

The Role of Family and Environmental Factors in The Early Identification of Musical Giftedness

Belgin Bağrıaçık - Istanbul University - Cerrahpasa
 Serap Emir - Istanbul University - Cerrahpasa
 Ahmet Serkan Ece - Ankara University of Music and Fine Arts

 0000-0001-7335-1432
 0000-0001-7577-6012
 0000-0002-1369-5812

Recepción: 04.01.2026 | Aceptado: 13.02.2026

Correspondencia a través de **ORCID**: Belgin Bağrıaçık

 **0000-0001-7335-1432**

Citar: Bağrıaçık, B, Emir, S, & Ece, AS (2026). The Role of Family and Environmental Factors in The Early Identification of Musical Giftedness. *REIDOCREA*, 15(16) 189-201.

Financiación: This study was funded by the “Institute Social” foundation

This research is derived from a doctoral dissertation prepared by the first author and supervised by the second and third authors at Istanbul University-Cerrahpaşa, Department of Special Abilities Education

Área o categoría del conocimiento: Identification of Gifted Musical Talent in Early Childhood

Abstract: Gifted musical ability refers to a significantly higher level of performance than peers in creativity, musical perception, expression, and technical skill. It is conceptualized as a multidimensional and dynamic construct, framed by Gardner’s theory of musical intelligence, Gagné’s catalyst-based model, and Renzulli’s focus on task commitment. The 0–6 age range is a critical period during which musical stimuli have strong neurodevelopmental effects, supporting language, emotional, and social development. For innate potential (gift) to turn into realized talent, environmental catalysts such as family support, quality education, and rich cultural exposure are essential. Without sufficient environmental stimulation, these potential risks atrophy over time. Thus, music education should be viewed not as a privilege for a few but as a right for all, requiring early identification systems to account for socioeconomic inequality. This systematic review analyzed 12 studies focused on children aged 0–6, using thematic content analysis. International models like Japan’s Suzuki Method, the U.S. Music Together program, and Sweden’s inclusive public schools illustrate effective family–environment integration. In contrast, studies from Turkey highlight the absence of standardized identification protocols, limited parental education, and insufficient pedagogical training among teachers as key barriers to recognizing early musical talent.

Keyword: Early Childhood Identification

Introduction

Gifted musical ability is a complex phenomenon defined as a significantly superior performance compared to peers in areas such as creativity, musical perception, expressive capacity, and technical skill. The question of whether this ability is a biological potential, or a skill set shaped by environmental influences necessitates a comprehensive examination of three foundational theoretical models developed by Gardner, Gagné, and Renzulli.

Gardner (2011) defines musical intelligence as the capacity to perceive and produce melody, rhythm, and tonal variations, emphasizing that individuals with this intelligence tend to exhibit high musical sensitivity from early ages. However, Gagné’s (2009) Differentiated Model of Giftedness and Talent (DMGT) argues that this innate potential (gift) can only transform into outstanding achievement (talent) through environmental catalysts such as family support, quality education, and a conducive cultural environment. The sustainability of this transformation depends on the intersection of three components in Renzulli’s (2021) Three-Ring Conception of Giftedness: above-average ability, creativity, and task commitment (motivation).

Early childhood (ages 0–6) represents a critical period for emotional, cognitive, and social development, during which musical stimuli have the most pronounced neurodevelopmental impact (Young, 2003). Research shows that a child’s early encounters with music are largely shaped by family and close social environment.

Factors such as the family's musical background, parental attitudes, and access to instruments in the home play a central role in musical development. However, environmental factors may also act as limiting agents. In low socioeconomic contexts, the absence of musical stimulation and support often leads to the under-recognition or even the atrophy of inherited musical potential.

This highlights the need to regard music education not as a privilege, but as a right to ensure every child can develop their full potential. While international models such as the Suzuki Method (Japan), Music Together (USA), and Sweden's inclusive public music education system exemplify successful family–environment integration, Turkey faces several structural challenges. These include the lack of standardized protocols for early musical identification, insufficient parent education, and inadequate pedagogical training among teachers—factors that increase the risk of overlooking talents, particularly in disadvantaged settings.

Within this context, the present study aims to systematically examine the role of family and environmental factors in the early identification of gifted musical ability, based on both theoretical and empirical literature. Anchored in the frameworks of Gardner, Gagné, and Renzulli, the study analyzes how early musical development is shaped by familial and environmental influences and proposes evidence-based policy recommendations to address current challenges in Turkey.

Problem Statement and Significance

According to Ripple (1961), for a situation to be considered a research problem, it must meet at least two conditions: a state of uncertainty and the existence of multiple potential solutions (as cited in Karasar, 2024). Within the context of gifted musical ability, this uncertainty centers around whether genetic potential alone is sufficient and what types of environmental interventions are necessary to transform this potential into high achievement.

Although the literature highlights the 0–6 age period as a neurodevelopmentally critical stage during which environmental stimuli can activate latent abilities, there remains global ambiguity and variation in how the necessary "environmental catalysts" should be optimized for this transformation.

While international frameworks—such as Japan's Suzuki Method, the U.S.-based Music Together program, and Sweden's inclusive public models—offer structured approaches (Suzuki, 1989; Schütz, 2015), significant structural gaps are observed in the Turkish context. These include the absence of standardized protocols for early identification, limited family education programs, and a lack of pedagogical preparedness among music educators for working with gifted children (Güler, 2015; Bolat, 2017; Jaschke et al., 2025; Puangsamlee, 2025). These deficiencies particularly jeopardize the musical potential of children from socioeconomically disadvantaged backgrounds, where insufficient stimulation may lead to the atrophy of innate ability (Wang, 2025).

In this context, conducting a systematic review on the role of family and environmental factors in early musical development offers three major contributions:

- **Theoretical Contribution:** By synthesizing empirical findings with key theoretical models (Gardner, Gagné, Renzulli), the study provides an integrated, interdisciplinary framework explaining how gifted musical potential transforms into sustainable achievement.

- **Social and Equity-Oriented Impact:** Emphasizing music education as a right, not a privilege, the study supports efforts to reduce the limiting impact of socioeconomic inequality on talent development.
- **Policy and Practice Advancement:** By analyzing successful international models (e.g., Japan, USA, Sweden, South Korea), the study contributes actionable policy recommendations to address systemic gaps in Turkey's identification and support systems.

Thus, the primary aim of this research is to systematically examine the role of family and environmental factors in the early identification of gifted musical ability, analyze how early musical development is shaped within these contexts, and propose evidence-based solutions to address structural challenges specific to Turkey.

Method

This study is qualitative research conducted within the framework of the descriptive survey model, systematically examining the role of family and environmental factors in the early identification of gifted musical ability. The descriptive survey model is a research method aimed at describing an existing situation—past or present—as it is, by systematically examining specific characteristics of individuals, events, or objects to provide information about general trends and relationships (Karasar, 2024).

Research Model and Rationale

This research is based on the Systematic Literature Review (SLR) approach, one of the qualitative research designs. SLR is a method that comprehensively searches, selects, analyzes, and synthesizes scientific studies from the literature using pre-defined, transparent, and replicable procedures to answer a specific research question (Gough et al., 2017).

The rationale for selecting this model lies in the need to gather and comparatively analyze a wide range of empirical findings produced across multiple disciplines—such as educational sciences, psychology, and neuroscience—on a complex and multidimensional topic like musical giftedness, and to synthesize them within a coherent theoretical framework (Braun & Clarke, 2006). For data collection, the descriptive survey model was used to thoroughly examine the existing body of literature on the topic.

Data Sources and Search Strategy

To identify the academic publications to be included in the study, six internationally and nationally recognized electronic databases were systematically searched:

- Google Scholar
- Web of Science (WoS)
- Scopus
- ERIC
- ProQuest
- TR Dizin (Turkish Academic Index)

The search was conducted between July 1–25, 2025, aiming to include the most recent empirical studies in the field. To ensure maximum coverage, the search strategy utilized both Turkish and English keywords. Table 1 shows the key keywords. The keyword sets and search phrases used in the search index are as follows:

Table 1.
Keywords

Turkish Keywords	Turkish Keywords
"Üstün müzik yeteneği", "erken çocukluk", "müzik eğitimi", "aile etkisi", "çevresel faktörler", "üstün yetenek", "erken tanılama"	"musical gifted", "early childhood", "music education", "family influence", "environmental factors", "giftedness", "early identification"

During the search process, Boolean operators (AND, OR) were used to combine keywords, enabling access to specific publications focusing on the relationship between talent identification and family or environmental factors.

Inclusion and Exclusion Criteria

To ensure the selection of materials aligned with the study's aims and scope, inclusion and exclusion criteria were rigorously applied throughout the review process. Clearly defining these criteria in qualitative research is critical not only for ensuring the consistency of included data with the research question but also for enhancing the transparency and replicability of the study (Patton, 2015).

Inclusion Criteria:

- Studies that focus on early childhood (ages 0–6) within the context of gifted musical ability.
- Studies that center on family and/or environmental factors in relation to the development of musical talent.
- Studies published in peer-reviewed journals, book chapters, or graduate theses, to ensure high academic validity.
- Studies that provide full-text access for comprehensive analysis.

Exclusion Criteria:

- Studies involving only adults or focusing exclusively on individuals older than six years.
- Reports, abstracts, or unpublished conference proceedings lacking academic validity.
- Studies outside the thematic scope or those that focus solely on technical performance metrics without contributing to the theoretical context.

Data Selection and Analysis Process

As a result of the search strategy, a total of 96 studies were initially identified. After applying the inclusion criteria, 12 studies—comprising 8 journal articles, 3 book chapters, and 1 graduate thesis—were selected as the final sample. The methodological profiles and general characteristics of the included studies are detailed below:

Research Designs: Most of the analyzed studies employed descriptive survey, case study, or experimental designs (Addressi & Pachet, 2005; Davidson & Borthwick, 2002). The sample also includes qualitative literature reviews synthesizing developments in the field (e.g., Hallam, 2010).

Data Collection Techniques: Common data collection tools included semi-structured interviews, parent and teacher observation forms, musical perception tests, and

questionnaires. Some studies (e.g., Jaschke et al., 2025) also incorporated neuroscientific data synthesis.

Study Samples: The studies focused on gifted or musically talented children aged 0–6, their parents, and preschool music teachers. Additionally, the sample includes studies on disadvantaged families (Puangsamlee, 2025) and cross-cultural child groups (e.g., from Korea, Japan).

Indexing and Publication Platforms: The majority of selected studies were published in journals indexed by reputable international databases such as Web of Science (WoS), Scopus, ERIC, and ProQuest (e.g., *Frontiers in Neuroscience*, *Psychology of Music*). National data were drawn from peer-reviewed journals indexed in TR Dizin and graduate theses (e.g., Güler, 2015). Table 2 below summarizes the general characteristics of the studies analyzed:

Table 2.
Characteristics of the included studies

Feature	Description
Total Number of Studies	12 (8 Articles, 3 Book Chapters, 1 Thesis)
Research Models	Descriptive Review, Case Study, Experimental Design, Literature Synthesis
Data Collection Techniques	Interview, Observation, Scales, Neuroscientific Synthesis
Study Groups	0–6-Year-Old Children, Parents, Music Educators
Index Coverage	WoS, Scopus, ERIC, TR Index

Following this descriptive phase, the data were analyzed through thematic content analysis, classified in alignment with the theoretical frameworks of Gardner, Gagné, and Renzulli. The findings were grouped by matching the data obtained from the systematic review with the core components of the three theoretical models that constitute the study's conceptual framework. This thematic categorization was built upon the following rationale:

- **Theoretical Foundations of Musical Giftedness:** This theme was developed to describe the potential of musical intelligence as defined in Gardner's (2011) Theory of Multiple Intelligences, along with its biological manifestations in early childhood.
- **The Role of the Family and Early Development Catalysts:** Based on the concept of interpersonal catalysts in Gagné's (2009) Differentiated Model of Giftedness and Talent (DMGT), this category focuses on the transformative impact of family support, parental attitudes, and musical stimuli present in the home environment.
- **Environmental Factors, Cultural Context, and Inequalities:** This theme draws from Gagné's environmental catalysts and external factors influencing Renzulli's (2021) Three-Ring Conception of Giftedness, particularly task commitment. It encompasses teacher quality, socioeconomic status, and culturally embedded values.
- **Implementation Models and Structural Gaps:** This category was designed to compare how the elements of environmental support and educational rights, emphasized in theoretical models, are institutionalized globally and where implementation gaps exist in the Turkish context.

Results

The findings of this study are presented under the main themes identified through the systematic literature review: the theoretical foundations of musical giftedness, the role of the family, and the impact of environmental and cultural contexts.

1. Theoretical Foundations of Musical Giftedness

The literature primarily refers to three foundational models when explaining the development of musical giftedness:

- **Multiple Intelligences and Potential:** Gardner's Theory of Multiple Intelligences (2011) relates musical intelligence to an individual's ability to perceive and produce rhythm, melody, and tonal variations. Children with musical talent demonstrate a clear distinction from their peers in recognizing musical patterns and generating original musical ideas from an early age.
- **From Potential to Achievement:** Gagné's Differentiated Model of Giftedness and Talent (DMGT) (2009) explains that innate potential (gift) can only transform into high-level achievement (talent) through environmental catalysts such as family support, quality education, and appropriate cultural context.
- **Sustainability and Task Commitment:** Renzulli's Three-Ring Conception of Giftedness (2021) argues that giftedness emerges through the intersection of high cognitive ability, creativity, and task commitment (motivation). In music, sustained discipline and ongoing practice underscore the role of both motivation and environmental support.
- The multidimensional structure proposed by these theoretical models highlights a significant shortcoming in Turkey's identification practices, which rely predominantly on momentary performance assessments. This finding indicates the need for standardized diagnostic criteria that are aligned with these theoretical perspectives.

2. The Role of the Family and Early Developmental Catalysts (Ages 0–6)

Early childhood (ages 0–6) represents a critical period for emotional, cognitive, and social development, with music playing a foundational role in supporting these domains. The family has been identified as a central factor in activating a child's musical potential.

Early Interaction and Neurodevelopmental Impact: The 0–6 age range is a sensitive developmental window in which musical stimuli significantly influence neurodevelopment. A family background in music, positive parental attitudes toward music, and access to musical instruments at home facilitate early and intensive exposure to music. Joint participation in musical activities contributes to the natural learning of foundational elements such as rhythm, melody, and harmony.

Motivation and Discipline: Parental attitudes are critical in this process. Positive reinforcement, regular engagement in musical activities, and emotional support accelerate both technical and expressive skill development. Family support not only provides physical resources but also strengthens the task commitment and discipline emphasized in Renzulli's model, thereby reinforcing talent development.

The Power of Pedagogical Involvement: Pedagogical approaches such as the Suzuki Method require active family participation, positioning parents as partners in the learning process. This transforms music education into a cultural value within the household.

Internationally, positioning the family as an active learning partner is a proven model. In contrast, the limited scope of family education programs in Turkey increases the risk of giftedness going unrecognized. This underscores the importance of localizing and adapting such international models to the Turkish context.

3. Environmental Factors, Cultural Context, and Inequalities

Environmental factors represent a critical component of Gagné’s catalyst framework and play a powerful role in actualizing genetic potential. The development of a child’s musical identity and the recognition of their talent vary based on school environment, teachers, and peer interactions.

The Restrictive Role of Environment: Genetic predisposition alone may not be sufficient; the transformation of existing potential into tangible talent requires favorable environmental conditions. Findings by Wesseldijk et al. (2019) and Herfindahl (2023) emphasize that environmental enrichment during childhood plays a key role in activating inherited potential, while inadequate environmental stimuli may result in the atrophy of that potential. Thus, the environment can function not only as a supportive factor but also as a limiting one.

Cultural Influence and Creativity: The culture in which a child is raised—including the types of music they are exposed to and the prevailing musical codes—significantly shapes their musical perception and ability to transform that perception into performance. For example, in some Asian countries, the early provision of music education and frequent exposure to tonal structures are linked to a higher prevalence of absolute pitch among children compared to Western countries. Exposure to diverse musical genres supports creative musical thinking and fosters innovation in rhythmic and melodic structures.

Socioeconomic Inequality: In low socioeconomic households, the lack of environmental support may lead to the under-recognition of a child’s musical aptitude. This poses a significant barrier to early identification of musical giftedness. The literature increasingly supports the view that music education should be considered a right rather than a privilege, with more equitable outcomes emerging when children’s potential is supported regardless of economic background. Therefore, diagnostic processes should account not only for current performance but also for developmental history and environmental exposure.

The risk of atrophy in the absence of environmental support underscores that socioeconomic disparities in Turkey are not merely an educational issue but also represent a broader loss of national talent capital.

4. International Practices, Cultural Context, and Structural Gaps in Turkey

Globally, the early identification and development of musical giftedness are supported through various pedagogical and structural models that systematically integrate family and environmental support. These models operationalize Gagné’s (2009) assertion that environmental catalysts are essential for the realization of high achievement.

4.1. Family and Environmental Integration in International Models

Practices in different cultural contexts actively involve families and communities to maximize talent development:

- **Central Role of Parental Involvement (Japan and USA):** The Suzuki Method in Japan begins as early as age 3–4, positioning parents as active learning partners and emphasizing collaboration between families and educators. This model, by embedding music education as a cultural value within the family, fosters rapid technical and emotional development. Similarly, the Music Together program in the U.S. encourages active parental participation for children aged 0–5. Children enrolled

in these programs have shown advanced rhythm, tonal perception, and musical expression.

- **Inclusive and Equitable Approaches (Sweden and Germany):** In Sweden, publicly funded music schools (Kommunala Musikskolor) offer accessible, low-cost music education to all children, enabling early engagement regardless of socioeconomic status. Germany's Musikalische Früherziehung programs, targeting ages 4–6, include rhythm, movement, and instrumental activities and also promote parental involvement.
- **Cultural Emphasis and Discipline (South Korea):** In South Korea, music holds significant cultural value, leading families to enroll their children in private music lessons from the preschool years. Studies show that intensive family involvement contributes significantly to musical discipline, technical skill development, and performance experience (Cho, 2015).

4.2. Cultural Context, Talent Development, and Equity Issues

The cultural context in which a child is raised may serve as either an advantage or disadvantage in nurturing musical potential.

- **Absolute Pitch and Tonal Structure:** The high prevalence of absolute pitch among children in Asian countries has been linked to early and intensive music education and constant exposure to tonal musical structures. This illustrates the transformative influence of cultural exposure on musical perception and performance.
- **Creativity and Environmental Richness:** Rich cultural environments support creative musical thinking. Children exposed to diverse musical genres tend to be more innovative and flexible in rhythmic and melodic structures.
- **Environmental Inequality and Risk of Atrophy:** Research emphasizes that music education should be seen as a right rather than a privilege, enabling more equitable developmental outcomes. In low socioeconomic households, the lack of environmental support may prevent the recognition of musical aptitude. Freeman (2000), Wesseldijk et al. (2019), and Herfindahl (2023) all highlight that in the absence of supportive environments, even inherited musical potential may fail to emerge and risks atrophy. Therefore, talent identification processes must consider not only current performance but also a child's developmental history and environmental context.

This risk of potential loss reinforces that socioeconomic inequality in Turkey constitutes not only an educational challenge but also a broader risk of losing national talent capital.

4.3. Structural Gaps in Early Identification and Support in Turkey

In contrast to international models, Turkey faces several systemic challenges in the early identification and support of musically gifted children:

- **Lack of Standardized Assessment Protocols:** A significant issue lies in the absence of standardized protocols across institutions for identifying musical giftedness at an early age. Inconsistencies in assessment criteria hinder the coherence of the identification process.
- **Limited Parental Education:** The scarcity of family education programs means that many parents lack the necessary knowledge to support their child's musical development. This gap is especially critical in disadvantaged or rural communities, where musical potential may go unnoticed.

- **Insufficient Teacher Competencies:** Many music educators lack the pedagogical training required to nurture the development of gifted students, constituting a major shortfall in the system.
- **Lack of Policy Support and Research Base:** The absence of long-term, empirical studies prevents the development of evidence-based policies to support musical giftedness.

In light of these findings, there is an urgent need in Turkey to standardize identification procedures based on scientific criteria and to expand awareness and guidance programs for families, which are vital for recognizing musical giftedness at an early stage.

Conclusion

The findings of this systematic literature review reveal that musical giftedness is not merely a biological potential, but a multidimensional and dynamic construct shaped by appropriate environmental conditions, conscious family support, and systematic pedagogical approaches. The core conclusions of the study are detailed under the following main themes:

1. Theoretical Integration and Talent Transformation

The development of musical giftedness is conceptualized as the transformation of Gardner's (2011) musical intelligence potential into sustainable achievement through the environmental and interpersonal catalysts highlighted in Gagné's (2009) Differentiated Model of Giftedness and Talent (DMGT), and supported by the task commitment and motivation emphasized in Renzulli's (2021) Three-Ring Model of Giftedness. In this context, talent is not a static condition, but a performative outcome continuously constructed through environmental interactions.

2. The Critical Importance of Early Childhood (Ages 0–6)

The 0–6 age range represents a neurodevelopmental threshold in which music functions as a foundational element for emotional, cognitive, and social growth. The musical stimuli encountered during this period play a decisive role in activating innate musical potential. However, in the absence of adequate environmental stimuli and support, this potential is at risk of atrophy, confirming that the environment may function not only as a facilitator but also as a constraint on talent development.

3. Determinative Role of Family and Cultural Context

- **Family as Catalyst:** The family serves as the primary interpersonal catalyst in activating musical potential. International models such as Suzuki and Music Together illustrate how positioning parents as active learning partners transforms music education into a cultural value within the home.
- **Cultural Influence:** The culture in which a child is raised and the tonal structures they are exposed to directly affect their musical perception and performance. For instance, early and frequent exposure to tonal music in Asian cultures has been linked to higher rates of absolute pitch compared to Western countries.

4. Equity and Music Education as a Right

One of the study's key social implications is that music education should be considered a right, not a privilege, to ensure that every child can develop their potential. The lack of

environmental support in socioeconomically disadvantaged families often hinders the recognition of musical abilities. Therefore, identification processes must consider not only technical performance but also the environmental conditions to which the child has been exposed.

5. Structural Gaps and Needs in the Turkish Context

Compared to international models, findings specific to Turkey highlight critical deficiencies:

- The absence of standardized protocols for early identification of musical giftedness undermines the coherence of the process.
- The limited availability of parental education programs and the insufficient pedagogical training of music teachers regarding gifted learners increase the risk of musical talent going unnoticed.

Ultimately, for musical giftedness to reach its full potential in Turkey, it is imperative to standardize early identification practices based on scientific criteria, expand family-centered support models, and urgently implement inclusive public policies that minimize socioeconomic barriers.

Discussion

The findings of this study indicate that musical giftedness is not merely a biological inheritance but rather the result of a continuous and dynamic interaction between genetic potential and environmental enrichment. When evaluated in light of the theoretical frameworks proposed by Gardner, Gagné, and Renzulli, the multidimensional nature of talent development becomes more evident. The potential defined by Gardner's (2011) Theory of Multiple Intelligences cannot evolve into measurable achievement unless it is cultivated through environmental catalysts, as emphasized in Gagné's (2009) Differentiated Model of Giftedness and Talent (DMGT). The sustainability of this process is further reinforced by the task commitment component in Renzulli's (2021) Three-Ring Conception of Giftedness.

Early childhood (ages 0–6) is widely recognized in the literature as a highly sensitive period for musical development. The musical stimuli encountered during this phase have significant effects on neurodevelopment, directly supporting children's language acquisition, social interaction, and emotional intelligence (Natati, 2025; Jaschke et al., 2025). However, this critical window poses substantial risk in the absence of adequate environmental input. As highlighted by Herfindahl (2023) and Wesseldijk et al. (2019), the lack of sufficient environmental support may lead to the atrophy of inherited potential, underscoring the role of the environment not only as a facilitator but also as a possible constraint in talent development.

The family emerges as the most critical interpersonal catalyst in this developmental process. The findings reveal that the family's musical background, positive parental attitudes toward music, and access to musical instruments in the home significantly influence the depth of a child's connection to music. Models like the Suzuki Method, which position parents as active "learning partners," help establish music education as a cultural value within the family, thereby instilling discipline and motivation—concepts closely aligned with Renzulli's notion of task commitment. In this sense, family support is not merely a matter of providing physical resources but plays a central role in constructing the child's musical identity (Olszewski-Kubilius, 2018).

The transformative power of cultural context in shaping musical talent is most clearly illustrated in the high prevalence of absolute pitch in East Asian countries. This highlights the idea that genetic advantages can only be activated through sustained exposure to specific cultural codes and tonal structures. On the other hand, socioeconomic inequality remains one of the greatest barriers to talent development. In families with low income, a lack of environmental support often results in the failure to recognize musically gifted children. Thus, the conceptualization of music education as a right rather than a privilege (McPherson et al., 2012) reinforces the importance of inclusive public policies—such as Sweden’s low-cost municipal music schools—that ensure early access and opportunity for all.

In the context of Turkey, comparative evaluations reveal significant structural deficiencies when juxtaposed with successful international models (e.g., Japan, USA, Sweden, South Korea). The absence of standardized protocols for the early identification of musical giftedness, the inconsistency of diagnostic criteria across institutions, and the limited availability of parental guidance programs have resulted in the systematic loss of potential talent. Furthermore, deficits in the pedagogical training of music educators regarding gifted learners weaken the educational foundation of the talent development process.

Recommendations

This systematic literature review has revealed the vital role of familial and environmental catalysts in the development of musical giftedness and identified significant structural gaps in current practices in Turkey. Based on the findings and conclusions of the study, the following recommendations are proposed to facilitate the early (ages 0–6) identification, support, and transformation of musical giftedness into high-level performance:

1. Recommendations for Policymakers and Relevant Institutions

Development and Standardization of Identification Protocols: Scientific, standardized protocols for the early identification of musical giftedness should be developed at the national level. The current variability in diagnostic criteria across institutions must be addressed, and national standards should be established specifically for early childhood (0–6). These standards should be designed to assess both Gardner’s concept of musical intelligence and Renzulli’s task commitment dimension.

Implementation of Inclusive Music Education Policies: Public policies should be developed to reduce socioeconomic barriers and ensure equitable access to music education. Inclusive international models, such as Sweden’s low-cost, state-supported music schools (Kommunala Musikskolor), can help children from disadvantaged backgrounds gain early access to music and reduce the risk of their talent going unnoticed.

Support for Comprehensive and Longitudinal Research: In order to ground policy decisions in scientific evidence, funding should be allocated for large-scale, longitudinal empirical studies focused on musical giftedness in Turkey.

2. Recommendations for Families and Early Childhood Education Institutions

Expansion of Parental Education Programs: The knowledge gap among parents must be addressed through widespread educational programs. These should inform parents about how to support their children’s musical development, including emotional support,

motivational strategies, and enriching the home environment with musical stimuli—all of which reinforce Renzulli's task commitment.

Integration of International Family Participation Models: Pedagogical approaches such as the Suzuki Method and Music Together, which emphasize active family involvement, should be examined and adapted into Turkey's early childhood education curriculum. These models promote the internalization of music education as a cultural value within the family and encourage consistent practice.

Systematization of Parental Observations in Early Identification: In early childhood, parental observations are critical in the identification of musical giftedness. These observations should be systematically recorded using scientifically grounded forms to enhance reliability in the diagnostic process.

3. Recommendations for Teachers and Faculties of Education

Enhancement of Teacher Competencies: The pedagogical deficiencies of music teachers in working with gifted children should be addressed through mandatory in-service training programs. These trainings should enhance teachers' abilities to identify and support the development of musical talent.

Enrichment of School Music Programs: School-based music curricula should be expanded to include diverse repertoires and performance opportunities (e.g., concerts and workshops), fostering deeper student engagement. Teachers should focus not only on technical instruction but also on nurturing students' motivation, confidence, and creativity.

4. Recommendations for Future Research

Future studies should conduct comparative analyses of how families from varying socioeconomic backgrounds in Turkey influence the development of musical giftedness and explore the applicability of international models (e.g., Suzuki, Music Together) in the Turkish context.

Research should also focus on developing and validating early identification tools specific to musical giftedness in early childhood.

References

- Addressi, AR, & Pachet, F (2005). Experiments with a musical machine: Musical style replication in 3 to 5 year old children. *British Journal of Music Education*, 22(1), 21–46. <https://doi.org/10.1017/S0265051704005972>
- Bolat, EY (2017). Determination of preschool teachers' views on music activities. *Idil Journal of Art and Language*, 6(35), 2073–2096.
- Braun, V, & Clarke, V (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- Cho, E (2015). The influence of parental involvement on children's musical achievement in Korea. *Korean Journal of Research in Music Education*, 44(2), 123–142.
- Davidson, JW, & Borthwick, SJ (2002). Family dynamics and family scripts: A case study of musical development. *Psychology of Music*, 30(1), 121–136. <https://doi.org/10.1177/0305735602301009>
- Freeman, J (2000). Children's talent in fine art and music—England. *Roeper Review*, 22(2), 98–101. <https://doi.org/10.1080/02783190009554010>
- Gagné, F (2009). Building gifts into talents: Detailed overview of the DMGT 2.0. In B. MacFarlane & T. Stambaugh (Eds.), *Leading change in gifted education: The Festschrift of Dr. Joyce VanTassel-Baska* (pp. 61–80).
- Gardner, H (2011). *Frames of mind: The theory of multiple intelligences*. Basic Books.
- Gembris, H, & Davidson, J (2002). Environmental influences. In R. Pamcutt, & GE McPherson (Eds.), *The science and psychology of music performance: Creative strategies for teaching and learning* (pp 17–29). Oxford University Press.
- Gough, D, Thomas, J, & Oliver, S (2017). *An introduction to systematic reviews*. SAGE Publications.
- Güler, N (2015). *The implementation of music activities by preschool teachers and the identification of their training needs* (Doctoral dissertation, Anadolu University, Turkey).
- 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>
- Herfindahl, NJ (2023). Creating talent: The effect of environment on the development of musical skill. [Unpublished manuscript].
- Jaschke, AC, Papatzikis, E, & Haslbeck, FB (2025). Medical neurohumanities: Sharing insights from medicine, neuroscience, and music in paediatric care. *Frontiers in Neuroscience*, 19, 1648030. <https://doi.org/10.3389/fnins.2025.1648030>
- Karasar, N (2024). *Scientific research method* (39th ed.). Nobel Publishing.
- McPherson, GE, Davidson, JW, & Faulkner, R (2012). *Music in our lives: Rethinking musical ability, development, and identity*. Oxford University Press.
- Natati, A (2025). AMUSED—The musical activities in educational services from an integrated 0–6-year perspective.
- Olszewski-Kubilius, P (2018). The role of the family in talent development. In S. I. Pfeiffer (Ed.), *Handbook of giftedness in children: Psychoeducational theory, research, and best practices* (pp. 129–147). Springer International Publishing.
- Patton, MQ (2015). *Qualitative research & evaluation methods: Integrating theory and practice* (4th ed.). SAGE Publications.
- Puangsamlee, P (2025). The role of music activities in strengthening family bonds and early childhood care in vulnerable families. *Mahidol Music Journal*, 8(2), 157–174. Retrieved from <https://so04.tci-thaijo.org/index.php/mmj/article/view/276797>
- Renzulli, JS (2021). The three-ring conception of giftedness: A developmental model for promoting creative productivity 4. In J. A. Plucker (Ed.), *Reflections on gifted education* (pp. 55–90). Routledge.
- Ripple, RE (1961). *A controlled experiment in acceleration from the second to the fourth grade* (Doctoral dissertation). The University of Wisconsin-Madison.
- Schütz, A (2015). Making music together: A study in social relationship. In W. Straw, S. Johnson, R. Sullivan, & P. Friedlander (Eds.), *The Routledge reader on the sociology of music* (pp. 57–65). Routledge.
- Suzuki, S (1989). *Shinichi Suzuki: His speeches and essays*. Alfred Music.
- Wang, J (2025). Implementing parent-child drama and rhythmic play for early childhood development: An applied study of home-kindergarten collaborative models. *Journal of Reproducible Research*, 1, 45–58.
- Wesseldijk, LW, Mosing, MA, & Ullén, F (2019). Gene–environment interaction in expertise: The importance of childhood environment for musical achievement. *Developmental Psychology*, 55(7), 1473–1481.
- Young, S (2003). *Music with the under-fours*. Routledge