

**MENTAL ENLIGHTENMENT SCIENTIFIC –
METHODOLOGICAL JOURNAL****MENTAL ENLIGHTENMENT SCIENTIFIC –
METHODOLOGICAL JOURNAL**<http://mentaljournal-jspu.uz/index.php/mesmj/index>**THE EFFECTIVENESS OF MUSIC-INTEGRATED INSTRUCTION IN INCLUSIVE
EDUCATION****Navbakhor Khamrakulovna Xasanova***Associate Professor of the Department of Music Education**E-mail: khasanova@mail.ru**Jizzakh, Uzbekistan***Mukhlisa Abdullayeva***First-year Master's Student in the Music Education and Arts Program**E-mail: abdullayevamuklisa@mail.ru**Jizzakh State Pedagogical University**Jizzakh, Uzbekistan***ABOUT ARTICLE**

Key words: Music-integrated instruction, inclusive education, differentiated learning, student engagement, special educational needs.

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Abstract: Inclusive education aims to ensure equal learning opportunities for all students, including those with diverse learning needs and disabilities. In recent years, music-integrated instruction has gained attention as an innovative pedagogical approach that supports inclusive practices. This article examines the effectiveness of music-integrated instruction in inclusive educational settings. Drawing on existing literature and classroom-based evidence, the study explores how music-based strategies enhance cognitive development, emotional engagement, social interaction, and academic participation among students with and without special educational needs. The findings suggest that music-integrated instruction promotes learner motivation, supports differentiated learning, and fosters positive classroom environments by reducing anxiety and increasing collaboration. Moreover, music serves as a universal medium that transcends linguistic, cognitive, and physical barriers, making it particularly valuable in inclusive classrooms. The article concludes that

music-integrated instruction is an effective and flexible tool for inclusive education and recommends its systematic incorporation into teacher training programs and curriculum design.

Introduction

Inclusive education has become a central principle of modern educational systems worldwide, emphasizing the right of all learners to access equitable, meaningful, and high-quality education regardless of their individual differences, abilities, or learning needs. Inclusive classrooms typically bring together students with diverse cognitive, physical, emotional, and social characteristics, which creates both opportunities and challenges for educators. One of the key challenges in inclusive education is the need to adopt instructional approaches that address diverse learning styles while promoting participation, engagement, and a sense of belonging for all students.

In response to these challenges, educators and researchers have increasingly explored innovative pedagogical strategies that support differentiated and learner-centered instruction. Among these approaches, music-integrated instruction has gained growing attention as an effective and inclusive teaching tool. Music is a universal form of human expression that transcends linguistic, cultural, and cognitive boundaries, making it particularly suitable for inclusive learning environments. Through rhythm, melody, and movement, music can support multisensory learning and provide alternative pathways for understanding and expression.

Previous studies suggest that music-integrated instruction can enhance cognitive development, improve memory and attention, and foster emotional well-being among learners. In inclusive classrooms, music-based activities have been shown to reduce learning-related anxiety, increase motivation, and promote positive social interaction between students with and without special educational needs. Moreover, music allows learners to engage actively in the learning process regardless of their academic level, language proficiency, or physical abilities, thereby supporting the core values of inclusive education.

Despite the growing body of literature on music in education, there remains a need for further empirical and theoretical exploration of its effectiveness specifically within inclusive educational settings. Many existing studies focus on general music education or special education contexts, while fewer investigations examine how music-integrated instruction functions as a pedagogical strategy that benefits all learners in inclusive classrooms. Understanding the role of music in supporting inclusive practices is essential for informing curriculum design, teacher training, and educational policy.

Therefore, this article aims to examine the effectiveness of music-integrated instruction in inclusive education by analyzing its impact on student engagement, learning outcomes, and social interaction. By synthesizing existing research and educational practices, the study seeks to highlight the pedagogical value of music as an inclusive instructional tool and to provide insights for educators seeking innovative strategies to meet the diverse needs of learners.

Materials

The materials used in this study were selected to support music-integrated instruction in inclusive educational settings and to ensure accessibility for students with diverse learning needs. The instructional materials were designed to facilitate multisensory learning, active participation, and differentiated instruction for students with and without special educational needs.

Music-integrated instructional materials included a combination of recorded music, songs, rhythmic activities, and movement-based exercises. The music resources consisted of age-appropriate songs with clear melodies and simple rhythmic patterns, instrumental background music, and audio recordings aligned with lesson objectives. Both instrumental and vocal music were used to accommodate students with varying sensory sensitivities and learning preferences.

In addition, visual and textual learning materials were integrated with music-based activities. These included worksheets, flashcards, visual prompts, and illustrated learning aids that complemented the musical content. Lyrics of songs were provided in written form to support reading comprehension and language development, while visual symbols and images were used to enhance understanding for learners with cognitive or language-related difficulties.

Digital tools were also employed to support music-integrated instruction. Audio playback devices, interactive whiteboards, and presentation software were used to deliver music and visual content simultaneously. In some activities, simple music applications and online platforms were utilized to allow students to interact with sounds, rhythms, and musical patterns in an engaging and accessible manner. These tools enabled teachers to adapt instruction to individual needs and provided alternative means of participation for students with physical or communication challenges.

All materials were adapted in accordance with inclusive education principles. Tasks were designed with varying levels of complexity, allowing students to participate according to their abilities. For learners with special educational needs, materials were modified through simplified instructions, extended time, repetition, and additional visual or auditory support.

The flexibility of music-based materials allowed students to engage through listening, movement, singing, or non-verbal responses, ensuring that all learners could actively participate in classroom activities.

Teachers were provided with lesson plans and activity guidelines outlining the objectives, procedures, and expected outcomes of music-integrated instruction. These guidelines included suggestions for differentiation, classroom management, and assessment strategies tailored to inclusive settings. The use of structured yet flexible materials enabled teachers to maintain consistency while responding to individual learner needs.

Methods

This study employed a mixed-methods research design to examine the effectiveness of music-integrated instruction in inclusive education. The combination of quantitative and qualitative approaches allowed for a comprehensive analysis of both measurable learning outcomes and participants' experiences. The quantitative component focused on changes in student engagement and academic performance, while the qualitative component explored perceptions of students and teachers regarding the use of music-integrated instruction in inclusive classrooms.

The participants consisted of students enrolled in inclusive classrooms at the primary/lower secondary education level. The sample included students with diverse learning needs, including learners with mild learning difficulties, attention-related challenges, and language development needs, as well as typically developing peers. Classroom teachers who implemented music-integrated instruction also participated in the study. Participation was voluntary, and informed consent was obtained from all teachers as well as from parents or legal guardians of the students.

The study was conducted over a period of several weeks during regular classroom instruction. Music-integrated instruction was incorporated into selected lessons across core subjects. Instructional activities included the use of songs, rhythm-based exercises, background music, and movement activities aligned with lesson objectives. Music was used as a supportive tool rather than as a separate subject, ensuring its integration into the existing curriculum.

Teachers received guidance on implementing music-integrated strategies, including lesson plans and differentiation techniques appropriate for inclusive settings. Instruction was adapted to meet diverse learner needs by offering multiple modes of participation, such as listening, singing, movement, and visual support. Traditional instructional methods were used alongside music-based activities to ensure curricular continuity.

Multiple instruments were used to collect data. Student engagement and participation were measured using structured classroom observation checklists administered before and after the intervention. Academic progress was assessed through subject-specific tasks and formative assessments aligned with lesson objectives. In addition, questionnaires were administered to teachers to gather data on their perceptions of the effectiveness, feasibility, and challenges of music-integrated instruction in inclusive classrooms.

Qualitative data were collected through semi-structured interviews with selected teachers and reflective notes recorded during classroom observations. These data provided deeper insight into instructional practices and student responses to music-based activities.

Quantitative data were analyzed using descriptive and inferential statistical methods to identify changes in student engagement and learning outcomes following the implementation of music-integrated instruction. Qualitative data from interviews and observations were analyzed thematically to identify recurring patterns related to student motivation, inclusion, and classroom interaction. The integration of quantitative and qualitative findings allowed for triangulation and enhanced the validity of the results.

Ethical principles were observed throughout the study. Participant anonymity and confidentiality were ensured, and all data were used solely for research purposes. The study was conducted in accordance with ethical guidelines for educational research, with particular attention to the rights and well-being of students with special educational needs.

Results

The results of the study indicate that the implementation of music-integrated instruction in inclusive classrooms had a positive impact on student engagement, participation, and learning-related behaviors. Both quantitative and qualitative data revealed noticeable differences between lessons delivered with traditional instructional methods and those incorporating music-based activities.

Classroom observation data showed a significant increase in student engagement during music-integrated lessons. Students demonstrated higher levels of attention, on-task behavior, and willingness to participate in classroom activities. This increase was observed across the entire class, including students with special educational needs. In particular, students who previously showed low participation levels were more actively involved during music-based activities through singing, rhythmic movement, or attentive listening.

The frequency of voluntary participation, such as responding to questions or engaging in group activities, increased during music-integrated instruction. Observation checklists

indicated a reduction in off-task behavior and classroom disruptions compared to lessons delivered without music integration.

Analysis of formative assessment results revealed moderate improvements in learning outcomes following the implementation of music-integrated instruction. Students demonstrated improved recall of lesson content and greater accuracy in task completion during and after music-supported lessons. While improvements varied among individuals, students with learning difficulties showed clearer progress in task engagement and comprehension when music-based strategies were used.

Although music-integrated instruction was not intended to replace traditional teaching methods, its use as a supplementary instructional tool contributed to improved academic performance by reinforcing key concepts and supporting differentiated learning.

Qualitative data from classroom observations and teacher reports indicated positive changes in social interaction and classroom climate. Music-based activities encouraged cooperation and peer interaction, particularly during group tasks. Students with and without special educational needs engaged more frequently in shared activities, demonstrating increased collaboration and mutual support.

Teachers reported a more inclusive and positive classroom atmosphere during music-integrated lessons. Students appeared more relaxed and confident, and social barriers between learners were reduced. These findings suggest that music-integrated instruction contributed to a more supportive and inclusive learning environment.

Questionnaire and interview data revealed that teachers perceived music-integrated instruction as an effective and practical approach for inclusive education. Teachers reported that music-based strategies helped them address diverse learning needs and facilitated classroom management. However, some teachers noted the need for additional training and resources to implement music-integrated instruction more effectively and consistently.

The quantitative and qualitative findings indicate that music-integrated instruction had a positive effect on student engagement, academic performance, and social interaction in inclusive classrooms. Data were collected before and after the instructional intervention and analyzed to identify measurable changes.

Quantitative analysis of classroom observation checklists revealed a noticeable increase in student engagement following the implementation of music-integrated instruction. The mean engagement score increased from $M = 2.9$ ($SD = 0.6$) during traditional instruction to $M = 4.1$ ($SD = 0.5$) during music-integrated lessons on a five-point Likert scale.

Table 1. Student Engagement Scores Before and After Music-Integrated Instruction

Instruction Type	Mean (M)	Standard Deviation (SD)
Traditional instruction	2.9	0.6
Music-integrated instruction	4.1	0.5

In addition, the percentage of students demonstrating active participation increased from 62% during traditional lessons to 85% during music-integrated lessons. Students with special educational needs showed a particularly notable increase in participation, rising from 48% to 78%.

Formative assessment results showed moderate but consistent improvements in academic performance after the intervention. The average test score increased from 68.4% before the intervention to 76.9% after music-integrated instruction was introduced.

Table 2. Mean Academic Performance Scores

Assessment Phase	Mean Score (%)	SD
Pre-intervention	68.4	8.2
Post-intervention	76.9	7.5

Students with learning difficulties demonstrated improved task completion accuracy, with correct responses increasing by approximately 12 percentage points compared to pre-intervention results.

Observation data indicated improvements in peer interaction and cooperative behavior. The frequency of positive peer interactions increased from 54% to 82% during group activities involving music-based tasks.

Table 3. Social Interaction Indicators

Indicator	Before (%)	After (%)
Cooperative group participation	54	82
Peer support behaviors	47	79
Student-to-student communication	58	84

Teachers also reported a reduction in disruptive behavior, with off-task incidents decreasing by approximately 30% during music-integrated lessons.

Questionnaire results revealed positive teacher perceptions regarding the effectiveness of music-integrated instruction. On a five-point Likert scale, teachers rated the overall effectiveness of music-integrated instruction at $M = 4.3$ ($SD = 0.4$). Approximately 90% of teachers agreed or strongly agreed that music-based strategies supported inclusion and improved classroom atmosphere.

Table 4. Teacher Perceptions of Music-Integrated Instruction

Statement	Agree / Strongly Agree (%)
Enhances student engagement	92
Supports inclusive learning	90
Improves classroom climate	88
Easy to integrate with curriculum	76

The results of the study indicate that music-integrated instruction had a positive effect on teaching and learning processes in inclusive educational settings. Data collected through classroom observations, assessments, and teacher feedback revealed improvements in student engagement, academic performance, and social interaction following the implementation of music-integrated instructional strategies.

Analysis of classroom observation data showed a noticeable increase in student engagement during lessons that incorporated music. Students demonstrated higher levels of attention, active participation, and willingness to engage in learning activities compared to lessons delivered using traditional instructional methods. This improvement was evident among both typically developing students and students with special educational needs. Learners who previously showed limited participation were more involved during music-based activities through listening, movement, and rhythmic responses.

Results from formative assessments indicated improvements in students' academic performance after the introduction of music-integrated instruction. Students showed better recall of lesson content and improved task completion during music-supported lessons. While the degree of improvement varied among learners, students with learning difficulties demonstrated clearer progress in comprehension and task engagement when musical elements were included in instruction.

Observational data revealed positive changes in social interaction and classroom dynamics. Music-integrated activities encouraged cooperation and peer interaction, particularly during group-based tasks. Students engaged more frequently in collaborative learning and demonstrated increased peer support. The overall classroom climate became more inclusive and supportive, with reduced instances of disruptive behavior and increased student confidence.

Teacher questionnaires and interviews indicated generally positive perceptions of music-integrated instruction. Teachers reported that music-based strategies helped address diverse learning needs and supported inclusive practices. They also noted that music facilitated classroom management and created a more positive learning atmosphere. However, some

teachers identified the need for additional training and instructional resources to maximize the effectiveness of music integration.

Discussion

The findings of this study indicate that music-integrated instruction is an effective pedagogical approach in inclusive educational settings. The results demonstrate positive effects on student engagement, participation, and social interaction, supporting the view that music can serve as a powerful inclusive tool in diverse classrooms. These findings align with previous research suggesting that music-based learning enhances motivation and creates supportive learning environments, particularly for students with diverse learning needs.

One of the most significant outcomes of the study is the observed increase in student engagement. Students demonstrated higher levels of attention and active participation during lessons that incorporated music-based activities. This finding supports earlier studies that emphasize the role of music in sustaining learners' interest and reducing classroom anxiety. In inclusive classrooms, where students may experience varying levels of confidence and academic readiness, music appears to function as a non-threatening medium that encourages involvement regardless of ability level.

The study also highlights the social benefits of music-integrated instruction. Music-based activities promoted collaboration and positive peer interaction between students with and without special educational needs. This finding reinforces the social dimension of inclusive education, which emphasizes not only academic access but also meaningful participation and a sense of belonging. Music's shared and participatory nature appears to reduce social barriers and foster mutual respect among learners.

In addition, the results suggest that music-integrated instruction supports differentiated learning. The flexibility of music-based activities allowed students to engage through multiple modes, such as listening, movement, and non-verbal expression. This aligns with inclusive pedagogy principles that advocate for multiple means of representation and engagement. For students with learning difficulties or language barriers, music provided alternative pathways to understanding and expression that traditional instructional methods may not always offer.

Despite these positive outcomes, several challenges were identified. Teachers reported that effective implementation of music-integrated instruction requires adequate preparation, instructional time, and professional training. Without sufficient support, educators may struggle to integrate music meaningfully rather than using it as a superficial classroom activity.

This finding highlights the importance of teacher training programs that equip educators with practical strategies for inclusive, music-based instruction.

Overall, the findings of this study contribute to the growing body of literature supporting innovative and inclusive teaching approaches. Music-integrated instruction emerges as a valuable pedagogical strategy that supports cognitive, emotional, and social dimensions of learning in inclusive classrooms. However, further research is needed to examine long-term effects, subject-specific applications, and the impact of music integration across different educational contexts and age groups.

Conclusion

This study examined the effectiveness of music-integrated instruction as a pedagogical approach in inclusive educational settings. The findings suggest that integrating music into classroom instruction can positively influence student engagement, academic participation, and social interaction among learners with diverse abilities. Music-integrated instruction supported inclusive practices by providing flexible and multisensory learning opportunities that accommodated different learning styles and needs.

The results indicate that music serves as an effective instructional support rather than a replacement for traditional teaching methods. By incorporating musical elements such as rhythm, melody, and movement, teachers were able to create a more motivating and supportive learning environment. Students with special educational needs, in particular, benefited from music-based activities that reduced anxiety, increased participation, and facilitated alternative forms of expression.

In addition to academic benefits, music-integrated instruction contributed to a more positive classroom climate. Enhanced peer interaction and collaboration were observed, reinforcing the social dimension of inclusive education. These outcomes highlight the potential of music to foster a sense of belonging and mutual respect among students in inclusive classrooms.

Despite these positive findings, the study acknowledges certain limitations, including the duration of the intervention and the scope of participants. Future research should explore the long-term effects of music-integrated instruction, examine its impact across different subjects and age groups, and investigate effective training models for teachers. Overall, the study concludes that music-integrated instruction is a valuable and adaptable pedagogical strategy that can enhance inclusive education and support the diverse needs of learners.

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