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# Metaphor as a teaching and learning tool in music composition

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Applying metaphor theory to music is

itself a metaphorical act (Spitzer, 2004:3)

#### Theoretical framework

The study of metaphors is an interdisciplinary research topic popular amongst the cognitive sciences and in education. Although, traditionally metaphor is something one achieves with words, and with language, Lakoff & Johnson argue "that metaphor is pervasive in everyday life, not just in language but in thought and action" (2003: 3) and that "our ordinary conceptual system, in terms of which we both think and act, is fundamental metaphoric in nature" (2003: 3). As metaphors are not only limited to language, metaphorical processes allow individuals to create structures that enable learning within abstract domains. Metaphor theory accepts that language is a reflection of our conceptual understanding of the world. Kövecses (2002) defends that, in a cognitive linguistics point of view, metaphors are able to fulfil with significance something that is uncertain or difficult to understand.

Several authors (Wiggins, 2007, 2009; Swanwick, 1988, 1999, 2006; Spitzer, 2004; Woody, 2000; DeNora, 2000; Greene, 1995; Ferguson, 1973) have discussed the strength of metaphor in musical contexts. As music is an abstract domain, the use of metaphorical processes allows individuals to create structures that enable music learning. Lakoff and Johnson explain that it is only through metaphorical processes that, for instance, we can comprehend how music moves through time and they propose that "most of our normal conceptual system is metaphorically structured; that is, most concepts are partially understood in terms of other concepts" (2003: 56). Swanwick adds that a metaphorical process always includes the "shifting an image or concept to a new context" (2006: 495).

According to Botha (2009: 431), there is widespread recognition that metaphors reveal an important role both at an aesthetic level, but also educational one. Therefore metaphors can be an effective teaching tool used to link known concepts and/or ideas to those that are unknown.

In music the use of metaphorical language in teaching and learning contexts is a natural strategy, even if teachers often are not fully aware of its value. Woody (2002) refers that music educators use metaphors to suggest images that help to develop the improvement of technical and expressive skills. Lubart and Getz (1997) demonstrate how emotions can be engaged in the construction of metaphors that lead to creative ideas. And, according to Juslin et al. (2004), metaphors usually are connected to the development of emotional communication. Petrie and Oshlag (1993) suggested that metaphorical language allows the transfer of one conceptual structure to another by an unforgettable means, which represents an emotional and structured teaching approach. Therefore, relating the use of metaphors and their role in compositional creative process, it is important to mention that metaphors allow associations that may either provide new perspectives to a problem, or transform our initial perspective (Lubart and Getz, 1997) as "metaphors enable us to make new connections and see things in a new way" (Bump, 1985: 447).

As explained by Zbikowski (1997) cross-domain mappings are usually referred to as metaphor. "Cross-domain mapping is a general cognitive process through which we structure an unfamiliar or abstract domain in terms of one more familiar or concrete. Cross-domain mapping plays two important roles in musical understanding. First, it provides a way to connect musical concepts with concepts from other domains (...). Second, cross-domain mapping allows us to ground our descriptions of elusive musical phenomena in concepts derived from everyday experience, since the structural relationships basic to cross-domain mapping have their source in repeated patterns of bodily experience – that is, in image schemata (...) Because cross-domain mapping offers a way to connect what are often elusive musical concepts with concepts from more concrete domains, and because these connections give rise to integrated systems of terms and relations, cross-domain mapping is essential to our theorizing about music" (Zbikowski, 2002: 76).

Many composition text books tend to focus more on issues of theoretical content, and suggest exercises that exemplify these, rather than identifying teaching and learning strategies relevant to composition that "could foster creativity when composing" (Burnard and Younker, 2002: 245). These activities require teachers to "(a) Understand fully the creative process; (b) Proceed sensitively, particularly in the earlier stages, of the creative process; (c) Engage students in acts of reflection on and recollections of the pathways that characterise their own creative process; d) Consider the impact of compositional tasks on students; and (e) Be equipped to design tasks according to students' needs" (Burnard and Younker, 2002: 259).

Relating all of these ideas to the process of teaching and learning composition, we can observe a complex method and it involves many different skills. Berkley (2001) mentions, "(...) teaching composing is more than delivering compositional technique. The teacher directs and guides students towards successful goals, enabling them to decide for themselves what works most effectively in the particular musical situation. The teacher structures the student's learning, converting the multi-skilled composing process into a series of manageable steps" (Berkley, 2001: 127).

In the field of composition, when the teaching and learning process is queried, there is found a significant hole concerning teaching beliefs and practices, and "the teacher's role is rarely the focus of attention in music education research" (Cox and Hennessy, 2004: 262). Wirtanen and Littleton (2004) also established that, at a more advanced level of study, "the processes of teaching and learning may involve the joint construction of an interpretation" (2004: 38).

Music composition is a process that involves many different skills such as "product intention, experimentation, sketching/trial performance, revising, editing, premieres and repeated performances" (Kaschub, 2009), therefore the act of composing not only develops compositional skills, but it also develops all areas of musical learning. Metaphors may be used as a teaching learning composition music strategy to promote musical thinking and understanding.

#### Case study

The most frequent tradition of composition teaching in Universities lies in individual tuition. My own practice leads me to believe that students-composers usually have some difficulties on the elaboration of their initial musical ideas and, when this initial phase is mostly dealt with, the problem becomes one of how to develop that same idea, and resolve the adjacent technical problems. Often it is easier for university students to understand both theoretical and analytical processes, rather than to use and apply them in creative ways.

Barrett and Gromko's (2007) ideas of procedural and conceptual problems were applied to help model, build structure and create compositional music meaning. "Procedural problems (...) focused on issues such as the 'communicativity' of the score, specifically: appearance; clarity; technical correctness; and general issues of presentation. (...) Conceptual problems dealt with the effective generation and communication of musical ideas (Barrett, 2007: 218-220)."

This paper aims to investigate the teaching process, and practice, of a composer-teacher when working one-on-one with a university student-composer over the course of one academic semester. It focuses on the theme of metaphorical process in the development of musical understanding, and sets out to understand how a student-composer deals with the process of composition, which refers to "the act of forming or constructing a revised piece created over time" (Burnard, 2002: 248). It also examines the student's individual engagement and reflection on the process.

In this research associative metaphors are, by my definition, metaphors that connect, correlate and give significance to conceptual ideas of the musical domain (time, as in meter, rhythm, tempo and form; pitch, as in modes, pitch and interval sets, melody, harmony, range; expression: as in dynamics, articulation, texture, timbre; and musical gesture: meaning sound, movement and meaning) with other extra-musical domains (such as literature, paintings, sculptures), and personal experiences (such as smells, colours, moments and gestures). The use of associative metaphors is intended to enhance compositional communication and "presumes that emotions expressed in music are similar to everyday emotion. Metaphors are useful because emotions experienced in a non-musical context can help shape musically relevant emotions" (Juslin et all, 2004: 250). The use of associative metaphors as a strategy, allows compositional ideas to be shaped with verbal and non-verbal ideas, in order to help highlight different aims. As an example, this is the same as to relate narrative and discourse to music and composition or, for instance, connecting the use of leitmotivs and specific music gestures to actions, characters, spaces or the passing of time. By relating specific compositional ideas to other domains, the objective is to foster creativity while composing, to provide new perspectives to problem solving and to promote communication.

#### Method

The timeline of this case study was a single academic semester, with participants: a 2<sup>nd</sup> year undergraduate university student-composer, studying for a 3 year Music Degree, and a composer-teacher working on a one-to-one basis. As the composer-teacher was also a participant observer and researcher, in order to examine the use of associative metaphors as a teaching and learning tool in music composition, data was generated from participant observation, interviews and analysis of audio-recorded classes.

The research was divided in two phases. In the first phase, 13 weekly classes were given with the teacher deliberately attempting to use metaphors to explain compositional technique; these classes were audio-recorded. In the second phase, at the end of the semester, a semi-structured interview was done with the student. The semi-structured interview was audio-recorded, transcribed, and the transcripts were given back to the student-composer for checking. As a means for generating the findings, all data was analyzed and triangulated to provide various angles of analysis.

Both observation in class and semi-structured interview data were framed within a constructivist perspective. Through interview methods, individuals describe "(...) their experiences and self-understanding, and clarifying and elaborating their own perspective on their lived world" (Kvale, 1996: 105).

### Phase 1

So as to examine the use of the metaphorical process, and to get a better understanding of the student-composers' perceptions of the teaching and learning process, 13 weekly classes were audio-recorded. The student was expected to submit work for assessment at the end of the academic Semester.

The teaching and learning metaphorical process as applied on phase 1

Burnard and Younker (2002: 259) formulated teaching strategies that foster creativity when composing and require that teachers recognize the creative process, that students engage in reflection on their creative process, and that teachers design tasks according to individual students needs. Taking this advice as a starting-point, associative metaphorical processes were applied in order to promote creativity while composing. The most important objective of the tutorials was always to extend students thinking in as many ways as possible, opening up or developing several possibilities of their sound world. The final goal was to build a piece with a musical *voice*, and with identity. In the first tutorials paramount was the importance of identifying long term goals, for instance when the piece needed to be finished, approximate duration, etc. Over the semester, in each weekly tutorial, it was important to set short-term goals as, for instance, to ask the student to plan the overall shape of the piece. All strategies always encompassed a relation with extra-musical stimuli and associative metaphors.

The 5 strategies used in the teaching and learning metaphorical process of phase 1 could happen over a period of several months or in just a few tutorials, depending on the student's work and development. They are not necessarily sequential and many times strategies should be presented simultaneously.

Strategy 1 - The initial composition classes should always be structured around speaking about relating and connecting extra-musical material to the process of composition. So that the student-composer can create meaning, associative metaphors should be used to model and build structure in the music composition. It is necessary to explain, for instance, that composition may be viewed as story telling with a succession of musical events, where the discourse refers to the material the composer adds to the story. And that by focusing on specific compositional ideas, musical narratives are shaped to highlight different aims, such as the use of leitmotivs and specific themes, which may help to characterize actions, characters, spaces and the time passing. This approach often establishes a more direct sensorial perception with the student. If necessary, this strategy should be present in every tutorial.

Strategy 2 - Invite the student-composer to explain initial structures of the piece. Always relate their choices with metaphorical associations as that may either provide new perspectives to the problem, or transform their initial perspective. Later ask them to explain score musical decisions and intentions. Clarify that to compose is all about decision-making, and some paths maybe more adequate than others. Sometimes students get "stuck" because the right solution was not found. If there is a problem, identify it through the student's compositional explanations, and then connect it to the initial metaphorical associative process, which has been used as a pillar strategy.

Strategy 3 - Remind students of the objectives for writing the piece; for instance connect the extra-musical material structure to her composition structures (at macro and micro level). Mention the importance to always think, even during home life, about the relations between ideas. It is useful to read the score as a whole unit, but it is also useful to analyse and relate the different instruments/characters individually, i.e., relate the initial extra-musical stimuli with the insight development of the score: "If a gesture changes or disappears too fast how does this relate with your initial extra-musical idea?"

Strategy 4 - Prompt the student-composer to listen to contemporary musical works and to investigate/study different contemporary instrumentation techniques. This will allow the student to broaden up their musical culture and it will help shape their musical voice.

Strategy 5 - Composer-teacher should give several examples, alternatives and suggestions to a problem, but never give "the solution". Student-composers must find the solution on their own, as this will give them more self-confidence, reassurance and independence in future problems.

In the data analysis these strategies will be illustrated with transcription examples from the audio phase 1.

## Phase 2

At the end of the semester a semi-structured interview was done with the student-composer. The semi-structured interview had two sections. In the first section the intention was to understand and explore how the student-composer recollected, perceived and described the process she used to write her piece, which she later on called "Palavras" or, in English, "Words". Not to compromise the answers at any moment the student was aware that a specific metaphorical process was being used in class. To achieve this, three questions, presented in Table 1, were asked. In the second section of the semi-structured interview the intention was to relate the way the student-composer had composed in the previous semester, which culminated with the piece "Quarteto de Cordas N°1" or, in English, "String Quartet N°1". The same questions, as in the first section, were asked.

1. Can you describe the process you went through to create your piece "Words"/ "String Quartet Nº1"?

[For example: How did you start? What material did you use? Why? Did it seem a good idea?]

2. After establishing the initial idea, how did you develop it?

[For instance: did you define sections? And how did you relate your material?]

3. What was your main objective with the piece? How did you achieve

it?

## [For example: was important to get a sense of unity in your piece? Why?]

Table 1 - Questions asked in the first and second section of the semi-structured interview of Phase 2.

## **Data Analysis**

All data analysis focused on the strategies used by the teacher-composer using the metaphorical extra-musical stimuli, in the encouragement of creativity, construction of meaning, and musical language structures in the student-composer's development.

Audio-data analysis specially aimed to examine the comments and reactions of the student-composer while being taught composition. In the analysis of the interview data I focused on recognizing important words and/or phrases in the student-composers' spoken descriptions/metaphors/ images and interpretations/ analysis/explanations concerning the way she constructed her composition. The composer-teacher almost always started the dialogue through the use of associative metaphors, descriptions, analysis, and inquiry.

## Audio-data (Phase 1)

As proposed in Strategy 1 and 2, the first 3 composition tutorials were structured around extra-musical material to the act of composition and about prompting the student-composer to explain the initial structures of the piece:

1<sup>st</sup> tutorial – The composer-teacher mentions the importance of decision making, starting point objects; the composer-teacher gives a homework that avoids pitch, as only one pitch may be used in the exercise, so that the student-composer can reflect on the use of timber, rhythm, articulation, dynamics, register.

2<sup>nd</sup> tutorial – Preliminary analysis of the homework exercise (in this case for solo flute) completed by the student–composer, who was advised to take care with the use of shape and rhythm. Questions like: "What is your piece about? And what is the title of the piece?" were posed. A first talk about the possibility of associating extra-musical elements with music ones: several examples given in literature (poetry, texts, etc), visual art (paintings, sculptures, etc), personal experiences (places, smells, situations, etc).

 $3^{rd}$  tutorial – Final analysis of the student's homework exercise. The exercise was called "Búzio", which was the character of a children's story. At this point the student-composer was asked to continue this piece and was invited to associate physical characteristics of the character Búzio to pitch material, so as to characterize him. It was explained that as the objective was departing from the non-pitch exercise the student should also elaborate a small ensemble piece.

Strategies 1 and 2 were still used often as the main structural point during tutorial 4 and 5. This was needed in order to guide the student-composer to facilitate the organization of ideas and musical material. Strategy 5 is transversal to the all process.

4<sup>th</sup> tutorial – The student-composer brought some pitch material (motifs) that she thought characterized the flute character of "Búzio". After joint analysis of the material, the teacher-composer tried to associate all motifs to the main objective, which was the construction of a musical piece; the composer-teacher mentioned that the process of composition may be viewed as story-telling with a succession of musical events, where the discourse refers to the material the composer adds to the story. By focusing on specific compositional ideas, musical narratives are shaped to highlight different aims, such as the use of leitmotivs and specific themes, which may help to characterize actions, characters, spaces and the time passing. The student-composer decided that she wanted to do a flute and piano piece (quote from 4<sup>th</sup> tutorial) "I have already researched the flute but I think I need also a piano to paint everything else that happens in the story".

5<sup>th</sup> tutorial – More material was brought to class; this time student-composer brought an invented mode that should be the musical pitch basis of the book's characters and action; the student explained that the pitch organization was based on text narrative. While analysing the piece the composer-teacher asked why there was no piano (as only a solo flute score was presented). Student-composer mentioned (quote): "This is initially a monolog because Búzio is alone. Next Búzio will start the dialogue with the piano, that represents what surrounds him." Towards the end of tutorial 5, and after a brief explanation, the student-composer was asked to think about macro and micro shape of the piece, never forgetting to associate it with the chosen extra-musical material.

In tutorial 6 and 7, strategy 2 was more often used, inviting the student-composer to explain initial structures of the piece and reminding the student-composer about the objectives for writing the piece of music.

6<sup>th</sup> tutorial – The student concentrates on explaining how she shaped the piece:

 Exposition – sound description of the surroundings where the story is set (beach, sea, wind). Here Homero (which was the other character of the book) appears. By this point the student had changed her mind - the piano was not what surrounded Búzio (flute), but was Homero; she also decided that both characters should construct their musical surroundings.

- 2. Development Homero speaks and presents his own musical characteristics.
- 3. Recapitulation/Re-exposition Homero goes away; only his impression stays; musical atmosphere becomes different after he leaves.

In this tutorial, the student-composer also brought and presented a scheme. In this scheme, presented in Table 2, it is possible to observe that the student associated each of the sections of the piece with timber, related to each character description.

Exposition Development Recapitulation/ Re-exposition			
. Piano		. Búzio, flute character, goes away and only	
strings	develop	his impression stays. Flute is now part of the	
. Aeolian sounds	harmony	musical atmosphere	
. Grace notes	. Solo flute		
. Mode and motives	. Percussive elements on piano		

Table 2 - Scheme of the shape and timber selections of the student-composer's piece "Words"

As mentioned in strategy 4, at this point the student was advised to go to the library and look at piano, flute and piano and flute scores and recordings, and also to choose and bring 3 of them (that she liked) to the next class. She was also advised to look to some contemporary instrumentation books on flute and piano.

7<sup>th</sup> tutorial – In this lesson student decided that after all the Piano was the surrounding to the character and the Flute was Homero. She was asked to speak about the 3 scores she picked in the library.

8th tutorial - The student-composer brought to class over 2 minutes of her piano and flute piece, which she called "H." From this tutorial onwards, strategy 3 was more often used, always reminding the student composer about the objectives for writing that piece of music. In the next tutorials (classes 9 to 13) classes reached a structure that mainly move around the analysis of the work, guided mainly by the composer-teacher, focusing on the score as the focal point of analysis, discussion and interpretation. The dialogue that developed from these score analysis consisted of teacher questioning and/or passing on information about score appearance and instrumental writing, in order to allow future clear communication with the performers. In these sessions it became obvious that the student-composer used the text, as her support for the instrumental discourse, but also an intuitive approach to the act of composing, not really "planned out".

The composer-teacher always tried to provide, and support, the student's development of both technical and terminological use of contemporary musical language, assisting her to find her own *voice*. The composer-teacher reinforced always the use of extra-musical stimuli as a point of unification and coherence in the score, to allow the musical discourse to flow. The questions provoked the student-composer to reflect on the intentions of the extra-musical text versus her own musical intentions, which allowed her some development of musical thinking. Only when the score was delivered for assessment the title changed from "H." (from the text character Homero) to "Palavras" ["Words"].

## Semi-Structured Interview (Phase 2)

The semi-structured interview was based on the 3 questions, previously presented in Table 1. As previously explained the piece "String Quartet No1" (Figure 1) was written in the prior academic Semester, while the piece "Words" (Figure 2) was written during the case study, while the associative metaphors were used.

In the data analysis I tried to identify correspondences and differences in the descriptions of both teaching and learning processes used prior and during the case study period. This analysis focused on 1) discovering words and phrases in the student-composer verbal descriptions, 2) understanding her experience concerning both teaching and learning approaches to composition. The intention was not

only to understand how the student-composer recollected, perceived and described the process she used to write both pieces, but also to help her conceptualise the process. In table 3 we can compare how the student built her 2 pieces.

	"Words" (Figure 1)	"String Quartet N⁰1" (Figure 2)
Question 1	"This year was different. Last year I did not use any non-music material to help me write the String Quartet. I started planning my piece using a story (Homero) as a starting point, and then I told it musically; well, I told parts of it with my interpretation, to make that story my story () In relation to the chosen instruments (flute and piano), they represent each a character of the story, and they develop themselves in the story, and they mix in the narrative of the story, and sometimes even told it. It was so different from last year! () This process helped me, and for me it worked very well. Departing from a story it was easy to imagine sound worlds and then to tell our story with sounds. Departing from a less abstract idea one can imagine different situations. It is more synergetic ()"	"I organized notes,  1st in chords trying to find non- consonant material; after I transposed those chords, and I divided them into the 4 instruments () from those chords I also found motives that I used in the piece () in relation to rhythm I developed it from small cells that multiplied themselves until I reached something () I describe the process as a motivic material development. This was all suggested by my old composition teacher."
Question 2	"I did not depart from musical material itself, but the material had to appear from somewhere. The difference here is I departed from the story to generate my musical material, and I did not depart from the material to find material. It is a bit different! When one departs from the story to get our material your imagination flies () Departing from the musical material itself, it is a more cold approach, less sensorial () I started to imagine a group of notes so that could establish the text sonority: 1 <sup>st</sup> I worked the flute as it	"I did the piece in form of little miniatures and then I glued them together with different processes, as if they were patchwork () Each miniature should develop one specific area – harmony, melody component, rhythm

represented the principal character – the component, etc. old tramp men that walked alone in the (...) You may see beach: so I associated timbre effects and lthe miniature rhythms that would characterize it (...) division in the This did not happen in the String Quartet, double bar lines used through the as I did not explore the instruments personality, I only used their "usual" timber piece. (...) Each (arco and pizz), as it did not occur to me to miniature has its use anything else – it did not seem own tempi and necessary at the time, even if I am a specific violinist (...)" characteristics." Question "For me it was important to explore each "The String quartet is well know to me, instrument, to learn about different techniques and sonorities, so I could as I am a violinist. I better apply them to my piece, making was advised to them mine (...) In terms of unity I find this develop an atonal piece a whole, as it was built with a language, which thought thread, as one (...) I find it was the bit coherent and cohesive (...)" unfamiliar to me (...) also different writing techniques (...) Even if unity

Table 3 - Answer from the student-composer in relation to the two sections of the semi-structured interview

Semi-structured interviews allow freedom in the interviewing process. In order to better understand the process the student went through to construct the piece "Words", I think it is useful to transcribe another excerpt taken from the answer given at the end of the 3<sup>rd</sup> question of the first section, which happened spontaneously:

was important, I
never felt there was
a true unity in this
piece (...) it was a
collage, without
little meaning,
understand? (...)
The miniatures

were sections glued

together (...)"

- T. Do you think the use of the extra-musical stimuli helped your creativity?
- S. Yes! Definitely!
- T. Why? What happen with you from the moment you had this extra-musical stimuli, was suggested?
- S. When I read the text for the 1<sup>st</sup> time I did not know straight away what I was going to do with it; I thought for approximately 3 weeks, and only then I was capable to do something about it. This process of suggesting extra-musical elements to then do something musical give us the capacity to interiorize some concepts, to meditate about what we really want and plan it better. This time it is essential to reflect upon things, always having, in this case, the text to help. The story ingrains on us and it is easier to make associations and for something to come out. While when is just the material... it is technique, right?

- T. So, do you tell the story literally?
- S. No! I tell my interpretation of the story. The imprint that was left. That is why it is so important the 3 weeks in order to I learn the story, to think about it and then to reflect on what I needed to do. Make it mine!
- T. Are you saying that this stimuli also help to build the musical structure? Or you do not need them?
- S. What you mean?
- T. Shape, for instance. How did you set your musical structures? Where did the stimuli take you to?
- S. I thought about everything at once; well, not at once, but it was like a puzzle: You start imagining the music that better fit my impressions of the story and things got into a form: the chord associated to a certain rhythm until that timbric element was associated and made sense...
- T. So do you think it is fair for me to say that in the "String Quartet N1" you used analytic structures to generate a develop your musical material, and in "Words" you generated, associated and developed your musical material from extra-musical structures (in this case narrative)?
- S. Yes! That is it. I used different departing points to generate my music material (...)

It is rather clear that the process that uses associative metaphors seems to encourage a more sensorial synergy to the work, and emotionally creates a much stronger connection between the student-composer and her piece. The student felt the need to have a piece that was not a mere exercise but something that belong to her. When I questioned her about motivation the student-composer almost interrupted me and replied that "With me it worked very well to be able to associate extra-musical stuff with music ones (actually, still works!) ... sometimes I am away from my house and I want badly to get there so I can continue my piece! I have ideas for the piece even when I was not working at my desk... this never happen last year! If I could go back, now I would probably write a totally differently String Quartet... even the title would not be the same..."

### **Findings and Discussion**

As referred by Barrett and Gromko "whilst to attempt broad generalizations from an intrinsic case study of this nature is not a useful path, *naturalistic generalizations* are achievable" (2007: 226). Stake calls naturalistic generalizations to "conclusions that are arrived at through personal engagement in life's affairs or by vicarious experience so well constructed that the person feels as if it happened to themselves" (1995:85). The triangulated analysis of observations and semi-structured interview has offered me a rather clear picture in the process of teaching and learning of composition through metaphors.

As Bump (1985) proposed, it was verified that the metaphoric associations enabled the student-composer to make new connections, which helped her to find a musical *voice*. The process also encouraged her to model and build structure in the music composition, therefore creating meaning and developing further. When analyzing the metaphors employed, and their function in teaching and learning composition, it was noted that the use of metaphors allowed comparisons that provided new perspectives to problems, as well as expanding the student's initial perspective of the same problem. Also, procedural and conceptual problems were manifested when the composer-teacher made remarks about the piece and raised some issues that instigated the student-composer to think of her musical aims.

All strategies used by the composer-teacher incorporated observation, description and analysis of the student's work, which lead to identify the problems and try to explain them, while simultaneously generating possible solutions. The metaphorical process was used in a constant dialogue situation with the student-composer, as the composer-teacher questioned her in order to provoke her thinking, and prompt her to articulate her intentions and understanding. Findings suggest that the metaphoric teaching strategies that were used fostered, helped and structured creative thinking while composing. Extra-musical ideas revealed to be less abstract, establishing a more direct sensorial perception between the student-composer and her work. After making the narrative association the student-composer become more independent and confident, the process of writing became faster and more efficient, and the student worked regularly and with motivation. This cultivated student reflection and made intuitive knowledge more explicit, implying that a metaphorical teaching and learning process may be a helpful strategy tool in composition mentoring.

As Lubart and Getz (1997) demonstrated emotions can be engaged in the construction of metaphors that lead to creative ideas. By starting in an extra-musical starting point the student-composer seemed to find easier to develop the initial creative process and also the musical material. Through class observation it was verified that it also helped the student-composer to keep a constant, continuum, writing habit over the weeks, without felling "lost". The student mentioned that this did not happen the previous year where she was just taught how to develop technically her musical material. She also mentioned that probably it was her fault while writing the String Quartet, because she had been so intellectual. Maybe (quote from the semi-structured interview) "if I had thought about a story she could had enjoyed it more... I almost gave up writing. Everything seemed so difficult!..." and she continued "Thinking about a story while I compose for me really worked (and still works!)... Sometimes I was away from my house and I wanted badly to get there so I could continue my piece! I had ideas for the piece even when I was not working at my desk... this never happen last year! ... this way there is a strong connection!". According to Juslin et al. (2004), metaphors usually are connected to the development of emotional communication. This process seemed to encourage and create a much stronger connection between the student-composer with his/her future piece, both sensorial and emotionally. As mentioned, metaphors allowed and enhanced a collaborative dialogue between the student-composer and the teacher-composer, in which solutions to problems were discussed while building students individual musical voice and musical thinking. It was rather clear, both from the semi-structured interview but also from the final score, that in the previous academic year the teaching and learning process was not adapted to her needs.

For the student-composer involved in this case study, the use of metaphorical processes served as a conceptual tool for learning to occur and enhance their composition skills. This study indicates that metaphorical language can be efficiently used when teaching

communication of an emotion or an abstract concept. Whilst the teaching of composition in other school settings has few parallels structurally with the one-on-one tutoring employed in this study, the teaching strategies observed may be modified and adapted to accommodate these settings. Finally, findings suggest that the use of metaphorical thinking should be utilized within a composition music educational context, as the use of metaphors helped and fostered the student's progress through several cycles of knowledge development. Unless metaphor is used, more abstract concepts were considered to have no direct sensorial contribution. Also, the use of associative metaphors, cultivated the student's reflection and made intuitive knowledge more explicit, implying that the use of metaphorical process's in composition mentoring may be a helpful strategy tool.

#### **Final Conclusion**

This research was set to investigate the relationship between the use of metaphors and several processes that are decisive in teaching musical composition, and to present and examine the use of a metaphorical teaching and learning strategy, by charting the development of a student's musical and creative thinking process when exposed to the strategy. For the student-composer involved in this study the use of metaphorical processes served as a conceptual tool for extending her compositional skills.

As referred to by Zbikowski (1997, 2002, 2007) cross-domain mapping plays an important role in musical understanding as it provides a way to connect musical concepts with concepts from other domains. Metaphors, associations and stories make a larger picture for a concept; as observed in phase 1 narrative relations within the domain of literature have been connected with concepts associated with musical elements, such structure, pitch, harmony. Cross-domain mapping also provided a way to structure and understand both procedural and conceptual processes involved in the creation of music composition, as it helped to shape ideas and guide musical discourse. Therefore cross-domain mapping is essential to our theorizing about music. Metaphors have been long used in music education successfully because they relate to something that is much less clear than a specific emotion. The subjectivity of a metaphor can trigger a palette of emotions, and that can be richer than the basic ones.

The phenomenon of teaching and learning of composition is a complex one as it involves many different skills. This paper presented and examined not only the use of metaphors as a teaching and learning strategy tool, but also presented the development of a composer-student's musical and creative thinking process while exposed to this teaching and learning practice. These studies hold potential to enrich our understandings of teaching and learning processes in music in general and composition specifically. The use of imagery and figurative stimulation provided cognitive and emotional exploration, making compositional learning as much thrilling and effective as possible.

I conclude that all the used metaphorical process's present themselves fundamentally in the development of compositional musical understanding, as conceptual teaching led to increased conceptual understanding, and to the generation and transfer of correct procedures. The use of metaphorical strategies was useful in the development of compositional musical understanding and to generation and transfer of correct procedures. The present research tries to open doors to possible pathways in teaching musical composition as a new strategy tool. Compositional narrative thinking may work as a structural foundation stone to stimulate imagination and knowledge correlation. Through a metaphor process, it is possible to come to a better analysis of the processes through which we organize our creative understanding of music.

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Figure 1: student-composer's piece "String Quartet nº1", written in the prior academic Semester.

Figure 2: student-composer's piece "Words", written during the case study while the associative metaphors were used.

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