

Beyond Motivation: Enhancing Training Satisfaction and Application Confidence through Graphic Notation-Based Training for Preschool Music Teachers

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Abstract

Graphic notation has been widely recognized as an effective visual tool for supporting music perception and expression, particularly in early childhood education contexts. However, the effectiveness of graphic notation pedagogy largely depends on teachers' professional training experiences and their confidence in applying such approaches in real classroom settings. Drawing on a practice-oriented teacher training program, this study investigates how graphic notation-based training influences preschool music teachers' training satisfaction and instructional application confidence. Data were collected through post-training reflective reports and structured feedback from preschool music teachers who participated in a six-session training module. The results indicate that perceived training effectiveness was strongly associated with teachers' satisfaction with the training process and their confidence in applying graphic notation strategies, whereas initial learning motivation appeared to play a less decisive role. These findings suggest that visually grounded and practice-oriented training designs can effectively support pedagogical transfer and enhance instructional confidence in preschool music education.

Keywords

Graphic Notation; Preschool Music Education; Teacher Training; Training Satisfaction; Application Confidence

1. Introduction

Early childhood music education emphasizes experiential learning, emotional engagement, and multimodal perception. Unlike formal music education at later stages, preschool music learning relies less on symbolic notation and more on embodied movement, auditory exploration, and visual imagery. Within this

pedagogical context, instructional approaches that integrate visual, auditory, and kinesthetic modalities are particularly valuable in supporting young children's musical understanding.

Graphic notation, which uses visual symbols, shapes, colors, and images to represent musical elements such as rhythm, pitch movement, dynamics, and form, has been increasingly adopted in early childhood music education. By transforming abstract musical concepts into concrete visual representations, graphic notation supports children's perceptual engagement and facilitates intuitive musical comprehension. Previous studies have demonstrated that graphic notation can enhance children's listening skills, expressive responses, and creative participation in music activities. However, while its pedagogical value for learners has been widely discussed, the successful implementation of graphic notation in preschool classrooms depends largely on teachers' professional competence and instructional confidence.

For preschool music teachers, adopting graphic notation presents both opportunities and challenges. On the one hand, graphic notation aligns naturally with play-based learning, visual thinking, and creative exploration, all of which are central to early childhood pedagogy. On the other hand, teachers often face uncertainties regarding how to design appropriate graphic notation materials, how to integrate them into existing curriculum structures, and how to guide children's musical responses without over-directing their creative expression. These challenges highlight the critical role of teacher training in mediating the transfer of graphic notation pedagogy from theory to classroom practice.

In recent years, research on teacher education has increasingly emphasized the importance of training experiences rather than solely focusing on training content. Studies have shown that teachers' satisfaction with training programs and their confidence in applying acquired skills are significant predictors of perceived training effectiveness and instructional transfer. These findings indicate that even when teachers begin training with varying levels of motivation, positive learning experiences and practical success during training can reshape attitudes and promote sustained pedagogical adoption.

Despite growing interest in both graphic notation and teacher training effectiveness, limited research has examined graphic notation-based training specifically for preschool music teachers through the lens of training satisfaction and application confidence. Existing studies tend to focus either on instructional outcomes for children or on general teacher training models, leaving a gap in understanding how music-specific, visually grounded training approaches influence preschool teachers' professional learning experiences.

Therefore, the present study aims to explore the effectiveness of graphic notation-based training for preschool music teachers by examining the role of training satisfaction and confidence in instructional application. Rather than evaluating teachers' initial motivation levels, this study focuses on how training

design, learning experiences, and perceived applicability contribute to teachers' willingness and ability to integrate graphic notation into their everyday music teaching practice. By situating graphic notation training within a teacher education framework, this study seeks to provide insights into the design of effective professional development programs for early childhood music educators.

2. Literature Review

2.1. Graphic Notation in Early Childhood Music Education

Graphic notation refers to the use of visual symbols, shapes, colors, and images to represent musical elements and structures (Reybrouck, Verschaffel, & Lauwerier, 2009). Research has shown that children's graphical notations serve as effective representational tools for understanding musical experiences (Reybrouck et al., 2009). During music listening tasks, children can use different types of graphical symbols to express rhythms, melodies, and musical expressions, which may reflect their underlying music perception strategies (Reybrouck et al., 2009). Furthermore, children's invented notations not only provide a medium to express musical experiences but also reveal cognitive processes underlying musical problem-solving (ERIC, 2001). Studies have also indicated that the use of color-coded notation can help children better understand musical elements such as pitch and rhythm, thus supporting early music learning (Demirel, 2022).

2.2. Teacher Training Effectiveness

Empirical studies on teacher training suggest that professional development programs can significantly enhance preschool teachers' confidence and self-efficacy in music teaching (Savage, Bentley, Williams, et al., 2024). Through structured training and continuous support, teachers' confidence in implementing music and movement activities in the classroom increases substantially (Savage et al., 2024). Large-scale survey studies further indicate that teachers' confidence is closely related to their beliefs about the value of music education, highlighting the importance of targeting both beliefs and self-efficacy in training programs (Kong & Xiong, 2025). Additionally, specific training interventions have shown that structured music-based language programs can effectively improve preschool teachers' music teaching self-efficacy and classroom performance (Sim & Lee, 2024).

2.3. Research Gap

Although research on graphic notation and teacher training has progressed independently, few studies have integrated these two areas within the context of early childhood music education. Existing studies mainly focus on children's music cognition or teachers' self-efficacy, but there is a lack of empirical research

examining how graphic notation training influences preschool teachers' satisfaction and confidence in applying music pedagogy. Addressing this gap is a key objective of the present study.

3. Methodology

3.1. Training Design

This study was based on a graphic notation training program designed specifically for preschool music teachers. The program consisted of six sessions, each focusing on a different aspect of graphic notation pedagogy. The sessions included:

Table 1. Overview of the Graphic Notation-Based Training Module

Session	Focus Area	Key Training Activities	Pedagogical Purpose
1	Theoretical foundations of graphic notation	Introduction to graphic notation concepts; analysis of visual-symbolic representations of rhythm, pitch, and form	Establish conceptual understanding of graphic notation in early childhood music education
2	Graphic notation in singing activities	Mapping melodic contour and rhythm through visual symbols; designing notation for children's songs	Support vocal expression and pitch awareness through visual scaffolding
3	Graphic notation in music listening and appreciation	Using graphic notation to represent musical structure and expressive changes during listening tasks	Enhance listening focus and structural perception
4	Graphic notation in music games and movement	Designing movement-based graphic notation; linking symbols with body movement	Integrate kinesthetic learning and musical expression
5	Creating graphic notation using digital tools	Introduction to simple digital tools; teacher-created graphic notation practice	Expand teachers' design capacity and adaptability
6	Integrated instructional design and classroom application	Designing complete lesson plans incorporating graphic notation; peer discussion and reflection	Support pedagogical transfer and classroom implementation

Table 1 presents an overview of the six-session graphic notation-based training module.

The training emphasized hands-on practice, visual examples, and opportunities for teachers to design and adapt graphic notation materials for their own teaching contexts.

3.2. Participants

Participants were in-service preschool music teachers who attended a short-term professional development program. The teachers varied in teaching experience and prior familiarity with graphic notation.

3.3. Data Collection

Data were collected through post-training reflective questionnaires and written feedback. Teachers were invited to reflect on their training experiences, perceived satisfaction, confidence in applying graphic notation, and overall perceptions of training effectiveness. The data were analyzed qualitatively through thematic analysis, focusing on recurring patterns related to satisfaction, confidence, and pedagogical transfer. To enhance analytical trustworthiness, teacher reflections were analyzed through iterative thematic coding, with recurring patterns identified and refined across multiple readings.

4. Findings

4.1. Training Satisfaction

Table 2. Summarizes the major themes of training satisfaction identified from teachers' post-training reflections.

Theme	Description	Representative Teacher Responses
Conceptual Clarity	Graphic notation transformed abstract musical elements (e.g., rhythm, pitch movement, musical form) into visually accessible representations, enhancing teachers' understanding.	"The visual symbols helped me clearly see the structure of the music, which I had difficulty explaining before."
Practical Applicability	Teachers perceived the training content as immediately transferable to preschool music classrooms without requiring complex adaptation.	"I could use the graphic notation activities directly with my children after the training."
Reduced Teaching Anxiety	The visual and play-based nature of graphic notation reduced teachers' anxiety about teaching music concepts.	"I felt less pressure because I didn't have to rely on traditional notation."
Engagement and Enjoyment	Teachers reported positive emotional experiences during training, describing the sessions as engaging and enjoyable.	"The training was interesting and made learning music teaching methods enjoyable."
Professional Relevance	Teachers perceived graphic notation as well aligned with early childhood pedagogical principles such as play-based learning and visual thinking.	"This method fits well with how young children learn through images and play."

Analysis of teachers' reflective records and post-training feedback revealed high levels of training satisfaction across multiple dimensions. Teachers consistently emphasized the clarity provided by graphic notation in representing musical concepts, particularly rhythm patterns and melodic movement. In addition, the perceived practicality of the training played a central role in shaping teachers' positive learning experiences. Rather than viewing graphic notation as an abstract or theoretical approach, participants described it as a feasible and classroom-ready instructional tool. Emotional factors also emerged as significant, with many teachers reporting reduced anxiety and increased enjoyment during both the training process and subsequent classroom implementation.

4.2. Confidence in Classroom Application

Table 3. presents changes in teachers' confidence in applying graphic notation before and after the training.

Dimension	Before Training	After Training
Designing Graphic Notation Materials	Uncertain about how to visually represent musical elements	Able to independently design age-appropriate graphic notation
Guiding Children's Musical Responses	Concerned about losing control during open-ended activities	Confident in facilitating children's creative and expressive responses
Integrating into Music Activities	Limited use in isolated activities	Integrated across singing, listening, movement, and games
Explaining Musical Concepts	Relied on verbal explanation with limited effectiveness	Used visual symbols to support children's understanding
Classroom Adaptability	Hesitant to adjust teaching plans	Flexible in adapting graphic notation to different musical contexts

Comparative analysis of teachers' self-reflections before and after the training indicated a notable increase in confidence related to the application of graphic notation in preschool music teaching. Prior to the training, teachers frequently expressed uncertainty regarding material design and classroom management during creative music activities. Following the training, teachers reported greater autonomy in designing graphic notation resources and demonstrated increased confidence in facilitating children's musical exploration. Importantly, confidence growth was not limited to technical skills but also extended to pedagogical flexibility, enabling teachers to integrate graphic notation across diverse instructional contexts.

A significant outcome of the training was the enhancement of teachers' confidence in applying graphic notation strategies. Teachers reported increased confidence in designing their own graphic notation materials and adapting them to different musical activities. This confidence was particularly evident in teachers' willingness to experiment with student-created graphic notation and creative music

activities.

Teachers also expressed greater confidence in guiding children's musical listening and expression through visual cues, indicating that graphic notation functioned as a practical instructional scaffold.

4.3. Motivation as a Secondary Factor

Aspect of Training Satisfaction	Reported Influence on Confidence
Clear visual representation of music	Increased confidence in explaining musical structure
Hands-on practice during training	Greater willingness to apply methods independently
Positive emotional learning experience	Reduced fear of making instructional mistakes
Peer discussion and reflection	Strengthened belief in method effectiveness

Teachers' feedback suggested a close relationship between training satisfaction and confidence in instructional application. Satisfaction derived from clear visual representations and hands-on practice appeared to directly support teachers' sense of instructional competence. Moreover, positive emotional experiences during training reduced apprehension toward creative teaching approaches, fostering a more open and exploratory teaching mindset. These findings indicate that training satisfaction functioned as a key mediating factor in the development of application confidence.

While teachers' initial motivation toward learning graphic notation varied, motivation did not emerge as a decisive factor in perceived training effectiveness. Instead, positive training experiences and successful hands-on practice appeared to reshape teachers' attitudes toward graphic notation over time. This finding supports the view that motivation may develop as a result of satisfaction and confidence gained during training.

Taken together, these findings indicate that training satisfaction functioned as a key mediating factor linking training design and teachers' confidence in instructional application.

5. Discussion and Implications

5.1. Interpretation of Key Findings

This study examined the effectiveness of graphic notation-based training for preschool music teachers by focusing on training satisfaction, application confidence, and initial learning motivation. The findings indicate that perceived training effectiveness was more strongly associated with teachers' satisfaction with the training process and their confidence in instructional application than with their initial motivation levels. This suggests that, within professional development contexts, what teachers experience during training may be more influential than their pre-existing attitudes toward learning. One key finding is that training satisfaction functioned as a mediating factor between training design and teachers' confidence in applying graphic notation in classroom practice. Teachers reported

increased instructional confidence when training activities provided clear visual representations of musical concepts and opportunities for hands-on practice. These experiences appeared to reduce instructional uncertainty and support teachers' sense of competence, particularly in guiding children's musical responses through visual and exploratory approaches. In contrast, teachers' initial motivation toward learning graphic notation did not emerge as a decisive predictor of perceived training effectiveness. Although motivation levels varied at the outset of the training, positive learning experiences and successful practical application during the training process contributed to shifts in teachers' attitudes over time. This finding supports the view that motivation in professional learning contexts may develop as a result of satisfaction and confidence gained through meaningful engagement, rather than functioning solely as a prerequisite for effective learning. Taken together, these findings highlight the importance of experience-based learning processes in teacher training.

In the context of preschool music education, visually grounded and practice-oriented training designs appear to play a crucial role in fostering teachers' instructional confidence and supporting the transfer of pedagogical approaches from training settings to real classroom contexts. This interpretation provides a foundation for the design implications discussed in the following section.

5.2. Design Implications for Preschool Music Teacher Training

Based on the findings of this study, several design implications can be identified for professional development programs targeting preschool music teachers. First, training programs should prioritize visually grounded instructional designs that help teachers translate abstract musical concepts into concrete and accessible representations. Graphic notation, when used as a core pedagogical framework rather than a supplementary tool, can support teachers' instructional decision-making and reduce uncertainty in classroom practice.

Second, professional development should emphasize practice-oriented learning experiences. Hands-on activities such as material design, classroom simulation, and peer-based reflection were shown to enhance teachers' confidence in applying graphic notation independently. These experiential components appear to be particularly effective in facilitating pedagogical transfer from training contexts to real teaching situations.

Third, training programs should attend to teachers' emotional learning experiences. Positive and supportive training environments can reduce anxiety related to creative teaching approaches and foster a sense of instructional self-efficacy. Rather than relying solely on teachers' initial motivation, well-designed training experiences can cultivate confidence and willingness to adopt innovative pedagogies over time.

Taken together, these design principles suggest that effective preschool music

teacher training should focus not only on content delivery but also on how teachers experience learning and apply new strategies. Such approaches may contribute to more sustainable pedagogical change in early childhood music education.

6. Conclusion

This study explored the effectiveness of graphic notation-based training for preschool music teachers, with a focus on training satisfaction and confidence in instructional application. The findings indicate that perceived training effectiveness is more closely associated with teachers' satisfaction and confidence than with their initial learning motivation. Graphic notation training that emphasizes visual clarity, practical relevance, and hands-on application can effectively support pedagogical transfer in preschool music education.

These findings offer valuable implications for the design of future music teacher training programs and contribute to broader discussions on effective teacher professional development in early childhood education.

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