



## Creativity-Based Music Education for Kindergarten: Integrating Musical Literacy and Emotional Intelligence at PPPK Petra

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**Abstract:** This study aims to analyze the creative application of music education through the integration of musical literacy—encompassing media use and teaching strategies—into activities that foster emotional intelligence among kindergarten children at PPPK Petra. The research employed a descriptive qualitative approach. Data were collected in the form of verbal data and visual documentation through direct classroom observations of children during music learning activities, interviews with music teachers and homeroom teachers, and interviews with parents. The data were analyzed through three stages: data reduction, data display, and conclusion drawing and verification. The findings indicate that music education integrating two paradigms—education about music and education through music—can create interactive and meaningful learning experiences. Children not only acquire a basic understanding of rhythm, pitch, and musical symbols, but also apply this understanding in activities that foster self-motivation, empathy, and collaborative skills. These findings confirm that the integration of musical literacy with emotional development is effective, as children learn through direct, contextual, and collaborative experiences. In conclusion, creative and comprehensive music education contributes not only to students' cognitive development but also to the formation of positive behaviors and character, serving as essential preparation for their future lives.

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## Introduction

The development of music in the modern era has grown exponentially alongside advances in digital technology, which has also influenced music education practices. Various models, approaches, and learning media are now available and increasingly accessible to educators (Woo & Montijo, 2024). This condition opens up opportunities for innovation, but at the same time presents new challenges, namely the tendency for learning to be oriented towards instant appeal without conceptual depth, especially in aspects of musical literacy such as the introduction of musical notation and symbols. In practice, learning is often still dominated by imitation and memorization. On the other hand, high exposure to technology also has an impact on reducing children's social-emotional practice, even though the formation of emotional intelligence requires stimulation from an early age when children's self-awareness is still in the early stages of development (Gottschalk, 2019).

Theoretically, children aged 4–6 years are in the pre-operational stage, which is characterized by the development of symbolic abilities, visual representation, and language (Pakpahan et al., 2022). Meanwhile, children begin to think intuitively from the age of 4, where they begin to have the ability to create something, such as drawing or arranging



blocks, but do not know exactly why they are doing it. At this age, children are already able to classify objects according to their group. (Shabnam et al., 2025). These findings indicate that this period is a strategic time to develop aural, visual, and kinesthetic sensitivity in an integrated manner. However, various studies show that the stimulation provided in early childhood education institutions still emphasizes early academic results rather than strengthening children's expressive and emotional dimensions. Thus, the potential of music as a symbolic medium that can bridge cognitive and emotional development has not been optimally utilized.

Daniel Goleman, in his book *Emotional Intelligence: Why Emotional Intelligence Is More Important Than IQ*, simply states that intellectual intelligence (IQ) can determine a person's success by 20%, while emotional intelligence (EQ) contributes 80%. This statement is supported by a number of studies showing that non-cognitive factors such as the ability to understand, manage, and use emotions play an important role in a person's life outcomes, sometimes even more dominant than intellectual ability alone (Goleman, 2009). He explains that non-cognitive factors such as the ability to manage emotions, empathy, and self-motivation play a major role in a person's life achievements. This is reinforced by empirical findings showing that emotional regulation and social skills correlate with academic success and social adaptation (Cotru et al., 2012).

Emotional intelligence (EQ) plays a much more significant role than intellectual intelligence (IQ). Brain intelligence (IQ) plays a role as a minimum requirement for success, but it is emotional intelligence that actually leads a person to the pinnacle of success. Research findings show that individuals with good emotional regulation skills tend to have stronger interpersonal skills, better motivation, and psychological stability that supports the achievement of their personal and professional goals (Pratama & Corebima, 2016). Dimensions such as self-awareness, emotion management, empathy, and the ability to work together are important foundations for child development (Mukhlisa et al., 2024). However, the implementation of emotional intelligence reinforcement in kindergarten learning is often not systematically integrated with arts activities, including music, so that the two run separately.

This gap points to something specific: music learning in early childhood still tends to stop at musical skills alone, without being deliberately connected to emotional development. Music psychology research supports a different direction musical activities can facilitate emotional expression, support self-regulation, and strengthen children's social capacities (Putri et al., 2018) The potential is there. What's missing is a structured approach that intentionally bridges musical literacy with emotional intelligence at the kindergarten level.

That's precisely why this study takes a different angle. Rather than treating music as a standalone subject, the focus here is on how musical literacy delivered through interactive media and creative teaching strategies can become a vehicle for developing self-motivation, empathy, and collaborative ability in young children. Studies that specifically examine this integration, particularly within a defined institutional context, remain scarce.

PPPK Petra was chosen not simply for its location, but because the school provides a conducive environment for this kind of research. Its learning culture is inclusive and open to creative pedagogical approaches, and the school already operates with a structured curriculum that allows music to be embedded meaningfully across activities not treated as an extracurricular addition. This institutional context made it possible to observe how musical literacy functions in real, everyday learning rather than in an artificial or experimental setting. The aim, then, is clear: to analyze how musical literacy is applied at the early childhood level



and how its implementation through learning media at PPPK Petra actively stimulates emotional development in a contextual and structured way.

### **Research Method**

This research method uses a descriptive qualitative approach, which is research that produces data in the form of words, images, and narratives, rather than numbers (Danim, 2000). In line with this, qualitative research is understood as a procedure that produces descriptive data from speech, writing, and observed behavior (Sugiyono, 2018) Within this framework, the research is descriptive and non-interactive because it does not manipulate variables but focuses on interpreting phenomena as they are. Descriptive research aims to describe phenomena systematically, factually, and accurately, whether they are natural or human-constructed (Pokhrel, 2024). This orientation is in line with the view that qualitative research emphasizes a deep understanding of meaning, context, and social processes (Creswell, 2018)

This study also uses literature studies to examine theories relevant to music education, early childhood development, and emotional intelligence. Literature studies enable researchers to build a strong conceptual foundation through critical analysis of credible scientific sources. A literature review in qualitative research is not merely a collection of references, but is part of the process of conceptualization and sharpening the focus of the research (Snyder, 2019) . Data processing is carried out inductively, namely by interpreting the data gradually to construct patterns, categories, and meanings.

The research stages follow the general procedures in the qualitative approach, namely orientation, exploration, and verification (Nasution, 1992). Data were collected through several techniques. First, direct observation was conducted in music learning classrooms to document children's behavioral responses and emotional expressions during activities. Second, semi structured interviews were carried out with the music teacher, homeroom teachers, and the school principal at PPPK Petra Kindergarten. The music teacher was selected as the primary informant due to direct involvement in designing and delivering music learning. Homeroom teachers were included because they observe children's daily emotional development across subjects. The school principal provided institutional context regarding the school's vision for holistic education. Parents were also interviewed to gain insight into behavioral changes observed at home. Informants were selected using purposive sampling chosen based on their relevance and direct knowledge of the research focus, not by random assignment.

Throughout data collection, the researcher wrote reflective comments alongside field notes to identify emerging themes and formulate conceptual questions. These reflective notes were kept strictly separate from descriptive data to prevent premature interpretation from contaminating the raw record. The researcher then compiled analytical summaries to synthesize findings from the literature and sharpen the focus of the analysis. Categories were developed intuitively, grounded in the interrelationships between recurring concepts. A further literature review followed not as a formality, but to ensure the emerging interpretation had a solid theoretical anchor.

Data analysis was carried out through data reduction, data presentation, and conclusion drawing and verification as stated by (Miles, 2019) Data validity was maintained through credibility criteria with extended observation, persistent analysis, and triangulation. This strategy aims to ensure that the resulting interpretations truly reflect the phenomenon being studied and are not merely the subjective assumptions of the researcher.

## Results and Discussion

Currently, early childhood arts education is an educational program aimed at providing age-appropriate learning and exploring children's potential in the arts, thereby equipping them for their future lives (Winner et al., 2013). In this regard, (Diamond & Lee, 2011) argue that early childhood education can be defined as a form of education for children aged 0-6 years, which is organized in an integrated learning program so that children can develop their abilities and creativity in accordance with their developmental characteristics. Music education at PPPK Petra Kindergarten operates under the paradigm of education about music a framework in which music functions as an independent educational discipline aimed at developing artistic competence, musical sensitivity, and foundational knowledge of musical symbols and notation. This paradigm aligns with the Merdeka Curriculum's learning outcomes in Literacy and STEAM, which emphasize children's capacity to recognize musical symbols, engage in artistic processes, and express themselves through sound.

The program is structured around three interconnected domains: sensitivity to tone, sensitivity to rhythm, and music knowledge each delivered through carefully designed multimodal learning media that integrate aural, visual, and kinesthetic modalities. This three channel approach is not incidental. Research consistently demonstrates that multimodal stimulation in early childhood music learning produces stronger cognitive and musical engagement outcomes than single-modality instruction, particularly during the pre-operational stage when children's sensory perception systems are most receptive to structured stimulation (Hallam, 2010) The integration of interactive video, physical cue cards, and live instrument play at PPPK Petra operationalizes this principle across all three domains.

### 1) Sensitivity to Tone

In the domain of tone sensitivity, children engage in singing, pianica playing, and notation reading activities supported by collaboratively developed audio-visual media produced by the PPPK Petra Music MGMP team. The use of minus-one audio guides and interactive video materials reflects current best practice in early childhood music pedagogy, where mediated listening experiences are shown to accelerate tonal discrimination and pitch matching in young learners (Gudmundsdottir & Trehub, 2018). The pianica, in particular, provides a tactile-visual-auditory bridge: children not only hear pitch relationships but physically locate and produce them, reinforcing tonal memory through embodied experience.



**Figure 1. TKB band singing activity and TKA class playing scales using the melodica**

### 2) Rhythm Sensitivity

Musical activities are an important part of kindergarten education programs. In his book *Mother Play and Nursery Songs*, Frobel, a leading figure in kindergarten education, believes in the value of musical experiences for children (Bayless, 1986:34). He suggests that children should be given as many opportunities as possible to sing and play rhythmic games. The aspect of sensitivity to beats in music is very

important and fundamental. By learning beats through games and songs, children can train their bodies to be more flexible and sensitive to rhythm. There are several beat materials used in music learning at PPPK Petra Kindergarten, including:

a. Beat or Rhythm Game



**Figure 2. TKB class distinguishes between beat and rhythm by playing tambourines.**

This learning medium is physical and very simple, consisting of two cue cards, each with the words Beat and Rhythm written on them. These cue cards guide the children in deciding whether they will play Beat or Rhythm. In the “hearing” or listening activity, children will guess whether they are hearing beat or rhythm. The musical instruments used are simple percussion instruments such as tambourines, maracas, and castanets. The application of beat or rhythm material aims to enable children to distinguish between regular and patterned beats from an early age and to practice them.

b. Sweet Beat

Sweet beat is a rhythm game that uses the names of fruits, including beet, cherry, banana, and avocado. Each fruit name explains the actual notation value, ranging from 1 beat to 1/16 beat. However, this is conveyed through pictures of fruits, while the actual notation value is not explicitly stated. This is to avoid complicated discussions of music theory. The main objective is to make children more sensitive to regular and patterned beats.



**Figure 3. Sweet beat material, rhythm imitation game using fruit names**

The Sweet Beat rhythm game can be played individually or in groups. There are two types of media used: physical (pictures of fruits) and interactive videos. Video media is considered to be much more effective in its application because it contains many visual attractions.

In the domain of rhythm sensitivity, two key media the Beat/Rhythm cue card game and the Sweet Beat fruit-name system transform abstract rhythmic values into concrete, playable experiences (Bentley et al., 2023). The Sweet Beat system, which maps rhythmic durations onto fruit syllables (beet, cherry, banana, avocado), is pedagogically aligned with the Kodály and Takadimi traditions of rhythm syllabification, both of which have demonstrated effectiveness in developing rhythmic literacy in children aged 4–7 without requiring formal notation



knowledge (Wang et al., 2022); (Palkki, 2010) By deliberately avoiding explicit notation theory and prioritizing felt rhythm over written symbol, this approach respects the developmental trajectory of early childhood learners while still building genuine musical competence.

### **3) Music Knowledge**

In the domain of music knowledge, the introduction of color notation and block notation represents a scaffolded approach to musical literacy. Color notation which maps pitch to color, shape, and hand signs draws on principles closely related to Figurenotes, a Finnish-developed music notation system shown to significantly increase engagement and music reading readiness in young and neurodiverse learners (Kivijärvi, 2019); (Incognito et al., 2022)). Block notation, introduced at the TKB level following color notation mastery, extends this scaffold toward conventional notation by first establishing spatial and durational understanding. Observations at PPPK Petra confirm increased comprehension and sustained enthusiasm during notation sessions outcomes consistent with research showing that visually dynamic, color-coded notation media reduce cognitive load and improve symbol-to-sound mapping in early readers (Kuo & Chuang, 2013)

Overall, the music education program at PPPK Petra reflects a coherent pedagogical architecture: each medium is purposefully designed, sequentially introduced, and grounded in the developmental characteristics of pre-operational learners. The program does not treat music as decorative curriculum it treats it as a structured discipline through which children develop perceptual, cognitive, and expressive capacities that serve as the foundation for both musical and broader academic competence.

### **Education Through Music**

Emotional intelligence, as Goleman defines it, encompasses five core capacities: self-awareness, self-regulation, self-motivation, empathy, and social skills. In early childhood, these capacities are not abstract ideals they are behavioral patterns that can be trained, shaped, and reinforced through the right learning environment. This study focuses on three of those five variables: self-motivation, empathy, and social skills, all of which were deliberately integrated into music learning activities at PPPK Petra Kindergarten.

The broader argument here is straightforward. Music is not just a subject. When designed intentionally, it becomes a medium through which children practice being human waiting their turn, encouraging a peer, adjusting to a group's tempo. This aligns with what researchers have increasingly documented: that music education, when framed through an emotional development lens, produces outcomes that go well beyond musical competence ((Hallam, 2010); (Rickard et al., 2013). A systematic review of 424 studies confirms this: structured music participation in educational settings consistently produces gains in emotional intelligence and prosocial behavior in children aged 3–12. (Blasco-Magraner et al., 2021) findings that directly parallel what was observed at PPPK Petra.

#### **1) Self-Motivation**

Motivation in early childhood is fragile. Children at this stage are easily discouraged by failure and highly responsive to autonomy. The music learning structure at PPPK Petra addresses this directly. Rather than assigning uniform song material, children are given the freedom to select from spectrum-based repertoire with varying levels of complexity from Aeroplane (Level 1) to Long-long Ago (Level 3). This is not simply a matter of differentiation for its own sake. It is a deliberate

pedagogical move to ensure that each child enters the learning process at a point where success is achievable.

This approach is consistent with Self-Determination Theory (SDT), where autonomy support is identified as a critical driver of intrinsic motivation (Hu et al., 2022); (Ryan & Deci, 2020). In music education specifically, (Miksza & Tan, 2015) demonstrated that when students perceive choice in their learning tasks, their practice persistence and self-efficacy scores increase substantially even among young learners. What was observed in PPPK Petra's group pianica sessions mirrors this: children who selected their own material played with noticeably greater confidence and were more willing to perform in front of peers.

The grouping strategy also matters. Once children chose their songs, they were grouped by level and performed together. The result was not competition but collective affirmation each child heard their own sound contributing to a shared musical outcome. That experience, repeated consistently, builds what Bandura (1997) called mastery experiences: the most reliable source of self-efficacy in children.



**Figure 4. Pianica performance by class TKB1**

This finding aligns closely with Creech et al. (2020), who found that choice-based music tasks in early childhood settings produced measurable increases in task persistence and positive affect, particularly in children who initially showed low motivation. Similarly, McPherson and Hendricks (2010) established that perceived competence developed through achievable challenge is the strongest predictor of long-term music engagement. PPPK Petra's spectrum-based model operationalizes exactly this: matching task difficulty to individual readiness, so competence is experienced rather than assumed. The Merdeka Curriculum's emphasis on differentiated learning provides the institutional framework here, but the psychological mechanism is SDT. The curriculum creates the permission; the theory explains why it works.

## 2) **Empati (Empathy)**

Empathy is harder to teach directly than most educators assume. Telling a child to "consider others' feelings" rarely works. What works is designing situations where considering others becomes functionally necessary where the activity simply does not work unless each participant accounts for those around them. At PPPK Petra, rhythm materials were embedded into movement-based activities: lining up in sequence, following traffic signs, waiting for a turn before playing. These are not decorative additions to the lesson. They are the mechanism through which empathy gets practiced. A child who must wait before striking a drum beat is not just learning rhythm they are learning that their action has timing relative to others, that jumping ahead disrupts the whole. This approach reflects what developmental researchers describe as situated empathy learning the idea that empathy develops most effectively through structured social experiences rather than explicit instruction (Rabinowitch et al., 2013). More recently, (Kirschner & Tomasello, 2010) showed that joint music-

making increases spontaneous cooperative and helpful behaviors in young children significantly more than other shared activities. That finding is particularly relevant here, because the empathy training at PPPK Petra was inseparable from musical participation the two were structurally intertwined, not parallel.

The observation data from this study showed that children who participated in these rhythm-in-context activities demonstrated more consistent turn-taking behavior over time, and teachers reported fewer instances of impulsive interruption during group tasks. These behavioral shifts are modest but directionally significant.



**Figure 5. TK A Level Students Practicing Rhythmic Beats While Learning Queue**

### **3) Social Skills and Cooperation**

Group music-making is one of the few learning formats where individual contribution and collective outcome are simultaneously visible. When a child plays the wrong rhythm in a cup-tapping ensemble, everyone hears it not as a judgment, but as information. The group adjusts. That process, repeated across sessions, teaches something that worksheets cannot: that cooperation is not about disappearing into the group, but about calibrating your contribution to fit a larger whole.

At PPPK Petra, ensemble activities cup rhythms, simple instrument groups were structured so that each child held a distinct musical role. No two children played identical parts. This design choice is important. Research on cooperative learning consistently shows that interdependence of roles (what Johnson & Johnson call positive interdependence) is the condition most reliably associated with genuine cooperation, as opposed to mere parallel activity (Johnson & Johnson, 2009)

Recent music education research supports this further. (Schellenberg & Lima, 2024);(Kupana, 2015) found that ensemble participation in early childhood predicts stronger social competence outcomes compared to individual music instruction, even when controlling for general cognitive ability. This is because ensemble work demands real-time social negotiation listening, adjusting, signaling skills that transfer beyond the music room.

Observations at PPPK Petra showed that children who were initially reluctant to engage in group tasks became progressively more participatory across sessions. Teachers noted that children began self-organizing deciding who would play which part without adult prompting by the later sessions. That shift from teacher directed to peer-directed cooperation is a meaningful developmental marker.



**Figure 6. TKB Level Students Practicing Cooperative Rhythm Activities Using Plastic Cups**

The findings from PPPK Petra converge with a number of contemporary studies that reinforce the argument that intentionally designed music learning particularly multimodal in nature consistently produces improvements in the emotional intelligence of young children. On the dimension of self-motivation, the results of this study align with (Váradi, 2022), who concluded that repeated experiences of success within social-musical contexts enhance children's self-esteem and self-efficacy. (Liang, 2024) further corroborates this by finding that dynamic and interactive music learning environments are significantly more effective in fostering emotional intelligence compared to static approaches a pattern that precisely mirrors the spectrum-based model at PPPK Petra, where children actively select their own material and interact within peer groups.

On the dimension of empathy, the longitudinal study by (Villanueva et al., 2024), which followed 83 children over four years, provides an important clarification: the type of empathy most responsive to music intervention is not stable dispositional empathy, but rather situational state empathy and theory of mind. This finding directly explains why the movement-based rhythm activities at PPPK Petra were effective children were not trained to "become empathic" as a fixed trait, but were trained to respond empathically within shared situational contexts, and it is precisely this that was measurable.

On the dimension of social skills, the strongest comparative evidence comes from multimodal approaches. (del Barrio & Arús, 2024) concluded that approaches integrating music, movement, language, and bodily expression consistently facilitate social-emotional development and merit consideration as a primary strategy in inclusive education. ( et al., 2024);(Ent et al., 2013) further support this: the integration of music within creative drama activities among five-year-old children produced significant gains in collaborative ability and interpersonal conflict management. The structure of positive interdependence within ensemble activities at PPPK Petra creates conditions that are structurally identical to those reported in these findings.

One critical note from (Villanueva et al., 2024) warrants acknowledgment: formal music instruction does not automatically generate broad socioemotional transfer the greatest impact occurs in domains most closely adjacent to the music activities themselves. This caveat, rather than undermining the present study, actually strengthens its central argument: the success observed at PPPK Petra was not simply a product of music per se, but of a pedagogical design that deliberately embedded emotional dimensions into every activity. Music is the medium; pedagogical intentionality is the mechanism.



## Conclusion

This study demonstrates that music education, when designed with deliberate pedagogical intentionality, functions as a powerful vehicle for holistic child development extending well beyond artistic competence into the domain of emotional intelligence. By integrating the paradigms of Education About Music and Education Through Music, the program at PPPK Petra Kindergarten establishes a coherent synergy between technical musical proficiency and socio-emotional growth.

The findings confirm that structured musical engagement, supported by multimodal interactive media and purposeful classroom design, significantly fosters three core dimensions of emotional intelligence: self-motivation, empathy, and social cooperation. The spectrum-based repertoire system cultivates autonomous learning and self-efficacy; movement-embedded rhythm activities develop situational empathy and impulse regulation; and ensemble formats with distributed roles build genuine cooperative skills through real-time social negotiation. Each of these outcomes is not coincidental they are the direct product of an environment in which emotional development is structurally embedded into every musical activity, not treated as a parallel or secondary objective. Overall, this study affirms that early childhood music education, when aligned with both the Merdeka Curriculum's developmental framework and evidence-based pedagogical principles, is capable of nurturing children who are not only musically literate but cognitively competent, emotionally resilient, and socially capable qualities that constitute a robust foundation for lifelong learning and human flourishing.

## Recommendation

For kindergarten teachers, music should be designed intentionally as a medium for socio-emotional development not merely as artistic performance. Adopting spectrum-based differentiation, embedding cooperative structures into musical activities, and investing in multimodal learning media are practical steps that can be implemented immediately within existing curricula.

For PAUD institution leaders, music education warrants recognition as a core developmental program rather than a supplementary subject. This includes allocating dedicated music educators, providing adequate learning media, and establishing structured teacher training to ensure consistent program quality across school units.

For future researchers, three directions are recommended: expanding the study to multiple institutions with diverse cultural and socioeconomic contexts to test the model's generalizability; adopting a mixed-methods design to capture both process and quantitative impact; and developing more specific, validated instruments to measure self-motivation, empathy, and cooperative skills in early childhood settings. Longitudinal studies are also needed to determine whether observed socio-emotional gains translate into sustained character development in later years.

## References

- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W. H. Freeman and Company.
- Bentley, L. A., Eager, R., Savage, S., Nielson, C., White, S. L. J., & Williams, K. E. (2023). A Translational Application Of Music For Preschool Cognitive Development: RCT Evidence For Improved Executive Function, Self-Regulation, And School Readiness. *Developmental Science*, 26(5), 1–16.



- <https://doi.org/10.1111/Desc.13358>  
Blasco-Magraner, J. S., Bernabe-Valero, G., Marín-Liébana, P., & Moret-Tatay, C. (2021). Effects Of The Educational Use Of Music On 3-To 12-Year-Old Children's Emotional Development: A Systematic Review. *International Journal Of Environmental Research And Public Health*, 18(7).  
<https://doi.org/10.3390/Ijerph18073668>
- Cotru, A., Stanciu, C., & Andreea, A. (2012). EQ Vs . IQ Which Is Most Important In The Success Or Failure Of A Student? 46, 5211–5213.  
<https://doi.org/10.1016/J.Sbspro.2012.06.411>
- Creswell, J. W. (2018). Mixed Methods Procedures. In *Research Defign: Qualitative, Quantitative, And Mixed M Ethods Approaches*.
- Del Barrio, L., & Arús, M. E. (2024). Music And Movement Pedagogy In Basic Education: A Systematic Review. *Frontiers In Education*, 9(June).  
<https://doi.org/10.3389/Feduc.2024.1403745>
- Diamond, A., & Lee, K. (2011). Interventions Shown To Aid Executive Function Development In Children 4 To 12 Years Old. *Science*, 333(6045), 959–964.  
<https://doi.org/10.1126/Science.1204529>
- Ent, D., An, O. F., Ent, N., Determ, T. O., Ence, N. E. S. C. I., & On, E. (2013). *International Online Journal Of Primary Education*. 2(2), 9–22.
- Gottschalk, F. (2019). *Impacts Of Technology Use On Children : Exploring Literature On The Brain , Cognition And Well-Being*.
- Gudmundsdottir, Helga, & Trehub, Sandra. (2018). Adults Recognize Toddlers' Song Renditions. *Psychology Of Music*, 46(2), 281–291.  
<https://doi.org/10.1177/0305735617711762>
- Hallam, S. (2010). The Power Of Music: Its Impact On The Intellectual, Social And Personal Development Of Children And Young People. *International Journal Of Music Education*, 28(3), 269–289. <https://doi.org/10.1177/0255761410370658>
- Hu, B. Y., Guan, L., Locasale-Crouch, J., Yuan, Y., & Guo, M. (2022). Effects Of The MMCI Course And Coaching On Pre-Service ECE Teachers' Beliefs, Knowledge, And Skill. *Early Childhood Research Quarterly*, 61, 58–69.  
<https://doi.org/https://doi.org/10.1016/J.Ecresq.2022.05.008>
- Incognito, Oriana, Scaccioni, Laura, & Pinto, Giuliana. (2022). The Impact Of A Music Education Program On Meta-Musical Awareness, Logical-Mathematical, And Notational Skills In Preschoolers. *International Journal Of Music Education*, 40(1), 90–104. <https://doi.org/10.1177/02557614211027247>
- Isidori, E., Leonova, I., Alonzi, R., Trombetta, M., M. Bruni, E., & Magnanini, A. (2024). Epistemological Foundations Of Fashion Pedagogy: Investigating Knowledge And Emerging Issues. *Educatia* 21, 28, 13–25.  
<https://doi.org/10.24193/Ed21.2024.28.02>
- Johnson, David W, & Johnson, Roger T. (2009). An Educational Psychology Success Story: Social Interdependence Theory And Cooperative Learning. *Educational Researcher*, 38(5), 365–379. <https://doi.org/10.3102/0013189X09339057>
- Kirschner, S., & Tomasello, M. (2010). Joint Music Making Promotes Prosocial Behavior In 4-Year-Old Children. *Evolution And Human Behavior*, 31(5), 354–364.  
<https://doi.org/https://doi.org/10.1016/J.Evolhumbehav.2010.04.004>
- Kivijärvi, Sanna. (2019). Applicability Of An Applied Music Notation System: A Case Study Of Figurenotes. *International Journal Of Music Education*, 37(4), 654–666.



- <https://doi.org/10.1177/0255761419845475>
- Kuo, Yi-Ting, & Chuang, Ming-Chuen. (2013). A Proposal Of A Color Music Notation System On A Single Melody For Music Beginners. *International Journal Of Music Education*, 31(4), 394–412. <https://doi.org/10.1177/0255761413489082>
- Kupana, N. (2015). Social Emotional Learning And Music Education. *SED Journal Of Art Education*, 3(1), 75–88. <https://doi.org/10.7816/Sed-03-01-05>
- Liang, J. (2024). Developing Emotional Intelligence In A Static And Interactive Music Learning Environment. *Frontiers In Psychology*, 15(February), 1–9. <https://doi.org/10.3389/fpsyg.2024.1279530>
- Miksza, Peter, & Tan, Leonard. (2015). Predicting Collegiate Wind Players' Practice Efficiency, Flow, And Self-Efficacy For Self-Regulation: An Exploratory Study Of Relationships Between Teachers' Instruction And Students' Practicing. *Journal Of Research In Music Education*, 63(2), 162–179. <https://doi.org/10.1177/0022429415583474>
- Miles, H. Dan S. (2014). (2019). Miles Hubner 2014. In *Sustainability (Switzerland)* (Vol. 11, Issue 1).
- Mukhlisa, P., Yohenda, S., Yanti, U., & Yarni, L. (2024). *Kecerdasan Emosional / Emotional Intelligence (EQ)*. 2(1).
- Pakpahan, F. H., Saragih, M., Pendidikan, M., Inggris, B., & Medan, A. W. (2022). Theory Of Cognitive Development By Jean Piaget. *Journal Of Applied Linguistics*, 2(1), 55–60. <https://doi.org/10.52622/Joal.V2i2.79>
- Palkki, J. (2010). Rhythm Syllable Pedagogy- A Historical Journey To Takadimi Via The Kodály Method. *Journal Of Music Theory Pedagogy*, 24(1). <https://doi.org/10.71156/2994-7073.1306>
- Pokhrel, S. (2024). No Titles *λενη. Αγαη*, 15(1), 37–48.
- Pratama, A. T., & Corebima, A. D. (2016). *Contributions Emotional Intelligence On Cognitive Learning Result Of Biology Of Senior High School Students In Medan , Indonesia*. 11(18), 11007–11017.
- Putri, A. A., Psikologi, F., & Gadjah, U. (2018). *Perbedaan Kecerdasan Emosional Pada Mahasiswa Yang Mengikuti UKM Musik Dan Mahasiswa Yang Mengikuti UKM Non-Musik*. 4(2), 119–126. <https://doi.org/10.22146/Gamajop.46358>
- Rabinowitch, Tal-Chen, Cross, Ian, & Burnard, Pamela. (2013). Long-Term Musical Group Interaction Has A Positive Influence On Empathy In Children. *Psychology Of Music*, 41(4), 484–498. <https://doi.org/10.1177/0305735612440609>
- Rickard, Nikki S, Appelman, Peter, James, Richard, Murphy, Fintan, Gill, Anneliese, & Bambrick, Caroline. (2013). Orchestrating Life Skills: The Effect Of Increased School-Based Music Classes On Children's Social Competence And Self-Esteem. *International Journal Of Music Education*, 31(3), 292–309. <https://doi.org/10.1177/0255761411434824>
- Ryan, R. M., & Deci, E. L. (2020). Intrinsic And Extrinsic Motivation From A Self-Determination Theory Perspective: Definitions, Theory, Practices, And Future Directions. *Contemporary Educational Psychology*, 61, 101860. <https://doi.org/10.1016/j.cedpsych.2020.101860>
- Schellenberg, E. G., & Lima, C. F. (2024). Music Training And Nonmusical Abilities. *Annual Review Of Psychology*, 75, 87–128. <https://doi.org/10.1146/annurev-psych-032323-051354>
- Shabnam, M., Lone, N., & Sidiq, M. (2025). *Revisiting Piaget ' S Cognitive Principles*



- Among 4 – 7-Year-Old Children In The Kashmiri Population. November 2024, 7–12.*
- Snyder, H. (2019). Literature Review As A Research Methodology: An Overview And Guidelines. *Journal Of Business Research*, 104, 333–339. <https://doi.org/10.1016/j.jbusres.2019.07.039>
- Sugiyono. (2018). *Metode Penelitian Pendidikan: Pendekatan Kuantitatif, Kualitatif, Dan R&D*. Alfabeta.
- Váradi, Judit. (2022). A Review Of The Literature On The Relationship Of Music Education To The Development Of Socio-Emotional Learning. *Sage Open*, 12(1), 21582440211068500. <https://doi.org/10.1177/21582440211068501>
- Villanueva, J., Ilari, B., & Habibi, A. (2024). Long-Term Music Instruction Is Partially Associated With The Development Of Socioemotional Skills. *Plos ONE*, 19(7 July), 1–30. <https://doi.org/10.1371/journal.pone.0307373>
- Wang, Yingzhi, Matvieieva, Olga, & Zheng, Qing-Wen. (2022). Effectiveness Of The Orff And Kodaly Methods For The Development Of Musical Ability In Preschool Children Compared To A Standard Curriculum (La Eficacia De Los Métodos Orff Y Kodaly Para El Desarrollo De Las Habilidades Musicales En Los Niños Preescolares En Comparación Con El Currículum Estándar). *Culture And Education*, 34(1), 14–38. <https://doi.org/10.1080/11356405.2021.2006500>
- Winner, E., Goldstein, T., & Vincent-Lancrin, S. (2013). *Art For Art ' S Sake ?*
- Woo, J. L., & Montijo, C. C. (2024). *Technology , Music Education , And Social- Emotional Learning In Latin America*. 13(2), 1–13.