









teacher's attention to be deep and sensitive enough to realize, through the students' reactions, what their real needs are, as well as the emotional stimulus, a determining factor in musical motivation.

It is possible to observe how *traditional model* practises can, sometimes, be *inflexible* in the face of specific educational needs. Among other things it causes: persistent *priority in reading*, ignoring *critical listening*; a strong educational trend to apply knowledge involving declarative memory rather than constructive procedural learning. In this context, the strategy is for music to be assimilated and rationally understood first, before going into artistic practice. The content covered is then practically detached from listening and creation and is focused exclusively on the learning of rules and technical procedures.

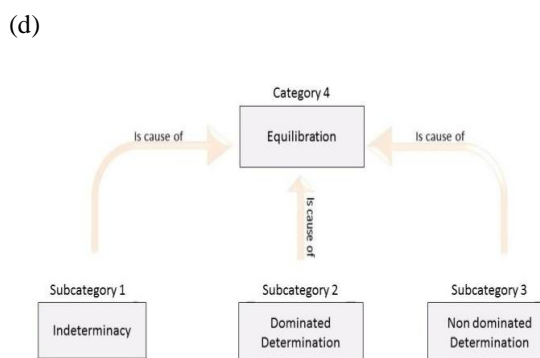
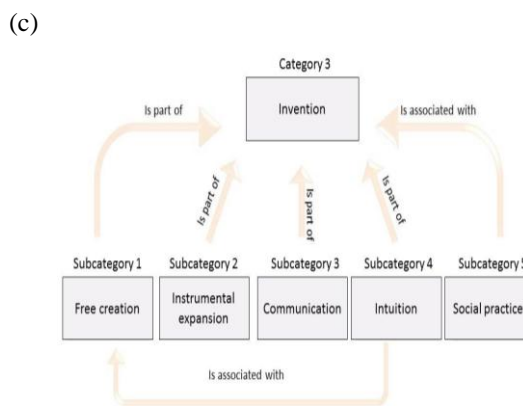
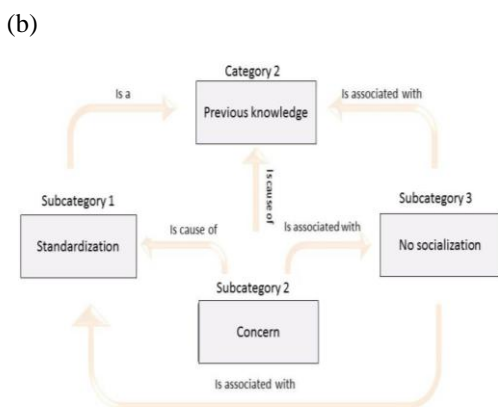
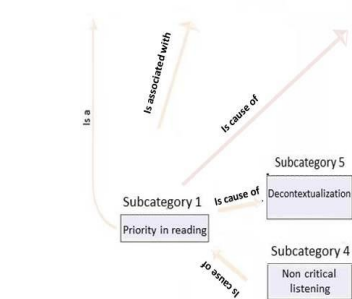
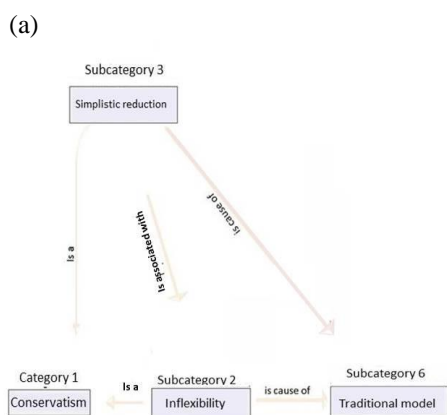


Figure 4: Categories 1 to 4 – (a) category 1; (b) category 2; (c) category 3 and (d) category 4

Another effect resulting from the emphasis on reading is the *decontextualization* of the musical phenomenon, that is, the student cannot experience music beyond the systematic action of reading notes, since there is no appreciation of listening or critical analysis of what is being produced by he (or she) and his or her partners. Figure 3, shows the relationships between this category and its subcategories:

In the *previous knowledge* category (Figure 4 – b) three subcategories related to each other were observed: *standardization*, *concern*, and *no socialization*.

*Standardization* - refers to previous knowledge requirement of specific musical models; *Concern* - is caused by lack of knowledge of the standards, thus damaging the fluency of his or her performance and causing creative block; *No socialization* - refers to the exclusion of student participation in musical activities, requiring prerequisites they do not master, thus damaging their integration within the group. Within this context, it was observed in this laboratory, that the requirement of previous knowledge when it comes to performing any musical activity is a result of their traditional learning process that imposes prerequisites to creation (improvised or not).

The *invention* category (Figure 4 - c) shows how students realized that being together as they perform the same action generates something exciting for music practice. Their educational background adds: free creation, instrumental expansion, communication, intuition, and social practice, subcategories that can encourage participants to make art:

*Free creation* - enables free expression, depending on the knowledge available at the moment. It does not require previous knowledge of practical or theoretical nature, or idiomatic music standards. It is a friendly practice, both liberating and exhilarating to the participants, increasing their confidence and engaging them in a pleasurable activity.

*Instrumental expansion* - refers to the search of technical means, beyond the traditional instrument resources, in order to work in a creative activity. Usually these unconventional techniques are called extended instrumental techniques or expanded instrumental techniques. Additionally, the musical use of extramusical utensils can also be attempted.

*Communication* - refers to the creative efforts of students to find ways of expressing themselves by using an unusual material or something that causes initial estrangement to them. It occurs in challenging situations in which they are forced to find a common vocabulary and develop it in a discursive way so as to establish a fluent dialogue.

*Intuition* - an essential element of inventive activities must be in constant balance with rationality and in a synergistic relationship with it. This subcategory highlights the students' learning and how much they loosen up or retrain themselves on account of critical listening during the performance.

Musical development achieved through group practice was a universal agreement in every testimony taken in this study. All of them emphasized the fact that playing together in group developed musical aspects in them that would not be possible in their individual practice. Therefore, *social practice* was considered a stimulating way of learning music:

In *equilibration* processes (Figure 4 - d), the subjects, when interacting with new situations, must sometimes readjust *schemes*. It allows a process of assimilation and *accommodation*, resulting in new acquired knowledge. *Equilibration*, *schemes*, *assimilation* and *accommodation* refer to the knowledge building model proposed by Jean Piaget. The time to reach the adjustment varies according to individuals and situations:

In our activities, the equilibration process occurred in three situations: indeterminacy, dominated determination, non dominated determination. (a) Situations of indeterminacy were characterized by creations without any pre-established plan; (b) Situations of dominated determination, the students

were asked to perform something they knew and therefore was under control; (c) In situations of non dominated determination, the students were asked to perform something for which they were supposedly unprepared or did not know.

In situations of *indeterminacy*, after a brief initial discomfort, there is the emergence of elements that are quickly shared and understood by the students that end up by getting together and forming a musical idea that goes on to be developed by the group.

In situations of *dominated determination* the students had knowledge of the musical material to be used and the instrumental techniques involved, and consequently, they had, at first, no difficulties in carrying it out. In these situations, the students started the activities with a lot of confidence and high expectation. However, it was observed that their concern and disappointment at the end of each session was ever harder.

In situations of *non dominated determination*, where the students should perform something supposedly new or not dominated, despite of the risk, they rise to the occasion trying to come to terms with it.

In this study group, the occurrence of indicators corresponding to *conservatism* and *previous knowledge* were observed, making it possible to establish a relationship between these two categories and the performance obstacles found by students in the *invention* category. The latter, in turn, because it encourages students to excell creatively and technically, puts them into somewhat unexpected situations they were forced to solve, thus calling for *equilibration* in the process. Figure 5, shows the relationship among the categories previously discussed:

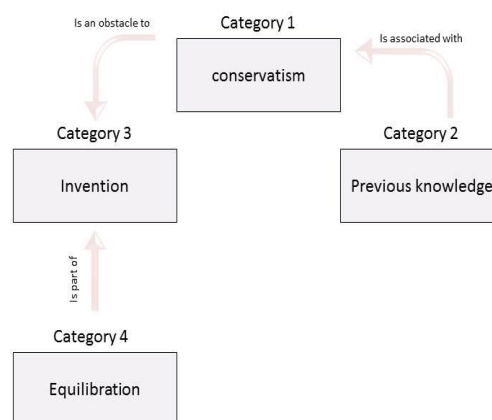


Figure 5: Relationship among categories

## 5. Discussion

What is the influence of the emerging categories in the creative environment of this study group? Considering that for Edgar Morin [9] all phenomena must be analysed in his entire complexity, since all cognitive events require the conjunction of energy, electrical, chemical, physiological, brain, existential, psychological, cultural, linguistic, logical, ideal, individual, collective, personal, transpersonal, and impersonal interconnected processes, when observing music activities we have a complex phenomenon (in an interdisciplinary and transdisciplinary sense). To ignore this fact is to reduce it to a simplicity level capable of excluding the relationships directly involved in music making. Beliefs, musical influences, psychological state etc., are elements directly and indirectly involved in a simple musical idea developed in a creative activity.

In our laboratory activities, for example, it was observed that certain beliefs involving category 2 (previous knowledge) related to *standardization* and *no socialization* damaged the development of several musical creations. Some participants had difficulties related to *receptive* and *productive skills* during activities proposed through the reference model, because, according to their reports, they were thinking of *standardizations* learned in previous studies, or because of concerns related to theoretical and instrumental-technical knowledge. When they realized the possibility of intuitive and inventive creation, free from the demands and requirements of traditional practice, their volitional acts expanded, potentializing their creations and making the activities more pleasurable.

By analyzing the participants' reports, it was noted that certain beliefs related to conservatism category may hinder the creative aspect, itself related to invention category. The conservative practices, often associated with systematic and inflexible actions, create obstacles to inventiveness, since the latter forces participants to resolve unexpected situations during performances. Once participants interact with these challenges, new *schemes* are constantly constructed, requiring a certain time to be understood and to realize new alternatives and techniques for their musical achievements (*equilibration* category).

## 6. Conclusion

The categories highlighted in this paper *Conservadorism – Previous Knowledge– Invention – Equilibration* introduced the first indicators to establish relationships among the elements that contribute to, or hinder, music learning through creative art making.

Since the experimental work presented here involved risks, mistakes and successes, for its own

nature, we chose to highlight the downside first. In some exercises, we realized that what we requested was beyond the participants' understanding. In this case, the sequence of exercises was immediately reformulated to fit the group; so we asked participants to freely improvise first. The technical resources for each one of the exercises were shown and explained after each improvisation, so the students could become aware of what they did intuitively in their performances. We noticed that knowledge elucidated *a posteriori*, after the empirical situation was experienced, contributed more effectively for a more concrete learning, since participants were able to relate their actions to the concepts explained.

On the upside: (a) when the participating students completed the activities they were extremely motivated to continue in the following semester, meaning that the methods and processes involved, from the musical pedagogy perspective were successful; (b) the students were surprised by the fact that they were playing musical sequences using resources they thought they were incapable of, meaning that the practices allowed them to be resourceful, capable of outdoing themselves creatively.

The next laboratory sessions will contemplate the application and classification of new creative activities, choose a core category and proceed to theoretical sampling, trying to see whether the provisional hypotheses are confirmed or change, observing the potential codes extracted from the obtained data, and finally, seeking theoretical saturation, that is, stabilization of the trends identified, which will rightly take us to the development of a substantive theory.

## 7. Acknowledgements

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