

***EXPRESSIVE-MUSICAL PLAYFULNESS: Expressive-Musical Playfulness:
reflections on childhood development***

Ludicidade expressivo-musical: reflexões sobre o desenvolvimento na infância¹

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Resumo

Os sons e a música estão presentes na vida desde o nascimento. Nas escolas a educação musical infantil é reconhecida como importante contribuição curricular para a expansão de hábitos e realizações culturais contribuindo para a sociabilidade uma vez que a música é extremamente colaborativa neste particular. Além disso, estimula a memorização, capacidade importante para futuras aprendizagens. Apresentamos neste trabalho uma reflexão a respeito da manifestação do talento infantil, procedimentos educativos e seus efeitos generosos no cérebro, suporte para a mente, os quais serão indispensáveis para a evolução pessoal e intelectual do educando. Destacamos que a ludicidade é um fator importante na aprendizagem pois o brincar é natural da criança. O presente estudo nos possibilita apreciar a dimensão de atividades específicas a partir da iniciação musical constatando como e porque deverão ser aplicadas enquanto potencial condutor para a evolução pessoal e cognitiva na educação infantil. Nesta pesquisa pretendemos fazer uma abordagem teórico-empírica sobre a importância da ludicidade na aprendizagem da arte musical.

Abstract

Sounds and music are present in life from birth. In schools, early childhood music education is recognized as an important curricular contribution to the expansion of cultural habits and achievements contributing to sociability since music is extremely collaborative in this regard. In addition, it stimulates memorization, an important skill for future learning. In this paper we present a reflection about the manifestation of children's talent, educational procedures and their generous effects on the brain, support for the mind, which will be indispensable for the personal and intellectual evolution of the learner. We emphasize that playfulness is an important factor in learning because play is natural to children. The present study allows us to appreciate the dimension of specific activities from the musical initiation, verifying how and why they should be applied as a potential conductor for personal and cognitive evolution in early childhood education. In this research, we intend to make a theoretical and empirical approach to the importance of playfulness in learning the art of music.

Palavras-chave: *Educação; Infância; Ludicidade; Aprendizagem; Educação musical.*

Key-words: *Education; Childhood; Playfulness; Learning; Music Education.*

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INTRODUCTION

The spontaneous manifestation of artistic abilities in childhood may appear in everyday activities in an informal, playful way or in school activities, as well as in their family and social environment. In addition, we can say that attending the art of dance, theater, cartoons or cinema makes it possible for human beings to awaken to the musical art, since this is necessarily an important component for the aforementioned representations.

Questions such as talent, genetics and musical education, among others, will be presented with the aim of understanding the appropriate follow-up for the improvement of these attributes so that the student feels capable and confident in the face of his own recognition and feeling of pleasure when working with music. rising performance.

We emphasize that studying and experiencing music is important for everyone, regardless of their intention to become teachers or professional artists. At the very least they are likely to be excellent amateur musicians. Scientific studies prove how musical studies can benefit brain development, especially from childhood. In this sense, we intend to carry out a theoretical-empirical approach on aspects related to particularities, behaviors, circumstances and natural expressiveness that allow the perception of the manifestation of talent for musical art in childhood and its possibilities for individual development.

Ludicity, Music and Development

Ludicity appears as a concept that involves the creation of a ludic environment, in which activities are carried out either in a pleasant way, or in a spontaneous and free way. Playfulness stimulates imagination, creativity and social interaction, providing a meaningful learning experience (Antunes & Pagaia, 1974; Csikszentmihalyi, 1996; Brougère, 1998; Ausubel, 2002; Gee, 2003; Johnson, 2005; Pellegrini, 2011; Kishimoto, 2013; D'Ávila, 2014; Santos, 2015). It is through playfulness that children, and even adults, explore, experience and learn in an engaging and fun way, using games as an educational and personal growth tool (Luckesi, 2014, Bocheco & Prado, 2017; Mineiro & D'Ávila, 2019).

This concept is related to the act of playing and the importance of the game in learning and human development, although there is no single consensual definition, several authors, namely Piaget, Vygotsky, Fröbel, Fridman, Huizinga, and Kishimoto and Wallon , among others, presented their perspectives on ludicity/game.

Piaget (1973) considered the game as a way to assimilate and accommodate knowledge, in addition to promoting cognitive development, he presented the importance of the game as a spontaneous and autonomous activity, in which children can explore and experience different possibilities.

Vygotsky (1967) framed the game as a social activity, in which children learn to interact with each other, and to build shared meanings. He argued that the game promotes the zone of proximal development, stimulating imagination, creativity, and problem solving.

Fröbel (1887), believed that playing was a vital activity for the physical, social, emotional and cognitive development of children, is considered the father of kindergarten, valued the game as the main form of learning in childhood.

Playing. – Playfulness is the highest stage of child development – of human development in this period; for she is the self-active representation of the inner—representation of the inner, of the inner urge and urge. Play is the purest, most spiritual activity of man at this stage, and at the same time typical of human life as a whole – of the inner natural life hidden in man and in all things. Therefore it gives joy, freedom, contentment, inner and outer rest, peace with the world. She has the source of all that is good. The child who plays a lot with self-active determination, perseveringly until physical fatigue forbids it, will certainly be a determined man, capable of self-sacrifice for the promotion of his own well-being and that of others. Is not the most beautiful expression of life at this moment a child at play? – a child wholly absorbed in his play? – a child who fell asleep so exhausted by play? As already indicated, play in this period is not trivial, it is highly serious and of deep significance. Cultivate and nurture it, oh mother; protect and guard her, oh father! To the calm and pleasant vision of him who really knows Human Nature, the child's spontaneous play reveals the future of man's inner life. The child's games are the germinal leaves of all future life; for the whole man is developed and shown in her, in her most affectionate dispositions, in her most interior tendencies (Fröbel, 1887, p. 55-56).

Friedman (1996), highlights the importance of games and entertainment as fundamental activities for the integral development of the child, showing that through them the child explores the world, acquires knowledge, develops social, emotional and cognitive skills, in addition to exercising imagination and the creativity.

Kishimoto (1990), assumes that it is possible to observe the presence of ludic elements and the importance of the game in the narrative, which end up favoring the development of intelligence. Henri Wallon (1981) emphasized the importance of the game as a central activity in the development of the child, he argued that the game allows the child to express his emotions, explore the world around him, develop motor and cognitive skills, in addition to learning. to deal with rules and interact socially.

Huizinga (1938/1980), refers that the game exposes different characteristics, such as voluntariness, separation from the real world and the presence of rules, and that these characteristics are essential for the ludic experience, in his book entitled “Homo Ludens”, makes an allusion to the game as a core activity for human culture. For the author, the characteristics of games (before culture) are rooted in several areas of society, mixing with the concept of elements such as art, poetry, law and justice, war, philosophy, among others.

Playfulness and music are formally and conceptually partners, providing an engaging and pleasurable experience of expression, exploration and learning for practitioners, interlocutors and spectators. Learning musical instruments in childhood can contribute in a certain way to an improvement in cognition, attention and working memory, this study developed by Kausel et al. (2020) compared different skills in a universe of 40 children aged between 10 and 13 years, half of whom studied a musical instrument regularly for at least two years. musical instrument, presented a higher score in the memory challenges, showing better performance in the assimilation of information, and skills.

Several authors (Peretz & Zatorre, 2003; Levitin, 2006; Patel, 2008; Jäncke, 2008; Koelsch, 2014; Licursi et al, 2017; Kausel et al., 2020) show that when the brain is exposed to a musical work , it is intensely activated, playing a fundamental role in the creation and processing of understanding, memorization and interpretation of music, emphasize that this musical exposure involves a series of complex cognitive and neural processes, in which the brain is requested in various ways to assimilate, store and give meaning to musical information. This interaction between the brain and music is fundamental to the formation of the musical experience and to the emotional and intellectual understanding that we can obtain from it. In this respect Sacks (2007) presents the following observation:

There are numerous indications that humans possess, as well as the instinct for language, an instinct for music, however it has evolved. We humans are a musical species as well as a linguistic one. This takes many forms. [...]. We build music in the mind using many parts of the brain (Sacks, 2007, p. 10).

Through the evolution of studies, we identified the sovereignty of expressiveness in music and recognized our potential to respond to it (Morgado et al., 2022; Auzani et al., 2022; Leonido et al., 2023). For “For some primitive societies and past civilizations, music is the language of divine revelation [...]” (Leonido et al., 2020, p. 96).

Music Talent

Gardner (1995, p. 188) shows that “Human beings are biological creatures, but they are also cultural creatures. Even before birth, the immature organism is in the womb of a woman who has habits, styles, and practices that reflect her culture and subculture. [...] There is no doubt that the baby's life after birth is intrinsically linked to her cultural practices and assumptions”.

We consider it relevant to understand talent for better guidance, especially in the family environment, where stimulation is fundamental. We found that research carried out in the medical field has scientifically proven that the “genius” is not born ready-made. Therefore, it is certain that virtuous artistic performance is the result of disciplined and persistent studies (Cardoso et al., 2018). We then understand the assertion presented that “musical achievement comprises ten percent of talent and ninety of work”. For Shenk (2011), since conception, our talent, among other characteristics, is subject to a progression process. According to the author “alone, genes do not make us [...] talented or deaf to music. Every day, in every way possible, you help determine which genes will be turned on. Your life interacts with your genes” (Shenk, 2011, p. 37).

Gardner (1994), attested in his research the existence of several innate capacities in every human being in his work entitled *Multiple Intelligences*. When disclosing the new concepts obtained regarding the different ways in which our mind really works, he drew attention to the fact that the difference is in the level of development provided by the individual to each of them. “[...] all human beings have several relatively autonomous cognitive capacities, [...]” (Gardner, 2008, p. 14), “At best, intelligences are potentials or inclinations that are realized, or not, depending on the situation. cultural context in which they are found (Gardner, 1995, p. 188).

About musical intelligence, Gardner (1994, p. 78) states that “of all the talents that individuals can be endowed with, none comes sooner than musical talent. At a minimum, the extent to which talent is publicly expressed will depend on the environment in which one lives”.

The author states that this particularity is related to the ability to learn, interpret music, in addition to perceiving different patterns, musical notes, timbres, melodies and rhythms. This type of intelligence is characteristic of musicians, composers, conductors, music critics and dancers. On this aspect, Shenk (2011) maintains that for intelligence to blossom, a gradual development is necessary that does not proceed spontaneously. In other words, “Intelligence is not an innate aptitude, built-in at conception or in the womb, but a developing set of skills, driven by the interaction between genes and the environment. [...] Some adults never come close to reaching their true intellectual potential” (Shenk, 2011, p. 39). On this subject Snyder (1997, p. 166) points out that:

Jane Healy (1991), in *Endangered Minds: Why Children Don't Think and What We Can Do About It*, explores children's brain development. She indicates that children's brains are becoming physiologically different due to environmental and societal changes of the past decade. At birth the human brain is “plastic.” This term refers to a malleable state, rather than a texture or material. While some neurons controlling reflex actions and basic learning are in place at birth, there are many neurons floating, inclined but uncommitted, ready to be lured into place, based on experiences. The places they may approach are the different centers of the brain, loosely related to Gardner's intelligences. The final configuration of the brain is affected greatly by environmental contact.

Silver et al. (2010) present us the characteristics of musical intelligence:

Musical predisposition/intelligence	
Sensibility for:	<i>Tone, rhythm, fear, timbre, sound</i>
Inclination for:	<i>Listening, Singing, Playing an Instrument</i>
Aptitude for:	<i>Composing music (lyric writer, composer, musician, conductor) and analyzing music (music critic)</i>
Activities:	<i>Play music, sing, rap creations, whistle, clap, analyze sounds and music.</i>

Source: Adapted from Silver et al. (2010, p.14, 22).

We consider relevant the following statement by Gardner (1994, p. 97) regarding musical ability, when he states that, “Musical intelligence presents its own development trajectory as well as its own neurological representation, so that it is not swallowed by the jaws omnivores of human language”.

However, we highlight how interesting it is to take advantage of the opportunities that present themselves in everyday life to, through music, in a playful way, stimulate the pleasure and enthusiasm for the musical art in the living environment. Musical intelligence is directly associated with imagination, creativity and communication (Healy, 1991; Sloboda, 1985; Odena, 2005; Concepción, 2009; Plaza, 2012). As Jane Healy (1991, p. 45) points out, “What we do with, for, and to our children's growing minds will shape not only their brains but also tZhe intellectual 'standards' that represent our cultural furore”.

In previous studies we learned that music covers different areas of the brain, including certain regions involved in other qualifications of cognition. By deepening these results, medical investigations have attested through image exams how our king organ responds in a refined way to musical stimuli. It is important to stress once again that brain responses to music are subject to experiments carried out for this improvement (Healy, 1991; Snyder, 1997; Plaza, 2012). Coulter (1984) referred to by Snyder (1997, p. 167) references that, “There is additional evidence showing that music learning increases the capacity of the frontal lobes of the brain, which is the area that deals with altruism, empathy, pattern recognition , global understanding, simultaneous processing, and inner speech”.

Coulter predicts that someday the majority of learning in early schooling will be “taught through music”. Applying all this brain research to our intuitions about music education, we know that music is highly motivating to children, and is the only reason some remain in school. Children are inclined toward musical experiences, activities, and interaction because it is “wired in.” (Snyder, 1997, p. 167).

Scientific research proves that sound perception is a progressive improvement. The habit of exposing oneself to musical procedures continuously promotes neuronal mutations in the auditory cortex (Kausel, 2020). Therefore, as one continues in studies, musical development is undoubted. Snyder (1997, p. 167), based on several authors, presents that:

The patterned nature of music is likely to interact with all kinds of learning, perhaps explaining Rauscher's recent results, including a significant increase in spatial IQ of preschoolers involved in interactive music-making (Rauscher, Shaw, Levine, Ky, & Wright, 1994), and findings that older students who listened to Mozart exhibited increased memory (Rauscher, Shaw, & Ky, 1993).

As teachers, musicians and researchers, we observe how fundamental it is to encourage the cult of the arts, specifically musical art, from childhood through activities that stimulate imagination, vocabulary expansion, motor activities and sociability. It is an extremely beneficial attitude to the subject because “Music [...] is an activity that requires large and multiple cognitive resources. It is a powerful stimulant of dialogue maintained by the cerebral hemispheres, favoring a dynamic balance between the capacities of both” (Jauset, 2013, p. 153). For as Snyder (1997, p. 166) had previously mentioned “Concurrently, early exposure to music may be necessary, or greatly enhance, development of other cognitive processes and intelligences”.

Doidge (2011, p. 13) proves that through neuroimaging tests applied to musicians, we can glimpse the various areas of the brain that are significantly different from those of non-musicians, emphasizing that those “beginning before the age of 7 have larger brain areas interconnected between the two hemispheres and point out that a change in the auditory cortex — an increase in frequency of activation — leads to changes in the frontal lobe connected to the cortex.” There are also results attesting that living with music, even for pleasure and contemplation, that is, without contact with the instrument through attentive listening, triggers abundant brain stimuli. Ira Altshuler (2001), psychiatrist and pioneering music therapist, found that “music, unlike other arts, moves faster. You can even be proud of dragging crowds”. And he explains that “Music, which does not depend on the higher functions of the brain to gain entry to the organism, can still excite through the thalamus. Once a stimulus has been able to reach the thalamus, the higher brain is automatically invaded” (Altshuler, 1954, p. 24). It is common knowledge that musical behavior comprises biological, social and psychic factors developing the learning process that is characterized by the way we represent music in our minds, and occurs primarily through enculturation during childhood and later through the acquisition and specific skills training. As stated by Sloboda (2008, p. 10):

The first is developmental enculturation, that is, the learning that results from our childhood exposure to the common musical products of our culture, together with the acquisition of simple skills, such as the ability to play short songs. In general, the knowledge acquired at this stage is not the result of self-conscious learning or effort. Rather, children simply acquire knowledge through their everyday social experiences. As a result, such knowledge tends to be universal in a given culture, and forms the foundation upon which other specialized skills will be built. The second phase is the acquisition of specific skills through training. These skills are not universal in a given culture; are those that turn ordinary citizens into “musicians”.

According to Doidge (2011, p. 13) “[...] thinking, learning or acting can turn our genes on or off, thus shaping our brain anatomy and our behavior—certainly one of the greatest discoveries of the 20th century”. The musical experience in childhood can function as an integration link between children's cognitive and emotional aspects and favor their socialization in the face of the emotionality associated with music. Thus Tavares and Freire (2020, p. 114) describe that “musical learning reflects a promising multisensory experience to support the executive functions that are recognized as important for the child development process and for adjustment in adult life. The continuity of this multisensory experience has significant effects on brain plasticity in the short and long term (Herholz & Zatorre, 2012), in addition to being an important source of pleasure and human fulfillment throughout life”.

Additionally, Tavares and Freire (2020, p. 108, based on Miendlarzewska & Trost, 2014 and Bugos & De Marie, 2017), state that “Playing a musical instrument at an early age requires high levels of sensorimotor integration, induces high levels of attention and short-term musical activity engages the brain's attentional systems, which among other aspects, results in multiple cognitive benefits related to different learning domains”.

As teachers and performers, we recognize the fact that as one progresses in studies, the musical mind accompanies this evolution with refinement and mastery.

FINAL CONSIDERATIONS

Several studies address emotional changes and the impact of music on the nervous system, changes that affect processes such as breathing, heart rate, blood pressure, digestion, hormonal balance, mood and attitudes.

Authors such as Elkonin (1998), Leontiev (1978, 1988), Luria (1987) and Vygotski (1994), refer that it is through the analysis of the social that one can understand, in part, how the individual acquires knowledge. In this way, the relationship between the social and cultural environment and the active role that the child plays in this context contribute decisively to the formation of psychological functions. Thus, the action and social ways of using objects are learned by children in practical interaction, which in the future also causes the need to dominate the world of human objects, causing the emergence of the first games.

Por sua vez Snyder (1997, p. 167) destaca que “The undeniable implication is that education without music is incomplete, and indefensible”.

Experiencing musical art promotes the structuring of multiple skills in childhood that are crucial for other cognitive processes, even beyond music. Musicalization contributes, among other factors, according to Ilari (2010), to greater affection and a better relationship between the child, the young person and their parents or guardians. Music education from an early age promotes intra and interpersonal development, the growth of cognitive and motor skills, emotional self-control and the expansion of cultural and musical knowledge. “There is so much evidence that music and the arts are essential for human growth and normal development, it is a wonder that some decision makers still consider them “frills” (Snyder, 1997, p. 171).

Studies demonstrate structural changes in brains exercised through music education practices. Thus, future research resulting from musical initiation should, when possible, explore musical aspects such as: musicality, motor coordination, auditory acuity, imagination and creativity.

BIBLIOGRAPHIC REFERENCES

- Altschuler, I. M. (1954). The Past, Present and Future of Music Therapy. In: E. Podolsky (org.), *Music Therapy*. Nova York. Philosophical Library.
- Altshuler, I. (2001). Psychiatrist's Experiences with Music as a Therapeutic Agent. *Music and Medicine Nordic. Journal of Music Therapy*, 10(1), 69-76. <https://doi.org/10.1080/08098130109478019>
- Antunes, C., & Pegaia, U. A. (1974). *Ludopedagogia*. Editora do Brasil.
- Ausubel, D. P. (2002). *Adquisición y retención del conocimiento: una perspectiva cognitiva*. Cognición y desarrollo humano. Paidós.
- Auzani, A. S., Silva, L. L. F., Pereira, A. M. A., & Morgado, M. G. (2022). Artistic-Cultural Perspectives in Technical-Professional Training at UTFPR-Brazil. *Motricidade*, 18 (nº SI 2022: Sport, Culture and Communication), 2-18. <https://doi.org/10.6063/motricidade.25790>
- Brougère, G. (1998). A criança e a cultura lúdica. *Revista da Faculdade de Educação*, 24(2), 103-116.
- Cardoso, M., Morgado, E., & Silva, L. (2018). Os Efeitos de uma proposta didáctica de Educação Auditiva no Desempenho Musical. *Revista Per Musi*, 2018, 1-18.
- Concepción, M. M. M. (2009). Psicología y Música: inteligencia musical y desarrollo estético. *Revista Digital Universitaria*, 10(11), 1-13.
- Csikszentmihalyi, M. (1996). *Creativity: Flow and the Psychology of Discovery and Invention*. HarperCollins Publishers.
- D'Ávila, C. M. (2014). Didática lúdica: saberes pedagógicos e ludicidade no contexto da educação superior. *Revista Entreideias*, 3(2), 87-100.
- Doidge, N. (2011). *O cérebro que se transforma*. Editora Record.
- Friedmann, A. (1996). *Brincar: crescer e aprender: o resgate do jogo infantil*. Moderna.
- Froebel, F. (1887). *The education of man*. Appleton.
- Gardner, H. (1994). *Estruturas da Mente. A teoria das Inteligências Múltiplas*. Artes Médicas.
- Gardner, H. (2008). *Cinco mentes para o futuro*. Atual Editora.

Gee, J. P. (2003). *What Video Games Have to Teach Us About Learning and Literacy*. Palgrave Macmillan.

Healy, J. (1991). *Endangered minds: Why children don't think and what we can do about it*. Touchstone.

Huizinga, J. (1980). *Homo Ludens: o jogo como elemento da cultura*. Perspectiva.

Huizinga, J. (2000). *Homo ludens: o jogo como elemento da cultura*. Perspectiva.

Ilari, B. (2010). Cognição musical: origens, abordagens tradicionais, direções futuras. In B. Ilari & R.C., Araújo (Orgs.), *Mentes em música*. Editora da Universidade Federal do Paraná.

Jäncke, L. (2008). Music, Memory, and Emotion. *Journal of Biology*, 7(6), 21. <https://doi.org/10.1186/jbio182>

Jauser, J. (2013). *Cerebro y musica, una pareja saludable*. Editorial Círculo Rojo.

Johnson, S. (2005). *Everything Bad Is Good for You: How Today's Popular Culture Is Actually Making Us Smarter*.

Johnson, S. (2005). *Everything bad is good for you: How today's popular culture is actually making us smarter*. Riverhead Books/Penguin Putnam.

Kausel, L., Zamorano, F., Billeke, P., Sutherland, M. E., Larrain-Valenzuela, J., Stecher, X., Schlaug, G., & Aboitiz, F. (2020). Neural Dynamics of Improved Bimodal Attention and Working Memory in Musically Trained Children. *Front. Neurosci.* 14:554731. <https://doi.org/10.3389/fnins.2020.554731>

Kishimoto, T. M. (1997). *Jogo, brinquedo, brincadeira e a educação*. Cortez.

Kishimoto, T. M. (2011). *O jogo e a educação infantil*. Cengage Learning.

Koelsch, S. (2014). Brain and Music. Wiley Interdisciplinary. *Cognitive Science*, 5(4), 485-496.

Leonido, L., Licursi, B., Cardoso, M., Rodrigues, J., & Morgado, E. (2020). A expressão, a expressividade e a performance na interseção poético-musical sob uma perspectiva multifacetada da estética artística contemporânea. *Motricidade*, 16(1), 94-102. <https://doi.org/10.6063/motricidade.20062>

- Leonido, L., Pereira, A., Mendes, L., Rodrigues, J., & Morgado, E. (2023). Art Education: Two Decades of Creation, Evaluation and Application of An Interdisciplinary Method of Artistic Literacy. *Education Sciences*, 13(6):589.
<https://doi.org/10.3390/educsci13060589>
- Levitin, D. J. (2006). *This is Your Brain on Music: The Science of a Human Obsession*. Penguin Books.
- Licursi, M. B., Morgado, E. M. G., & Silva, L. (2023). Arte y Sociedad: una reflexión artística y científico-cultural. In: Musicoguaia (Ed.), *Conference Proceedings CIVAE 2023* (pp. 41-45). Adaya Press. <https://doi.org/10.58909/ad23571835>.
- Luckesi, C. (2014). Ludicidade e formação do educador. *Revista Entreideias*, 3(2), 13-23.
- Mineiro, M., & D'Ávila, C (2019). *Educ. Pesqui.*, 45, e208494.
<https://doi.org/10.1590/S1678-4634201945208494>
- Morgado, M. G., Licursi, M. B., & Silva, L. L. F. (2022). Music, rhythmic gymnastics and expressiveness: an artistic performance. *Motricidade*, 18 (n.ºSI 2022: Sport, Culture and Communication), 1-15. <https://doi.org/10.6063/motricidade.25789>
- Odena, O. (2005). Creatividad en la educación musical. Teoría y percepciones docentes. *Eufonía*, 35, 82-94.
- Patel, A. D. (2008). *Music, Language, and the Brain*. Oxford University Press.
- Pellegrini, A. D. (2011). *The Role of Play in Human Development*. Oxford Handbook of the Development of Play.
- Peretz, I., & Zatorre, R. J. (Eds.). (2003). *The Cognitive Neuroscience of Music*. Oxford University Press.
- Piaget, J. (1932/1999). *O juízo moral na criança*. Summus.
- Piaget, J. (1973). *A formação do símbolo na criança*. Zahar.
- Plaza, J. L. A. (2012). El desarrollo creativo en Educación Musical: del genio artístico al trabajo colaborativo. *Educação*, 37(1), 31-44.
- Sacks, O. (2007). *Alucinações Musicais*. Cia das Letras.
- Santos, C. L., & Silva, J. F. (2015). O lúdico como estratégia de ensino. *Educação em Revista*, 31(4), 123-146. <https://doi.org/10.1590/S0102-46982015000400006>

Sawyer, R. K. (2008). Learning from music collaboration. *International Journal of Educational Research*, 47 (1), 50-59.

Shenk, D. (2011). *O gênio em todos nós*. Editora Zahar.

Silver, H. F, Strong, R. W., & Perini, M. J. (2010). *Inteligências Múltiplas e Estilos de Aprendizagem – Para que todos possam aprender*. Porto Editora

Sloboda, J. A. (1985). *The musical mind*. Oxford University Press.

Sloboda, J. A. (2008). *A mente musical: psicologia cognitiva da música*. Eduel.

Snyder, S. Developing musical intelligence: Why and how. *Early Childhood Educ J.*, 24, 165–171 (1997). <https://doi.org/10.1007/BF02353274>

Vygotsky, L. S. (1967). Play and its role in the mental development of the child. *Soviet psychology*, 5(3), 6-18

Wallon, H. (1981). *A Evolução Psicológica da Criança*. Edições 70.

Wallon, H. (1989). *Origens do pensamento na criança*. Manieie