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Drawings and paintings: an exploratory study with children

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Abstract

In the theoretical framework of developmental pedagogy, the arts represent an essential tool in the study and growth of the child. In this context, music, drawings, and paintings a relevant role in this development that enters in the child's life from many different experiences. Starting from the principle that the drawings and paintings are related to varying levels of intelligence and musical cognition and the selective attention to musical features depending on the context, this exploratory study sought to understand: (i) what representations also, graphics (iconic, figural and metric) used by children appear linked to musical elements (form, timbre and pitch) after the hearing of different musical works; (ii) the impact of the application of interdisciplinary practices in the development of musical notation in the context in Preschool education. Considering the objectives that guide this research, it has been set a qualitative, descriptive, and interpretive research paradigm developed in the context of Preschool education with children from 3 to 5 years of age (n=12) search through continuous (de)construction processes between all the theoretical information and elements that emerge from empirical research. The collection and analysis of data where integrated using various methods. From the analysis and interpretation of the data appear indicators that the crossing of diverse art forms not only benefits the formation and development of the musical and artistic literacy of the child, as the production of graphics constitutes an essential epistemic instrument in the development and construction of musical knowledge. The representation and the elaborated graphics presents an iconographic and figurative character.

Keywords: drawings; music; preschool education.

Resumo

No campo teórico da pedagogia do desenvolvimento, as artes representam uma ferramenta essencial no estudo e crescimento da criança. Neste contexto, música, desenhos e pintura têm um papel relevante nesse desenvolvimento que entra na vida da criança a partir de diversas experiências. Partindo do princípio de que os desenhos e as pinturas estão relacionados com vários níveis de inteligência e de cognição musical e a atenção seletiva à características musicais dependendo do contexto, este estudo exploratório procura compreender: (i) quais representações gráficas (icônicas, figurativos e métricos) usadas pelas crianças aparecem ligadas a elementos musicais (forma, timbre e andamento) após à audição de diferentes obras musicais; (ii) o impacto da aplicabilidade de práticas interdisciplinares no desenvolvimento da notação música no contexto da educação pré-escolar. Considerando os objetivos que norteiam esta pesquisa, foi definido um paradigma de pesquisa qualitativo, descritivo e interpretativo, desenvolvido no contexto da educação pré-escolar com crianças de 3 a 5 anos de idade (n=12), buscando processos contínuos de (des) construção entre todas as informações teóricas e elementos que emergem da pesquisa empírica. A coleta e análise de dados foram integrados usando vários métodos. A partir da análise e interpretação dos dados aparecem indicadores de que o cruzamento de diversas formas de arte não só beneficia a formação e desenvolvimento da alfabetização musical e artística da criança, como a produção de gráficos constitui um instrumento epistémico essencial no desenvolvimento e construção de conhecimento musical. A representação e os gráficos elaborados apresentam um carácter iconográfico e figurativo.

Palavras-Chave: desenho; música; educação pré-escolar.

1 Introduction

The drawing is one of the oldest artistic representations of the human being and assumes a fundamental role for the child. It is through her that she communicates, registers her speech, creates worlds, characters, environments, plays and is her “first writing” (Moreira, 1984, p. 20). It is important to emphasize that it is not the drawing that develops, but the child. In this perspective, many authors (Luquet, Lowenfeld, Brittain, Piaget and Vygotsky) devoted themselves to the study of children’s drawing, recognizing in their development the existence of different stages/phases that are common to all children. In this context, Luquet (1969) considers that children’s drawings are realistic. That is, the child draws to represent what he knows (as he sees it), whether it obtains or not. Based on this representation of reality, Luquet (1969) defined three phases to distinguish the different characteristics present in the child’s drawing: *fortuitous realism*; *failed realism*; *intellectual realism*. It is important to note that these phases are not rigid.

Another perspective on children’s design assumes by Lowenfeld and Brittain (1977). According to the authors, it is through drawing that the child demonstrates what is important and what is actively present in his mind while drawing. Also, here the construction and development of the design go through different phases. Thus, the authors consider the existence of four phases: *scrawl*, *pre-schematism*, *schematism* and *realism*. This theme also had a particular look of Piaget (1978). Hence within the stages (*sensory-motor*, *pre-operational*, *concrete operational* and *formal operational*) of the development of the rational thought of Piaget (1978), are the phases of the children’s naturalistic evolution: *scrawl*, *pre-schematic*, *pseudo naturalism*. Another aspect raises by Vygotsky (1991). The development of children’s drawing based on the domain of the motor act and speech. For the author, the development of the children’s graphic-plastic expression divides into four stages: *symbolic*, *symbolic-formalist*, *truthful formalist* and *plastic formalist* (Alexandroff, 2010).

Children’s drawings are also the starting point for research in the musical universe. For example, musical cognition is studied not only through musical performance, but also indirectly through the drawings or musical notation invented by children. This fact has played an important role in the investigation of different authors (Bamberger, 1991; Davidson, & Scripp, 1988; Gromko, 1994). As far as Bamberger (1991) is concerned, the analysis of the drawings associated to rhythmic practices performed with children from 4 to 12 years allowed the author to classify drawings in two categories (figurative and metrical). As a conclusion of this study, Bamberger (1991) considers that children’s musical drawings reflect the development of their musical intelligence. In the same sense, Davidson & Scripp (1988) express that the musical design developed by the children who participated in their studies are “windows on music cognition”. Gromko (1994) developed some studies that allowed him to confirm “the validity of children’s invented notations as a measure of their musical understanding” (Umamoto, 2004, p. 127).

Considering that the insertion of artistic experiences in the classroom makes possible the introduction/reinforcement of knowledge, skills and attitudes, and that in the process of language/musical knowledge construction there is an accompaniment in increasing complexity of different graphs/notations, this study tried to perceive: (1) what representations and graphics (iconic, figural and metric) used by children appear linked to musical elements (form, timbre and pitch) after the hearing of different musical works; and (2) the impact of the application of interdisciplinary practices in the development of musical notation in the context in preschool education.

2 Method



2.1 Participants

For this study, it was used a sample of children (n=12) belonging to a Social Solidarity Institution (IPSS) located in the city of Bragança, aged between 3 and 5 years. For the study presented, two graphic productions were collected by each of the participants, in a total of (n=22) drawings. Two of the productions were not considered in the final analysis due to their authors’ absence.

2.2 Instruments

The type of instrument used in the data collection was the production and respective description of the drawings made by the children themselves through the audition of two musical works (A - *Happy* by Pharrell Williams; B - *Gnossienne* n.º 1 by Erik Satie) of the pop and classical music repertoire. Both present timbral, rhythmic, melodic, historical and aesthetic differences in their constitution (Table 1).

Table 1: Characteristic elements.

Music	Movement	Melodic motive	Instruments	Intensity	Repertoire
A	R&B beat		Guitar Drum Bass Vocals	Mezzo-forte (<i>mf</i>) Forte (<i>f</i>)	Pop
B	Lent		Piano	Piano (<i>p</i>) Mezzo-forte (<i>mf</i>)	Classical Music

2.3 Proceedings

For the accomplishment of this study we chose to divide the activity in two moments. The first moment assumed a sense and a preparatory character in the accomplishment of the main activity. In this sense, it was proposed the realization of a small dynamization, which we call "A Musical Safari". This proposal consisted in the execution of an "imaginary trip", exploring the entire space of the room reserved for the practice of the artistic and physical-motor expressions of the cooperating institution. The children had to move freely around the room representing one of the means of transportation chosen previously by all participants. The means of transport with the highest incidence rate were airplane, bus and train. This "imaginary trip" was accompanied by a song sung by the participants, which contained elements directly related to the theme (animals) that were appearing drawn on the posters presented along the road.

After the preparatory activity referred to above, all participants were asked to sit in a circle and sit on the floor in a comfortable way and with full access to the materials (colored pencil, markers and leaves) necessary for the development of the main activity. After the distribution of the various materials were defined the tasks to be developed by all participants in this activity, namely:

- Task 1: After the hearing of the musical works, the participants were invited to represent, through the drawing, the effect / sensation transmitted by the music.
- Task 2: At the end of the construction of each of the drawings, each participant was asked individually for a descriptive and representative account of their design.

This process was repeated a second time in order to obtain two drawings and two reports. All the reports and drawings constructed by the participants were analyzed and interpreted.

2.4 Analysis and processing of data

For the analysis and treatment of the data, we choose the used MAXQDA 2018 software. Each analysis of the drawings was based on four main evaluation criteria:

- the colors used, the shapes applied by the participants;
- the orientation of the sheet;
- the respective size of the drawing;
- the representation of natural forms (human, animal, etc.), like some allusion or representation of musical symbolism.

In order not to present a too extensive work, recalling that they were 12 participants (24 draws), the analysis was carried out from three students who in this article assume the denomination of student A, student B and student C.

3 Results

Regarding the applied color analysis (Figure 1), as we can see from the following figure, there is a predominance of green color.

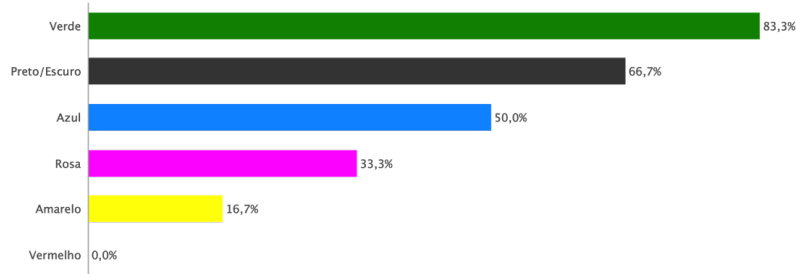


Figure 1: Component regarding the use of colors.

The preference for the use of green color may be associated with nature (grass, trees, etc.), just as the absence of red color is related to blood, but the true meaning will forever remain a mystery guarded and locked in the minds of each child. In order to obtain answers to these questions, this specific question would have to be asked to the child at the time of drawing, where only he knows the real meaning.

According to the following criterion (Figure 2), the participants who were the subject of analysis demonstrate equality in the preference of using straight and mixed forms.



Figure 2: Component regarding the use of forms.

According to Pillar (1996), "the child begins to construct circles, rectangles, triangles, etc. and to combine them into more complex patterns, establishing a vocabulary of lines and forms that are the basis of the construction of the graphic language" (p. 52).

The following criterion (Figure 3) is related with the orientation of the sheet in the applicability of the drawing. Participants demonstrated a preference in the horizontality of the sheet, where there was also a tendency for a mixed orientation, where the student does not assume a basis in drawing the drawing, letting himself be carried away by his imagination.

The last criterion (Figure 4) depicts the applied size of the drawings along the sheet. Recalling that in one of these four criteria were conditioned to the participants, having all the freedom to draw. Through the figure, we can observe that children prefer to occupy the sheet in its entirety.

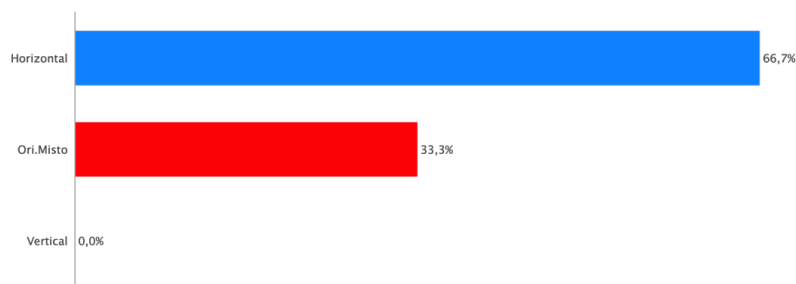


Figure 3: Component regarding the orientation of the sheet.

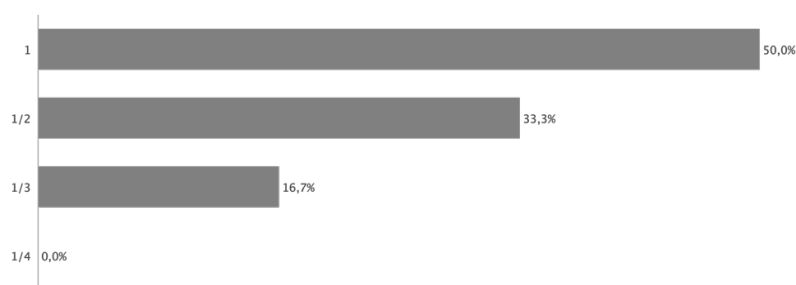


Figure 4: Component regarding the size of the drawing along the sheet.

This may convey a taste for the child in drawing, where Pillar (1996) refers: “Between 5 and 7 years, children draw with remarkable expressiveness, organization and pleasure” (p. 52). Similarly, it is possible to observe that actions and thoughts are not coordinated, allowing the non-grouping of parts of a drawing, as Mèredieu (1995) affirms, there is no constancy of greatness or attempt to present depth (at the level of the perspective) throughout the graphic production of a child. Although there is understanding in the relation between the elements, they are represented superimposed and not coordinated. The author also states that this stage of development begins at around 4 years old and may extend up to 10/12 years old.

4 Discussion

Concerning the stage of development of the drawing

One of the analyzed cases reveals an evolutionary state in the construction of graphics. For example, we can observe with child A presentation of a state of different complexity in the second drawing (Figure 5), namely by the way it treats the figure of the human being. This fact allows us to perceive that the participant in question presents, according to Piaget’s developmental stages, a change from the pre-schematic phase to the schematic where he presented improvement in the human figure and portrait of a piano, a permanent instrument in music B.

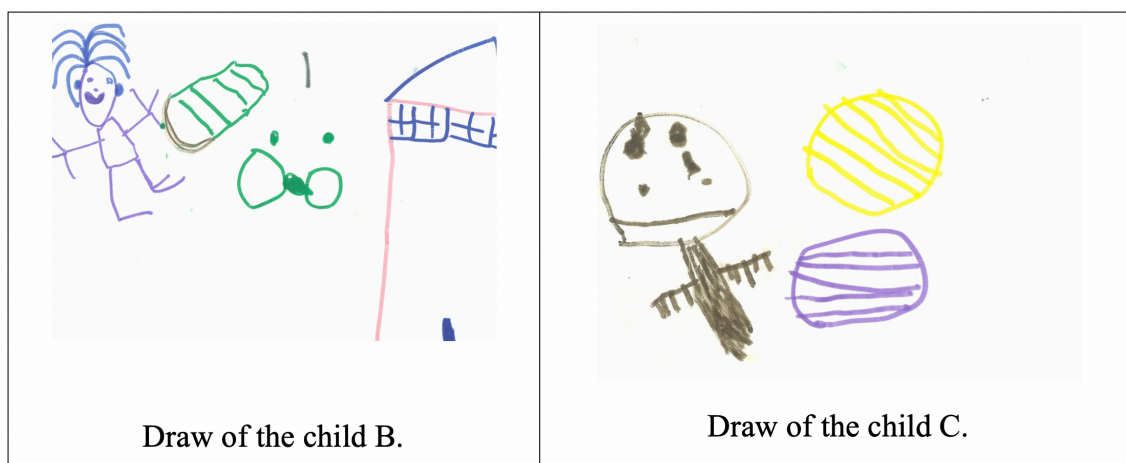
Concerning the presence of musical elements

From the intersection of the graphs and narratives produced by the participants of this study are indicators of the existence of figurative representations of the musical universe. In the drawing of child B and child C (Figure 6), we can see that there is the intention of representing a musical instrument, in this case a guitar, as well as in the previously mentioned representation where the child A draws a piano. All these musical representations were only perceptible through the analysis of the students narratives. There is no mention in any of the graphs produced by the participants of musical concepts (form, tone and pitch).

There are more draws made by the children’s, but, for our choice, we didn’t want to put them all on this work. We only want to show the process and some results of this experiment. Maybe someday, how knows, we wrote an extensive article with all the draws and paintings and make an investigation and research more detailed and broader.



Figure 5: Draws of the child A.



Draw of the child B.

Draw of the child C.

Figure 6: Draws of the children B and C.

5 Conclusion

From the analysis and interpretation of the different designs performed by the participants, the following indicators result:

- The representation and the elaborated graphics present an iconographic and figurative character.
- From the analysis and interpretation of the data emerge indicators that the crossing of diverse artistic forms not only benefits the formation and development of the musical and artistic literacy of the children, but also the production of spellings constitutes an important epistemic instrument in the development and construction of the language / musical knowledge.
- In the future it will be important to perceive and analyze the representative and transformative evolution of these graphs for each of the sound parameters.

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