

# INCLUSIVE MUSIC EDUCATION: STRATEGIES AND CHALLENGES IN TEACHING MUSIC LESSONS WITH A STUDENT WITH AUTISM SPECTRUM DISORDER PRESENT IN THE CLASSROOM

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This study investigated musical methods of teaching and learning, forms of teaching, adaptations (school, classroom and lesson adaptations), and challenges faced by elementary school teachers when instructing music lessons in the presence of a student with autism spectrum disorder (ASD) in a mainstream classroom. Employing a mixed methods design, the research utilized a questionnaire and semi-structured interviews with a focus on eight key research questions, exploring teacher challenges, the impact of training and experience, collaboration with support networks, and teacher competencies in addressing the needs of students with ASD in music lessons. The findings underscore the need for specialized training and resources to both enhance inclusive education and effectively engage students with ASD in music lessons in the mainstream elementary classroom.

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**Ključne besede:**  
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# INKLUZIVEN POUK GLASBENE UMETNOSTI: STRATEGIJE IN IZZIVI POUČEVANJA GLASBENE UMETNOSTI, KADAR JE V RAZREDU PRISOTEN UČENEC Z MOTNJO AVTISTIČNEGA SPEKTRA

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Ta raziskava preiskuje glasbene metode poučevanja in učenja, oblike pouka, prilagoditve (šole, razreda in pouka glasbene umetnosti) in izzive, s katerimi se soočajo učitelji pri pouku glasbene umetnosti v programu s prilagojenim izvajanjem in dodatno strokovno pomočjo, kadar je v razredu prisoten učenec z motnjami avtističnega spektra. Raziskava je osnovana na podlagi vprašalnika in polstrukturiranih intervjujev s poudarkom na osmih ključnih raziskovalnih vprašanjih. Slednja raziskujejo izzive učiteljev, vpliv izobrazbe in izkušenj učiteljev na izvedbo pouka glasbene umetnosti, sodelovanje učitelja s podpornimi mrežami in kompetence učiteljev pri obravnavi potreb učencev z motnjami avtističnega spektra pri pouku glasbene umetnosti. Ugotovitve poudarjajo potrebo po specializiranem dodatnem pedagoškem usposabljanju učiteljev za izboljšanje inkluzivnega izobraževanja in učinkovito vključevanje učencev z motnjami avtističnega spektra v pouk glasbene umetnosti v večinskem osnovnošolskem izobraževanju.



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## 1 Introduction

Globally, the prevalence of autism as a neurodevelopmental disorder is increasing (Habe & Sicherl Kafol, 2020), leading to an increased demand for qualified professionals and effective teaching methods and strategies for students with autism spectrum disorder (ASD). In Slovenia, ASD is recognized as the most rapidly increasing developmental disorder (Ministry of Health, 2009). It is a lifelong condition that affects how individuals perceive and interact with the world around them (Attwood, 2007). Students with ASD are often isolated due to their unique communication (both verbal and nonverbal), behavioural challenges, and specific emotional and social needs (Draper, 2020; Obrul, 2016). Despite having the same diagnosis, two students with ASD may exhibit completely different characteristics and behaviors (Stone & Foy DiGeronimo, 2006). Nevertheless, it is crucial for students with ASD to be accepted and feel safe and free in society (Kodrič, 2006). This necessitates an education process that emphasizes the collaboration of parents, teachers, and other professionals working with the student (Chang, 2017; Križnar, 2019; Sobol, 2017; Udaze, 2016), a conclusion also supported by a national evaluation study (Vršnik Perše et al., 2016).

The Placement of Children with Special Needs Act (ZUOPP-1, 2011) establishes the educational framework for elementary school children with special needs in Slovenia. It sets forth the goals and principles of education for these children and highlights the importance of involving parents in the placement process, providing necessary support, and implementing an individualized approach to education. This ensures a comprehensive and inclusive education system for children with special needs in Slovenia. Children with ASD who can meet the standards of the elementary school curriculum are directed to a program with adapted implementation and additional professional assistance (Ministry of Education, 2021). In such a program, the student receives adjustments that should not hinder other students but should be helpful enough to enable their participation alongside their peers. Also, they receive additional professional assistance to help overcome deficits, obstacles, or impairments, including counselling or educational support.

Successful inclusion requires the adaptation of teaching methods and approaches to cater to the individual needs of students. This calls for the comprehensive training of the educators involved, empowering them to recognize and apply techniques that

enable students to reach their maximum potential (Globačnik, 2020; Kocjančič, 2017; Lindsay, 2013). This approach emphasizes the importance of specialized educator training as a key factor in fostering an inclusive educational environment that promotes the growth and development of all students, especially those with special needs, allowing them to flourish and utilize their abilities to the fullest extent.

In the field of music education, a variety of teaching and learning methods are employed in addition to general instructional approaches. These specific methods and diverse methodological systems play a vital role in enhancing the effectiveness and comprehensiveness of music education. By incorporating these specialized techniques, educators are able to cater to the unique needs and preferences of their students, fostering a more engaging and dynamic learning environment. By establishing effective musical methods of teaching and learning, forms of teaching, adaptations, and work planning, a teacher can influence the actual inclusion of students with ASD in educational and social environments (Johnson & LaGasse, 2021; Licardo & Schmidt, 2014). Furthermore, music can offer individuals with learning difficulties opportunities for creative, psychological, and social development (Wilson & MacDonald, 2019).

When a student with ASD is present in the classroom, it becomes essential to make specific adaptations to the school, classroom, and music lessons. These adaptations are necessary to ensure that students with ASD can thrive and make notable progress in their music education. With the support of professionals, clear objectives, and appropriate adjustments, students with ASD can make significant advancements, capitalizing on their unique strengths (Habe & Sicherl Kafol, 2020). By providing targeted assistance that caters to their specific needs, educators play a crucial role in guiding these students towards meaningful growth and development. It is crucial to adopt an individualized approach that recognizes the distinctive needs and characteristics of each child, going beyond the diagnosis of autism alone (Dempsey & Foreman, 2010; Drossinou-Korea & Fragkouli, 2016; Jurišić, 2006). Through this personalized approach, educators can create an inclusive and supportive learning environment that maximizes the potential of students with ASD.

For this study, eight pivotal research questions were developed to explore the dynamics of music lessons in a classroom that includes a student with ASD: (1) What challenges do teachers face in mainstream elementary school music lessons when a

student with ASD is present in the classroom? (2) How do the specific needs of a student with ASD influence the teacher's planning and delivery of music lessons? (3) How does the teacher's training and experience influence the use of musical methods of teaching and learning? (4) How does the teacher's training and experience affect the use of forms of teaching? (5) How does the teacher collaborate with the ASD student, their personal assistant, the school counselling service, and the student's parents? (6) What additional professional training do teachers receive, and to what extent? (7) Do teachers feel competent to recognize the characteristics of ASD? And (8) do teachers feel competent to work with students with ASD in music lessons?

## 2 Method

The aim of the study was to investigate the particularities of musical methods of teaching and learning, forms of teaching, and music lesson adaptations that teachers use when a student with ASD is present in the classroom. The teachers first completed a questionnaire and then participated individually in semi-structured interviews. To participate in the study, teachers were asked to select a student with ASD whom they had taught music to in the last 3 school years.

### 2.1 Participants

**Table 1: Data From Teachers Participating in the Survey**

	Musical education	Pedagogical education	Teaching seniority	Teaching grade
Teacher 1	a) None	d) 2-year program of the Pedagogical Academy*	d) 37 years	a) First grade (7-year-old ASD student)
Teacher 2	b) Primary music school	c) Faculty of Education (Elementary Education)	a) 8 years	b) Second grade (7-year-old ASD student)
Teacher 3	a) None	c) Faculty of Education (Elementary Education)	a) 7 years	d) Fourth grade (9-year-old ASD student)

\* This programme no longer exists.

The sample consisted of mainstream elementary school teachers who teach music lessons in elementary education classrooms. To participate in the study, the teachers had to: a) complete all questions of the questionnaire, b) answer all questions in an individual interview, c) have a relevant qualification as an elementary school teacher,

d) have at least 5 years of experience as a teacher, and e) facilitate music class with a student with ASD aged 6–10 years in a neurotypical classroom. These criteria significantly limited the number of potential teachers who could participate in the study. We therefore focused on three cases in which the teachers met all the requirements.

**2.2 Research instruments**

The survey was conducted in two phases. First, the teachers completed a questionnaire consisting of seven A4 pages containing 10 questions and 63 sub-questions. After processing the collected data, the researchers contacted the teachers to arrange the interviews, which were conducted via Google Meet, where the interviews were also recorded to facilitate further data processing.

The questionnaire consisted of two parts:

- Part I consisted of closed-ended questions related to the independent variables listed in Table 1;
- Part II consisted of closed questions on a 5-point Likert scale with questions on the dependent variables listed in Table 2.

**Table 2: Presentation of the Independent Variables Used in the Survey**

Independent variables			
Musical education	Pedagogical education	Teaching seniority	Teaching grade
a) None b) Lower primary c) Higher primary d) Secondary / Conservatory e) Academy	a) Academy of Music b) Faculty of Education (Elementary Education) c) Faculty of Education (Music Education) d) Other	a) up to 10 years b) 11–20 years c) 21–30 years d) 31 years or more	a) First b) Second c) Third d) Fourth e) Fifth

**Table 3: Presentation of the Dependent Variables Used in the Survey**

Dependent variables		
Musical methods of teaching and learning	Forms of teaching	ASD characteristics
– <i>Methods of execution:</i> Demonstration of the rhythmic dictation (V1),	a) Frontal/Joint (V48) b) Group (V49)	Reduced ability to socialize (V25),

Dependent variables		
<p>Imitation of the rhythmic dictation (V2), Vocal demonstration (V3), Singing with accompaniment (V4), Singing with imitation (V5), Singing with solfege syllables (V6), Demonstration of playing on children's musical instruments (V7), Imitation of playing on children's musical instruments (V8), Demonstration of movements to music (V9), Imitation of movements to music (V10), Reading musical notation (V11), Dictation (V12), Musical notation (V13)</p> <p>– <i>Methods of listening:</i> Experience-oriented listening (V14), Experience-analytical listening (V15)</p> <p>– <i>Methods of creation:</i> Creative singing (V16), Creative playing of instruments (V17), Rhythmic/Melodic complementation (V18), Rhythmic/Melodic questions and answers (V19), Inventions (V20)</p> <p>– <i>Making movement to music</i> (V21)</p> <p>– <i>Drawing to music</i> (V22)</p> <p>– <i>Creating writing to music</i> (V23)</p> <p>– <i>Didactic games</i> (V24)</p>	<p>c) Working in pairs (V50)</p> <p>d) Individual work (V51)</p>	<p>Reduced ability to communicate interests or emotions (V26), Impaired verbal communication (V27), Irregularities in eye contact (V28), Lack of understanding of body language (V29), Lack of understanding facial expressions and gestures (V30), Difficulty adapting behaviour to different situations (V31), Difficulty with tasks that require imagination (V32), Difficulty making friends (V33), Lack of interest in peers (V34), Repetitive movements or tics (V35), Sorting things (V36), Throwing things (V37), Echolalia (V38), Idiosyncratic expressions (V39), Insistence on routine and inflexibility (V40), Fear of change (V41), Strong attachment to objects (V42), Limited interests (V43), Hypersensitivity (V44), Hyposensitivity (V45), Distinctive reaction to a particular sound (V46), Motor restlessness (V47)</p>

The semi-structured interview contained open questions based on comparable studies (Rogelj & Štule, 2020). These questions were formulated neutrally and complied with ethical standards for interviews, including content pertaining to obtaining consent, ensuring voluntary participation, maintaining anonymity, and protecting personal information (Mohd Arifin, 2018).

**2.3 Data analysis**

Data collection took place from May to July 2023. Using a deductive approach to content analysis based on predetermined themes, the data were methodically processed in phases as described by Elo and Kyngäs (2008). The interview analysis began with the transcription of the interviews, followed by a coding process. Subsequently, the findings from the interviews were interpreted in a meaningful way and related to the findings from the questionnaires.

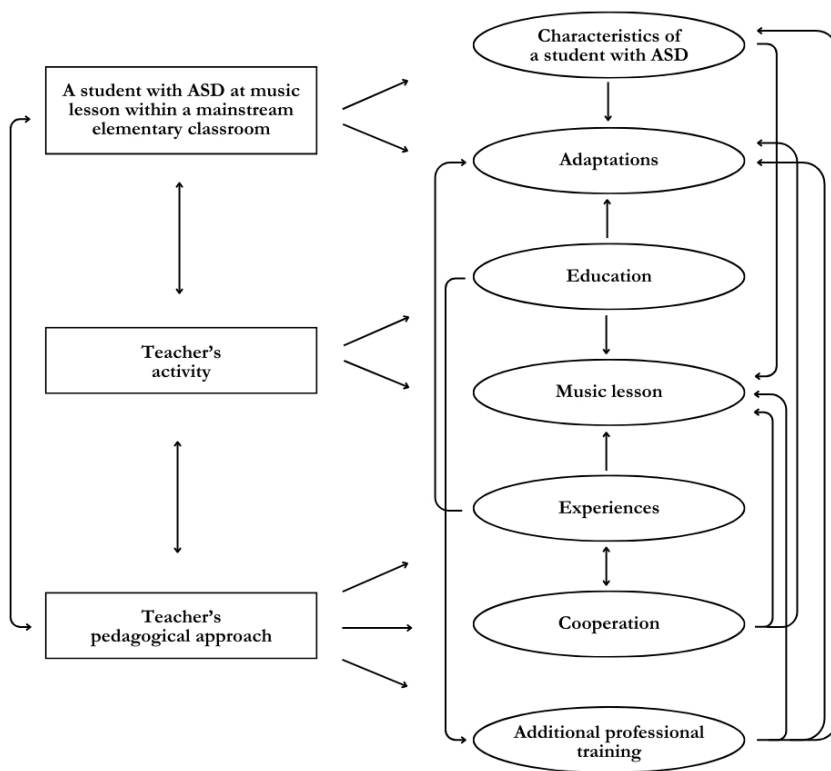
**3 Results**

Three main research themes with seven subthemes were identified, as presented in Table 4. Also, see Figure 1.

**Table 4: Identification of Themes, Subthemes, and Codes**

Theme	Subtheme	Code
A student with ASD at music lessons within a mainstream elementary classroom	Characteristics of a student with ASD	Verbal communication Social interactions Motivation Behaviour Sensory peculiarities Skills and knowledge
	Adaptations	School adaptations Classroom adaptations Music lesson adaptations
Teacher's activity	Education	Musical education Pedagogical education
	Music lesson	Music lesson preparation Musical methods of teaching and learning Forms of teaching
Teacher's pedagogical approach	Experiences	Teaching students with ASD Teaching music lessons
	Cooperation	Student's personal assistant School counselling services Student's parents
	Additional professional training	Seminars Trainings





**Figure 1: Conceptual Grid of Research Topics and Subtopics.**

Source: own

### **3.1 A Student With ASD at Music Lessons Within a Mainstream Elementary Classroom**

In elementary music lessons, teachers often observe distinct differences between students with ASD and their neurotypical peers. These differences manifest through various behavioural markers that are characteristic of ASD, such as motor restlessness (V47), atypical responses to musical sounds or rhythms (V46), and irregularities in eye contact (V28). These behaviors reflect the sensory processing and communication differences associated with ASD, and due to the sensory nature of music, they may be particularly noticeable in a musical setting. One significant

challenge for students with ASD is social engagement (V25), which is often hindered by communication difficulties (V27). They may struggle to interpret nonverbal cues, such as facial expressions (V30) and body language (V29), and struggle to express and communicate their emotions effectively (V26). Despite these challenges, students with ASD have a strong desire to be accepted and participate alongside their neurotypical peers, not just in music but in all aspects of life (V25, V34). Conversely, neurotypical students may also face challenges when interacting with peers with ASD in music lessons. Initially, they may find it difficult to understand and connect with students who exhibit ASD characteristics. Therefore, neurotypical students also require time and guidance to fully comprehend and embrace the differences presented by their ASD peers.

The dynamics within a music class highlight the importance of inclusive teaching practices that cater to the diverse needs of all students. For students with ASD, music lessons provide both challenges and opportunities for social interaction and sensory engagement. Teachers play a crucial role in creating an environment where all students, regardless of their neurotypical or ASD status, can learn, interact, and grow together. Teachers also find that structuring music lessons to meet the needs of students with ASD can be beneficial for all. Activities that are clear, predictable, and sensory-friendly not only support students with ASD in their learning journey but also foster empathy and understanding among neurotypical students, ultimately enriching the educational experience for the entire class.

The teachers' observations indicated a noticeable decrease in engagement among students with ASD during music lessons, necessitating additional support and attention to achieve their educational goals. Moreover, there were instances where these students disrupted lessons, prompting the teachers to devise specific strategies for maintaining classroom harmony. In addressing the educational needs of students with ASD in the music lessons, the teachers therefore identified several key strategies and challenges that led to a differentiated approach to classroom management and lesson planning. To address these disruptions and assist in focusing, the teachers introduced flexible physical accommodations, such as allowing students to lie down or take short walks. The adaptation of the classroom environment was a key strategy reported, involving the creation of "retreat corners" to provide a calming space for overwhelmed students. Furthermore, a consistent routine was maintained to offer a predictable and secure learning environment. The teachers also tailored their

assessment and evaluation methods to better cater to the learning styles of students with ASD, and they adjusted the organization of school materials to meet the ASD students' specific needs. Despite these adaptations, the teachers generally did not overhaul their music lesson plans but instead tailored them to the varying needs of the students with ASD. They continued to use age-appropriate teaching methods effective with neurotypical learners, including a range of creative activities like drawing (V22), creative playing on instruments (V17), and dancing (V21). Continually redirecting the attention of students with ASD and helping them with organizing school materials were focal points, however, to ensuring the students' sustained participation in lessons, a task that teachers acknowledged as challenging while trying to maintain the overall lesson flow.

### **3.2 Teacher's Activity**

This study also sheds light on a significant gap in the teacher training curriculum, specifically regarding the education of students with ASD in music lessons at the elementary level. According to the findings, the teachers received no information or training on working with children with autism during their university studies. They were provided only with a basic overview of different special needs categories but lacked in-depth focus on specific teaching methodologies or adaptation strategies tailored for students with special needs, including those with ASD. This lack of specialized training created a pressing issue, as students with ASD require specific teaching approaches and techniques to facilitate effective learning.

The teachers instructing students diagnosed with ASD adopted various approaches to effectively engage and instruct these individuals in music lessons. Commonly utilized musical methods of teaching and learning included singing with accompaniment (V4), drawing to music (V22), making movement to music (V21), experience-oriented listening (V14), experience-analytical listening (V15), and vocal demonstration (V3). These approaches, widely adopted by teachers, primarily aligned with the age, grade level, and curriculum of the students, rather than being specifically tailored to accommodate the unique needs of individuals with ASD. This suggests that the foundational approach to teaching music in these settings remained largely unchanged in the presence of students with ASD. Moreover, the predominant form of teaching in these classes was a frontal/joint form of teaching (V48), although teachers recognized the effectiveness of working in pairs (V50).

Working in pairs allowed for a relatively improved control and focus, which appeared particularly advantageous for the students with ASD, as they tended to engage more actively and maintain concentration for longer periods in such settings compared to frontal teaching methods.

Despite using effective strategies, the teachers consistently faced several challenges when teaching music lessons to students with ASD. One significant observation was that the teachers often limited the use of musical instruments due to concerns of overstimulation or unexpected reactions from the students with ASD. This caution arose from worries about these students' potential hypersensitivity to specific sounds (V46). Additionally, the teachers found that these students often struggled with imaginative tasks or generating new content (V32), leading to a preference for maintaining routine lesson structures (V40) to prevent distress (V41).

A crucial insight from teachers was the limited use of group teaching methods (V49) due to the low participation levels of students with ASD. These students appeared to require more individualized attention, explicit instructions, and clear guidance. In contrast to group activities, pair-work emerged as a preferred approach, allowing for more personalized assistance and role allocation that benefitted both the student with ASD and their partner. However, a notable challenge was the apparent lack of motivation among students with ASD for various musical activities, including singing, playing instruments, and dancing. The teachers reported a general unresponsiveness during these activities, with students often avoiding eye contact (V28) and physically withdrawing, except in instances where students found enjoyment in the activity or when a specific song was repeated multiple times. Furthermore, any minor deviations from routine (V40) or changes in instruments (V41) could trigger intense emotional and sometimes impulsive responses (V31) from these students. However, it was also consistently noted by all teachers that the students with ASD did not face challenges in order to meet their learning objectives.

### **3.3 Teacher's Pedagogical Approach**

The teachers often expressed a sense of inadequacy regarding their ability to effectively teach music to students with ASD. Despite their firm belief in the affinity these students had for music, there existed a notable uncertainty about how to engage them meaningfully in music lessons. This uncertainty stemmed from a

perceived lack of specific knowledge and skills tailored to the unique learning needs of students with ASD. Furthermore, this gap in expertise not only hindered the teachers' confidence but also potentially impacted the quality of music education provided to these students.

The teachers' responses in the study brought to light a notable disparity in their experiences regarding collaboration with the students' personal assistants (if there was one), the school counselling service, or the students' parents. One teacher encountered a particularly challenging situation where their limited influence over collaborative efforts became evident. The teacher faced difficulties in understanding and meeting the unique needs and strengths of a student due to the student's mother opposing the Ministry's decision to transfer the child from a regular school to a specialized program. As a result, the necessary adjustments and supports typically provided in a specialized setting were then not available. The teacher had to rely solely on their own discretion and judgment to make minimal modifications for the student's education in the mainstream school environment. In contrast, two other teachers in the study reported receiving substantial support from various sources. They emphasized the importance of ongoing and precise communication among all parties involved, particularly highlighting the indispensable role of parents in the successful inclusion of students with ASD in music lessons. Moreover, both teachers advocated for the presence of a personal assistant in mainstream school settings for students with ASD. They argued that managing a class of 25 students, including those with ASD who may require constant support, poses significant challenges for a single teacher. Having a personal assistant dedicated to supporting the ASD student can help create a more inclusive and effective learning environment for the entire class. This approach acknowledges the complexities of teaching in a diverse classroom and underscores the significance of adequate support systems for both students and teachers.

The teachers participating in the research sought out specialized professional training focused on educating students with ASD. However, this pursuit was initiated only after they encountered an ASD student for the first time in their professional career. The additional training was mainly comprised of seminars that offered a broad overview of the characteristics associated with ASD. Unfortunately, these seminars did not meet the teachers' expectations and needs, lacking specific, actionable information and practical guidance that they deemed crucial for their

teaching practice. Recognizing the limitations of the seminars, the teachers took it upon themselves to seek alternative resources, such as educational literature, to supplement their understanding and skills. Despite the availability of formal training, many teachers perceived it as insufficient or not aligned with their specific needs. They expressed a desire for hands-on, practical information and real-life examples that could be directly applied in their music classes. Interestingly, the teachers reported that their most valuable insights and strategies for engaging students with ASD in music lessons came from direct, hands-on experiences in the classroom. This practical exposure enabled the teachers to develop personalized approaches and adapt their teaching methods effectively, which was previously reported by Licardo (2007–2013), who stated that the most important aspect of a teacher's professional development following their undergraduate education is learning through experience. This finding underscores the importance of experiential learning in enhancing teachers' ability to support students with ASD. It also highlights a gap in current professional development offerings, suggesting the need for more experiential, classroom-based training opportunities that provide teachers with the practical tools and examples they require to effectively teach and support students with ASD in music education.

#### **4 Discussion**

In music lessons within elementary school classrooms, the imperative to include students with ASD is a particular challenge and requires a multifaceted pedagogical approach. The teachers in this study often observed a decline in engagement and interest among students with ASD, necessitating creative and adaptable strategies to promote the students' active participation and cultivate a harmonious classroom atmosphere. Inclusive education, as advocated by Stamou et al. (2019), aims to create an educational environment where all students, regardless of their neurological differences, feel valued and included. Incorporating innovative methods like integrating physical movement into music lessons and establishing consistent routines has proven effective in enriching the educational journey for students with ASD. These techniques, rooted in multisensory learning, not only facilitate the understanding of musical concepts but also create an environment that is structured and predictable, thereby reducing anxiety and behavioural challenges that these students may face.

Facilitating music lessons with students with ASD appears to require tailored strategies, collaborative support systems, and adaptive teaching approaches. By addressing the challenges and implementing inclusive practices, teachers can create a more inclusive and enriching music classroom environment for all students (Scott, 2016). Despite the challenges, the teachers in this study emphasized the importance of using age-appropriate methods for neurotypical learners while redirecting attention to keep the students with ASD engaged. This required a delicate balance between adapting instruction to meet the current needs of students with ASD and meeting the overall learning objectives of the class, which was also reported by Darrow (2003). The effective involvement of students with ASD in music lessons requires an understanding of their sensory and communication needs, as well as adaptability in teaching methods to accommodate their learning styles. While the teachers made some adaptations to accommodate the students with ASD in their music lessons, these adjustments appeared to align more closely with general teaching practices rather than being specifically tailored to the unique needs of individuals with ASD.

## **5 Conclusions**

Despite the teachers' adaptation efforts, a gap in teacher preparedness for helping students with ASD was evident. As Nordlund (2006) highlighted, many teachers lack comprehensive training in teaching methodologies specific to students with ASD. This deficiency often leads teachers to rely on experiential learning and trial-and-error tactics, which may not fully address the diverse needs of students with ASD. Consequently, there is a critical need for specialized training programs that focus on pedagogical strategies tailored to students with ASD in music lessons. These training modules should incorporate practical components, such as classroom adaptations and specific teaching aids, complemented by case studies and real-life scenarios. By implementing these changes, teacher training programs can become more effective and responsive to the needs of all students, ensuring that teachers are well-equipped to provide a supportive and enriching learning environment for students with ASD, particularly in specialized subjects like music.

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