
Irritable	-	0	0	0	
Bored	-	0	0	0	
Distracted	-	0	0	0	
Drowsy	-	0	0	0	
Frustrated	-	0	0	0	
Failure	-	0	0	0	

Table 3. Qualitative Statistics of the "Affective Indicators" in"Music and Movement" classes

Concerning the "Affective Indicators" revealed on "Music and Movement" classes, we stress:

- 1. Students always felt positive emotions; in the "Neither" level neither students did not referred neither negative emotions, nor positive emotions in the "Neither" level. They always felt positive emotions;
- 2. For most of the students involved in this study, activities developed in under the category the "Music and Movement" classes generated positive lived emotions in the higher level (Very) for most of the students involved in this study (e.g. 73, 18 % felt "Very" *Satisfied*; 71,01% felt "Very" *Cheerful*; More than 60% felt "Very" *Happy, Excited, Involved* and *Successful*).

"Music Laboratory" classes provided the "Affective Indicators" presented on "Table 4".

Grading parameter	Neither	Somewhat	Quite	Very	
"Positive lived emotions"					
Нарру	1 (0,51%)	4 (2,06%)	62 (31,95%)	127 (65,46%)	
Cheerful	0	10 (5,15%)	72 (37,11%)	112 (57,73%)	
Excited	0	13 (6,70%)	97 (50%)	80 (41,23%)	
Involved	2 (1,03%)	9 (4,63%)	89 (48,87%)	98 (50,51%)	
Alert	0	16 (8,24%)	108 (55,67%)	70 (36,08%)	
Satisfied	0	12 (6,18%)	65 (34,47%)	119 (61,34%)	
Successful	0	18 (9,27%)	73 (37,62%)	103 (53,09%)	
"Negative lived emotions"					
Sad	-	0	0	0	
Irritable	-	0	0	0	
Bored	-	0	0	0	
Distracted	-	0	0	0	
Drowsy	-	0	0	0	
Frustrated	-	0	0	0	
Failure	-	0	0	0	

 Table 4. Qualitative Statistics of "Affective Indicators" in "Music

 Laboratory" classes

Regarding "Affective Indicators" lived in "Music Laboratory" classes, we underline:

- "Positive emotions" appear in the higher level (Very) for most of the students (e.g. 65,46% felt "Very" *Happy*; 61,34% "Very" *Satisfied* and 57,73% "Very" *Cheerful*).
- 2. Only three students chose the "Neither" level on "positive emotions (one in *Happy* and two in *Involved*);
- 3. Students always experienced "positive emotions", since negative ones have never been reported.

VI. CONCLUSION

In this research it is clear that that the activities taught using the *Orff-Schulwerk* approach raised more "positive emotions" by students than "negative" ones. For most of the students, these emotions were experienced in the highest possible level that *AFIMA* presents (Quite and Very). *AFIMA* enabled us to establish that through an *Orff-Schulwerk's* approach children lived several positive emotions, which demonstrated to be significant in the way they acquire musical knowledge.

These results reveal that the use of the Orff-Schulwerk approach in students enrolled in the 5th and 6th grade of the Portuguese Educational System (aged between 10 and 12 years old) enhances "positive emotions" on their first formal compulsory music experience. We underline that flow is a single-minded immersion and represents the ultimate in harnessing the emotions in respect to performing and learning activities, where positive emotions are associated with situations that present opportunities (Goleman, 2005). Cognitive psychologists (Fiedler & Bless, 2001; Bless et al. 2004) suggests that positive and negative affective states selectively trigger different information processing styles, consistent with evolutionary principles, i.e., positive affect facilitates the use of internalized strategies using knowledge structures (assimilative thinking), while negative affect promotes a focus on accommodative thinking.

According to AFIMA "Affective Indicators" and based on the principle that positive and negative emotions facilitate distinct information processing and problem solving styles (Clore & Tamir, 2002; Fielder & Bless, 2001), the results presented seem to validate the formulated hypothesis that Orff-Schulwerk approach activities improve children to become better music makers / thinkers (creators), building a sense of confidence and interest in Music Education context, once, according Fredrickson (2002) and Fredrickson & Branigan (2005), in contrast to negative emotions which narrow the individual's repertoire of thought and action, positive emotions such as joy, contentment and interest have the effect of broadening the thought-action repertoire and of building cognitive resources for the future. In this way, emotions can redirect and help to prioritize our thinking (Huppert & Whittington, 2003; Salovey et al., 2000) when channelled to energize the "Self / Consciousness" improvement (Csikszentmihalyi, 1990, 1997, 2002; Damásio 1995, 1999, 2010).

The connection of emotions with occurred "optimal experiences / flow states" will be the foundation of our hypothesis that emotions are most relevant for the development of musical learning. At this stage, the results of the study are valuable indicators on our ongoing longitudinal research, and demonstrated to be significant in the way children acquire musical knowledge.

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REFERENCES

- Araújo, R. (2008). Experiência de fluxo na prática e aprendizagem musical. *Música em Perspectiva*, 2 (1), 39-52.
- Bakker. A. (2005). Flow among music teachers and their students: The crossover of peak experiences. *Journal of Vocational Behavior*, 66, 26-44.
- Bersh, B. (2009), *Music Education: Is it time to go with Flow?* [Arts in Music Education Thesis submitted in University of Delaware] Retrieved November 26, 2010, from http://dspace.udel.edu:8080/dspace/bitstream/handle/19716/4266/ Bersh,%20Brian.pdf?sequence=1.
- Bloom, J. & Skutnick-Henley, P. (2005). Facilitating Flow Experiences Among Musicians. *American Music Teacher*, 54 (5), 24-29.
- Bless, H. et al. (2004). Social Cognition: How individuals construct social reality. Philadelphia: Psychology Press.
- Byrne, C. et al. (2003). Assessing creativity in musical compositions: flow as an assessment tool. *British Journal of Music Education*, 20 (3), 277-290.Campiez, E. & Volp, C. (2004). Dança criativa: a qualidade da experiência sbubjetiva. *Revista Motriz*, 10 (3), 167-172.
- Campbell, P. (2008). *Musician and Teacher*. New York: W.W. Norton and Company.
- Clore, L. & Tamir, M. (2002). Affect as embodied information. *Psychological Inquiry*, 13, 37-45.
- Cook, N. & Dibben, N. (2010). Emotion in Culture History: Perspectives From Musicology, In P. Juslin & J. Sloboda (Eds.), Handbook of Music and Emotion: Theory, Research, Applications (pp. 46-72). New York: Oxford University Press.
- Cottone, J. (2010). Orff in Middle School: An American Prespective". In Ostinato – Music for Children / Musique pour Enfants, 36 (3), (pp. 4-6), Toronto: Carl Orff Canada.
- Csikszentmihalyi, M. (1975). Beyond Boredom and Anxiety. San Francisco, CA: Jossey-Bass.
- Csikszentmihalyi, M. & Csikszentmihalyi, I. (1988) (Eds.) *Optimal Experience: Psychology Studies of Flow in Consciousness.* Cambridge: Cambridge University Press.
- Csikszentmihalyi M. (1990). Flow: The Psychology of Optimal Experience. New York: Harper & Row.
- Csikszentmihalyi M. (1997). Finding Flow: The Psychology of Engagement with Everyday Life. New York: Basic Books.
- Csikszentmihalyi M. (2002). *Fluir: A Psicologia da Experiência Óptima.* Santa Maria da Feira: Relógio d'Água Editores, Lda.
- Csikszentmihalyi, M. & Custodero, L. (2002). Creativity and music education. In T. Sullivan & L. Willingham, (Eds). (pp. xiv-xvi). Edmonton: Canadian Music Educators' Association.
- Csikszentmihalyi, M. et al. (1993). *Talented teenagers: The roots of success and failure*. New York: Cambridge University Press.
- Csikszentmihalyi, M. et al. (2005). Flow, In Elliot, A. & Dweck, C. (Eds.), *Handbook of competence and motivation* (pp. 598-608). New York: Guilford Publications.
- Cunha, J. (2005). Orff-Schulwerk em Portugal: Realidade ou Utopia na Formação de Professores de Educação Musical. [Master of Music Education Dissertation]. Braga: University of Minho.
- Cunha, J. (2011). Música e Experiência de Fluxo: Indicadores iniciais de um estudo piloto em Educação Musical, In R. Pestana & S. Carvalho (Eds.), *PERFORMA' 11 Conference on Performance Studies*. Aveiro: Universidade de Aveiro.
- Cunha, J. & Carvalho, S. (2011). *Orff-Schulwerk* approach and flow indicators in Music Education context: A preliminary study in

Portugal. International Journal Of Arts And Sciences 4 (21), 75-81.

- Custodero, L. (1998). Observing flow in young children's music learning. *General Music Today*, *12* (1), 21-27.
- Custodero, L. (1999). Constructing of musical understandings: The flow-cognition interface. [Extended Abstract]. *Bulletin for the Council of Research in Music Education 142*, 79-80.
- Custodero, L. & Williams, L. (2000). Music for everyone: Creating contexts for possibility in early childhood education. *Early Childhood Connections*, 6 (4), 36-43.
- Custodero, L. (2002a). Seeking challenge, finding skill: Flow experience in music education. *Arts Education and Policy Review*, 103 (3), 3-9.
- Custodero, L. (2002b). The musical lives of young children: Inviting, seeking, initiating. *Journal of Zero-to-Three*. 23(1), 4-9.
- Custodero, L. (2003). Perceptions of challenge: A longitudinal investigation of children's music learning. *Arts and Learning*, 19, 23-53.
- Custodero, L. (2005). Observable indicators of flow experience: A developmental perspective of musical engagement in young children from infancy to school age. *Music Education Research*, *7(2)*, 185-209.
- Custodero, L. & Stamou, L. (2006). Engaging classrooms: Flow indicators as tools for pedagogical transformation. *Proceedings* of the 9th International Conference on Music Perception and Cognition. Retrieved April 2, 2012, from http://www.marcocosta.it/icmpc2006/pdfs/596.pdf.
- Damasio, A. (1995). Descartes Error: Emotion, Reason, and the Human Brain. New York: HarperCollins Publishers.
- Damasio, A. (1999). The Feeling of What Happens: Body and Emotion in the Making of Consciousness. New York: Harcourt Brace & Company.
- Damasio, A. (2010). Self Comes to Mind: Constructing the Conscious Brain, New York: Pantheon Books.
- DeNora, T. (2000). *Music in Everyday Life*, Cambridge: Cambridge University Press.
- Fiedler, K. & Bless, H. (2001). Social cognition: The construction of social reality. In W. Stroebe, M. Hewstone & G. Stephenson (Eds.), *Introduction to social psychology* (4th edition), (pp. 115-149). New York: Springer.
- Fredrickson. L. (2002). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist, 56,* 218-226.
- Fredrickson, L. & Branigan, C. (2005). Positive emotions broaden the scope of attention and thought-action repertoires. *Cognition* and Emotion, 19(3), 313-332.
- Fritz, B. & Avsec, A. (2007). The experience of flow and subjective well-being of music students, *Horizons Of Psychology*, 16 (2), 5-17.
- Goleman, D. (2005). *Emotional Intelligence: Why It Can Matter More Than IQ*. New York: Random House Publishing Group.
- Goodkin, D. (2004). *Play, Sing & Dance An Introduction to Orff-Schulwerk*, New York: Schott Music Mainz.
- Huppert, F. & Whittington, J. (2003). Evidence for the independence of positive and negative well-being: implications for quality of life assessment. *British Journal of Health Psychology*, 8, 107-122.
- Johnson, D. (2006). Carl Orff: Musical Humanist. In International Journal of the Humanities, 3 (8), 1-6.
- Juslin, P. & Sloboda, J. (2010). The Past, Present and Future of music and emotion research. In P. Juslin & J. Sloboda (Eds.), Handbook of Music and Emotion: Theory, Research, Applications (pp. 933-955). New York: Oxford University Press.
- Klemp, B. (2009). The Effects of Instrumental Training on Music Notation reading abilities of High School Choral Musicians. [Doctor of Musical Arts Dissertation]. New Jersey: State University of New Jersey.

- Kraus, B. (2003). Musicians in flow: Optimal experience in the wind ensemble rehearsal. *Dissertation Abstract International A: Humanities and Social Sciences*, 64 (3A), 839.
- Krumhansl, C. (2002). Music: A link between cognition and emotion. Current Directions in Psychological Science, 11, 45-50.
- Kugler, M. (2011). Introduction. In Haselbach, B. (Ed.), Texts of Theory and Practice of Orff-Schulwerk - Basic Texts from the Years 1932-2010 (pp. 14-42). New York: Schott Music, Mainz.
- Lui, L. (2011). Weaving togheter Regio Emilia and Orff-Schulwerk: Using Pedagogical Documentation in a Elementary Music Classroom. In Ostinato – Music for Children / Musique pour Enfants, Volume 37 (2), (pp. 13-179). Toronto: Carl Orff Canada.
- MacDonald, R. et al. (2006). Creativity and flow in musical composition: an empirical investigation. *Psychology of Music, Society for Education - Music and Psychology Research, 34 (3),* 292-306.
- O'Neill, S. (1999). Flow theory and the development of musical performance skills. *Bulletin of the council for Research in Music Education*, 141, 129-134.
- Pachet. F. (2004). Creativity Studies and Musical Interaction. In Deliège, I. & Wiggins, G. (Eds.) *Musical Creativity: Current Research, Theory and Practice*. Retrieved April 3, 2012, from http://www.csl.sony.fr/downloads/papers/2006/pachet-04g.pdf.
- Rhoda, B. (2009). Music making, transcendence, flow, and music education. *International Journal of Education & the Arts*, 10 (14), Retrieved April 3, 2012, from http://www.ijea.org/v10n14/v10n14.pdf.
- Salovey, P. et al. (2000). Current directions in emotional intelligence research. In M. Lewis & J. Haviland-Jones (Eds.), *Handbook of Emotions (2nd ed.)*, (pp. 504-520). New York: Guilford Press.
- Sawyer, K. (1992). Improvisational creativity: an analysis of jazz performance, *Creativity Research Journal* 5, 253–263.
- Sheridan, M. & Byrne, C. (2002). Ebb and flow of assessement in music. *British Journal of Music Education*, *19* (2), 135-143.
- Silva, A. (2008). Oficinas de performance musical: uma metodologia interdisciplinar para uma abordagem complexa da *performance* musical. In Anais do IV Simpósio de Cognição e Artes Musicais. Retrieved November 22, 2010, from http://www.fflch.usp.br/dl/simcam4/downloads_anais/SIIMCA M4 Abel Silva.pdf.
- Sloboda, J. (1999). Music Where Cognition and Emotion Meet. *The Psychologist*, 9(2), 450-455.
- Sloboda, J. & Juslin, P. (Eds.), (2001). Music and Emotion: Theory and Research. New York: Oxford University Press.
- Sloboda, J. (2005). *Exploring the Musical Mind: Cognition, Emotion, Ability, Function*. Oxford: Oxford University Press.
- Sloboda et al. (2001). Functions of music in everyday life: an exploratory study using the Experience Sampling Method. *Musicae Scientiae*, V. (1), 9-29.
- Teachout, D. (2009). Collaborative research in music teacher education: Taking a cue from research approaches outside music education. In S. Holgersen & F. Nielsen (Eds.), RAIME -Research Alliance of Institutes for Music Education Proceedings of the Tenth International Symposium", Research Studies in Music Education - DPU Volume 3, (pp. 247-259). Copenhagen: The Danish School of Education - Aarhus University.
- Troum, J. (2008). Self-regulated deliberate flow: A metacognitive goal-directed praxis toward musical practice. Proceedings of the 28th ISME World Conference publication, (pp. 637-638). Bologna.