



# Interdisciplinary Research Overview of Secondary School Music Education

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## **Author's contribution**

*The sole author designed, analyzed, interpreted and prepared the manuscript.*

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## **ABSTRACT**

This study explores interdisciplinary research in secondary school music classrooms to enhance teaching concepts. It emphasizes the importance of blending music and literature to deepen students' understanding of the arts, promoting connections between music composition and literary reading, enhancing overall literacy, and fostering enthusiasm for artistic diversity. The study advocates for introducing aesthetic education to cultivate students' emotions and understanding of artistic creation, aiming to develop their sensitivity to beauty and independent aesthetic insights in music. Additionally, it underscores the importance of integrating visual arts teaching methods to create a more enriching learning experience, enhancing students' perceptual abilities in music and promoting diverse creative expression. The study also highlights the incorporation of STEAM education into music classrooms, fostering comprehensive learning in science, technology, engineering, arts, and mathematics, contributing to holistic student development and improving education quality. Ethical education elements are proposed to guide students in forming correct artistic perspectives and cultural values, nurturing a sense of responsibility. Lastly, the study emphasizes integrating traditional Chinese culture, especially poetry, into music education to stimulate students' interest, promote cultural inheritance and innovation, and contribute to China's cultural heritage in music education.

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## 1. INTRODUCTION

Secondary school music education plays a crucial role in cultivating students' overall refinement, emotional expression, and creativity. However, with the continuous evolution of educational philosophies and changing societal demands, secondary school music education needs to actively engage in interdisciplinary research with other disciplines to better cater to the holistic developmental needs of students. This paper aims to provide a comprehensive overview of the cross-disciplinary research between secondary school music and other disciplines, revealing the opportunities and challenges faced by secondary school music education in the interdisciplinary research domain. Through a review of existing literature, the interdisciplinary issues of secondary school music can be explored from the following perspectives:

## 2. INTERDISCIPLINARY RESEARCH BETWEEN SECONDARY SCHOOL MUSIC AND LITERATURE [1]

Literary works encompass rich cultural connotations and emotional expressions. Integrating literature with music can deepen students' understanding of literary works, enhancing the emotional depth of musical expression. Additionally, composing music allows students to more fully express their understanding and emotional experiences of literary works.

## 3. INTERDISCIPLINARY RESEARCH BETWEEN SECONDARY SCHOOL MUSIC AND SCIENCE [2]

The acoustical properties of music are closely related to scientific principles. In-depth exploration of the physical nature of music can deepen students' understanding of scientific knowledge. Furthermore, the innovative thinking involved in music composition is similar to scientific research, and combining music with science helps cultivate students' creativity and practical skills.

## 4. INTERDISCIPLINARY RESEARCH BETWEEN SECONDARY SCHOOL MUSIC AND HISTORY [3]

Music, as a form of cultural expression, is closely linked to history. Studying music compositions from different historical periods provides insights into the social, cultural, and political contexts of those times, expanding students' historical perspectives. Performing ancient musical works allows students to experience the allure of historical culture firsthand.

## 5. INTERDISCIPLINARY RESEARCH BETWEEN SECONDARY SCHOOL MUSIC AND MATHEMATICS [4]

Elements such as rhythm and pitch in music are closely connected to mathematics. Integrating music theory with mathematical knowledge can foster students' abstract and logical thinking abilities. Additionally, the arrangement and rhythmic structure in music involve mathematical permutations and combinations, providing students with opportunities to apply mathematical knowledge in practice.

## 6. INTERDISCIPLINARY RESEARCH BETWEEN SECONDARY SCHOOL MUSIC AND ART [5]

There is a close connection between music and visual arts, dance, and other forms of art. Interdisciplinary fusion of different art forms prompts students to gain a more comprehensive experience in artistic creation, cultivating their overall understanding and creative abilities across various art forms.

## 7. OPPORTUNITIES AND CHALLENGES IN INTERDISCIPLINARY RESEARCH IN SECONDARY SCHOOL MUSIC

Interdisciplinary research brings rich teaching resources and innovative possibilities to secondary school music education but faces challenges in terms of educational systems, teaching faculty, and instructional resources. To better promote the development of interdisciplinary research in secondary school music, it is essential to establish platforms and collaboration mechanisms, strengthen

teacher training, and actively drive educational reforms.

## 8. INTERDISCIPLINARY RESEARCH OVERVIEW OF SECONDARY SCHOOL MUSIC EDUCATION

Li Yu [6] delved into the significance and practical strategies for incorporating aesthetic education into secondary music instruction. The article emphasizes the necessity of cultivating students' aesthetic perception and appreciation of artistic emotions, and points out some limitations in Chinese school art education, primarily stemming from the prominent position of exam-oriented education. The paper proposes a series of practical teaching methods and activities aimed at enhancing students' understanding and appreciation of music. Additionally, the article mentions music appreciation materials and relevant literature, including a master's thesis discussing modern aesthetic education and secondary music education. Overall, the paper highlights the urgency of introducing aesthetic education in secondary music education and provides practical teaching suggestions and methods. The views and recommendations in the paper have a guiding role in enhancing students' understanding and appreciation of music. At the same time, the article explicitly identifies issues in Chinese school education and calls for reform of the exam-oriented education model to better promote students' comprehensive development. Therefore, the paper provides valuable insights into the application of aesthetic education in secondary music education.

Huo Nairui [7] explored the significance and suitability concerns related to incorporating the "aesthetic" and "practical" philosophy of music education within the context of Chinese secondary music education. By analyzing the relationship between these two philosophical perspectives and the objectives, music materials, and teaching practices of secondary music courses, the goal of the research is to provide beneficial support for the development of secondary music education. The paper is divided into two main parts, first outlining the core viewpoints and value orientations of "aesthetic" and "practical" music education philosophy, highlighting their ideals in music education. The second part focuses on the appropriateness issues of these two philosophies in Chinese secondary music education. In this process, in-depth explanations are provided for the questions of "what kind of people to cultivate,"

"what content to teach students," and "how to teach," proposing strategies to enhance appropriateness through a comparison with practical situations. The core focus of the research covers two aspects: first, the appropriateness analysis of "aesthetic" and "practical" music education philosophy for the objectives of secondary music courses, finding a high overall appropriateness through the study of their alignment in texts. Second, the analysis of the appropriateness of these two philosophies in secondary music materials and teaching practices, discovering the implicit "aesthetic" and "practical" ideals through the dimensions of material structure and content arrangement. Finally, through in-depth analysis of real-world issues, the paper suggests that music education philosophy should focus more on applicability, combining theory with practice, providing beneficial insights for secondary music education.

Sun Yuwei [8] discussed the current situation and issues of "music performance" teaching in middle schools after the implementation of the art quality evaluation system. The research conducted a survey and analysis of "music performance" teaching in two middle schools in Kunming city, aiming to explore feasible strategies to improve middle school "music performance" teaching. The article emphasizes the importance of guiding students to experience and present music, as well as the necessity for teachers to cultivate students' aesthetic awareness and individual cognition. The paper proposes practical methods, such as self-evaluation and peer assessment, to improve "music performance" teaching. The research results show that in the aspect of "melody creation," the accuracy of student responses increased by nearly 40%, and students became more familiar with folk music composition techniques. Additionally, the article explores related research findings and reflections, as well as a discussion on issues related to art quality assessment. This paper comprehensively analyzes and discusses middle school "music performance" teaching, proposing practical teaching strategies and methods that have a certain guiding role in enhancing students' artistic quality and music performance abilities.

Liu Ziyue [9] studied the influence of modern popular music on Chinese high school music education. The article emphasizes the necessity of integrating music, art, and physical education in teaching to cultivate students' comprehensive literacy. Integrating modern popular music into teaching is seen as a means to break through

traditional teaching methods, helping to increase students' interest in music education and improve the quality of education. However, the article also warns about the need for balance to ensure that modern popular music does not overshadow the core values of music education. The article discusses the impact of traditional and exam-oriented education on music teaching, emphasizing the need to address their negative effects on students' learning interests and quality. At the same time, the article points out that modern popular music is more suitable for students' appreciation and enjoyment due to its widespread appeal. Therefore, the article suggests better integrating modern popular music into teaching to enhance the effectiveness of education and increase students' interest in learning.

Zhang Likun [10] discussed the positive effects of middle school music education on students' physical and mental development. With the continuous improvement of national education standards and the advocacy of comprehensive development in morality, intelligence, physical fitness, art, and labor, music education, as an artistic discipline, plays an indispensable role in secondary education. Firstly, music education helps adjust students' psychological states, alleviate academic pressure, and cultivate students' aesthetic concepts and creative thinking. Secondly, music education plays a positive role in shaping students' personalities, fostering emotions, enhancing creative thinking, and promoting comprehensive development of physical and mental health. In addition, the text mentions the promotion of intellectual development and diversity of extracurricular activities through music education. Music education in middle school plays a significant role in promoting students' comprehensive development, not only enhancing students' artistic cultivation but also contributing to their physical and mental health and creative thinking. Therefore, middle school music education should receive more attention and support.

Dong Xiangjie [11] addressed the significance of collaborative teaching in the reform of middle school music education curricula. The article points out that music is not an independent subject and has close connections with other cultural forms and teaching approaches. Therefore, collaborative teaching becomes a key direction in middle school curriculum reform. In the field of music education, integrating visual arts teaching methods can enhance teaching

effectiveness and attract students' attention. Additionally, integrating elements of art appreciation into music appreciation courses helps students better understand musical works, reducing the difficulty of learning music. On the other hand, implementing collaborative teaching between music and physical education can help students overcome learning challenges and develop their potential. Overall, the collaborative teaching of music, visual arts, and physical education is of significant educational value in improving students' understanding and creativity, contributing to the development of students' diverse qualities and effectively implementing the requirements of quality education.

Wang Keru [12] discussed several important issues in the field of education. Firstly, the article emphasizes the importance of creating a harmonious classroom atmosphere in the educational environment and the significance of cultivating a harmonious relationship between teachers and students. Secondly, the article highlights the value of integrating music into art education and emphasizes the creation of a music atmosphere conducive to students' active learning and development. In addition, the article particularly emphasizes the importance of using teaching materials and methods that conform to artistic education principles to effectively cultivate students' comprehensive abilities. The paper mentions the urgency of quality education, emphasizing the urgent need to cultivate students' multi-faceted qualities and abilities. Finally, the article highlights the sustainability of education and the importance of placing lifelong education on the agenda, truly reflecting the fundamental nature of basic education. Overall, the paper covers several key issues in the field of education, emphasizing the importance of creating a positive learning environment and cultivating students' diverse abilities.

Hong Limei [13] discussed the comprehensive relationship between middle school music appreciation teaching and other subjects. Firstly, the article emphasizes the importance of music education in Chinese middle schools, aiming to enhance students' appreciation of music, promote comprehensive development, and cover various aspects of art, intelligence, physical fitness, and aesthetics. The article points out that music appreciation can be integrated with subjects such as poetry, history, art, and politics, enriching the curriculum content and expanding students' knowledge horizon. Through detailed case studies, the article explains how to combine

poetry studies with historical background and emotions to enhance students' understanding and appreciation of related music. The article particularly emphasizes the close connection between music and history, highlighting that music, as a form of emotional expression, reflects changes in different eras and social development, making it closely related to history. Finally, the article emphasizes the benefits of interdisciplinary teaching, stating that integrating music with other subjects not only provides students with a comprehensive learning experience but also stimulates their enthusiasm and deep involvement in learning. This article elaborately discusses the in-depth integration of middle school music education with other subjects, highlighting the importance of this comprehensive teaching approach and its benefits for students.

Chen Ronghui [14] studied the organic integration of music education with other humanities disciplines to deepen students' understanding of music, enhance aesthetic abilities, and cultivate a strong interest in music. The article emphasizes the close connection between music and humanities such as literature, history, and geography, advocating the use of music to broaden students' academic perspectives. In addition, the article explores in detail the profound impact of history and geography on music and provides examples of how these influences can be organically integrated into music education to help students comprehend the cultural and artistic significance of music more comprehensively. In practical teaching, the article suggests combining music with literary works, such as linking music with poetry and prose, to assist students in a deeper understanding of the emotions and atmospheres conveyed through music. Furthermore, the article highlights the close relationship between music and history, emphasizing the importance of incorporating historical knowledge into music appreciation teaching to help students better grasp musical knowledge. The article further discusses the integration of music education with other humanities disciplines, emphasizing the importance of a comprehensive teaching approach. It advocates introducing a multidisciplinary approach in music curriculum to enrich students' learning experiences, providing specific cases, such as combining music with painting and historical events, aiming to assist students in better understanding the themes and emotions conveyed in musical works.

Chen Deng [15] discussed the application of the STEAM education philosophy in secondary school music classrooms. In recent years, the STEAM education philosophy has gained widespread recognition, emphasizing the importance of interdisciplinary education in fostering students' innovative thinking and abilities. The article points out that integrating STEAM education into secondary school music classrooms requires additional hardware resources to support new teaching methods and ensure educational quality. Successful implementation of STEAM education also depends on student feedback and the establishment of a comprehensive education assessment system. Combining music education with other subjects such as art helps increase student engagement and provides a more comprehensive learning experience. Schools need to recognize the significant role of STEAM education in enhancing students' core competencies and overall quality, requiring sufficient attention. Additionally, to ensure effective implementation of education, schools need to provide continuous training and research activities for teachers so that they can stay informed about the latest educational methods and continually improve their professional skills. Therefore, this article emphasizes the importance of integrating STEAM education in secondary school music classrooms, aiming to promote students' overall development and enhance education quality. In this process, schools and educational institutions need to invest sufficient resources and support to ensure the effective implementation of STEAM education and achieve significant educational outcomes.

Wang Qiqing [16] examined the function and tactics associated with the utilization of music in physical education within Chinese secondary schools. The article emphasizes the effectiveness of combining music with physical education, significantly improving teaching outcomes, and stimulating students' interest and participation in sports. The rhythm of music plays a promoting role in helping students master movements and improve skills while also fostering their imagination. Regarding the strategies for using music, the article emphasizes that music should serve the purpose of physical education and provide effective support for the objectives of sports teaching based on the specific characteristics of different sports. Additionally, the article mentions that teachers should carefully select music that aligns with the

teaching content, incorporate different music styles, and enhance teachers' musical literacy when using music. These strategies help ensure a close integration of music and physical education, promoting students' overall development.

Tao Jinru [17] discussed the practical application of the theory of multiple intelligences in secondary school music education. The article emphasizes the crucial role of experiential learning in music education and proposes the necessity of paying attention to extracurricular music activities. The theory of multiple intelligences provides a new approach to meet students' balanced development needs. The integration of the theory of multiple intelligences with experiential learning in secondary school music education has practical significance and produces positive effects for both teachers and students. In secondary school music education, self-assessment, peer assessment, and teacher assessment serve as the main evaluation methods for implementing experiential learning. The research results indicate that students in the experimental class have higher average scores in various intellectual aspects compared to students in the control class. The combination of the theory of multiple intelligences and experiential learning significantly improves the quality of music teaching and learning.

Shang Jianyou [18] discussed how to incorporate the study of party history into secondary school music education. The article emphasizes the importance of combining learning with practice, guiding students to integrate personal ideals into the themes of the times and become the youth of the new era. At the same time, the article highlights the responsibility of music teachers to guide students in inheriting the national spirit and cultivating them to become youth of the new era. Teachers can introduce songs reflecting the socialist spiritual civilization construction of the new era, such as "Do Not Forget the Initial Heart," to stimulate students' patriotic feelings and sense of responsibility. The article also mentions the importance of in-depth independent thinking in music research activities. Using the opera excerpt "Embroidering the Red Flag" as an example, teachers can organize the viewing of related opera scenes and pose questions about the characters' language or actions, guiding students to think deeply. Finally, the article points out the necessity of conducting party history learning education in secondary school music teaching and calls for teachers to seek the

brilliance of party history in music teaching materials. Additionally, it explores implementation methods based on the psychological development characteristics of students in junior and senior high school stages.

Liu Xi [19] discussed the integration of moral education in Chinese high school music education, emphasizing the urgency of incorporating moral education into music teaching and the need for innovative methods. The article highlights potential issues with traditional moral education methods and advocates for more comprehensive teaching approaches. Furthermore, the article points out the shortcomings in music teachers' awareness and methods of integrating moral education. To illustrate how to integrate moral education into music education, the article provides specific examples, such as creating music dramas and patriotic music works based on historical events. These examples demonstrate innovative ways of organically incorporating elements of moral education into music teaching. The article emphasizes the need for music teachers to flexibly integrate moral education into music teaching and underscores the importance of this integration.

Liu Huiqing [20] studied the new singing methods of applying classical poetry in secondary school music education, exploring the practices in the secondary school music classroom through information technology, chanting techniques, independent composition, and teaching methods. The article emphasizes the importance of new singing techniques and independent creation in enriching students' artistic expression and cultural confidence. The fusion of poetry and music is highlighted as a key factor in deepening students' understanding of Chinese culture and enhancing aesthetic perception. By combining poetry with music, the aim is to inspire students' enthusiasm for classical poetry and to inherit and promote the cultural heritage of China. This integrated approach is considered an effective way to stimulate students' interest in learning, cultivate aesthetic emotions, and enhance cultural confidence. The viewpoints and practical examples in the article support this notion, emphasizing the positive impact of new singing methods on students' artistic literacy and cultural identity. Therefore, it can be concluded that the new singing methods that combine classical poetry with music in secondary school music education are of great significance, as they can

inspire students' enthusiasm for learning, enhance their aesthetic abilities, and deepen their understanding of traditional Chinese culture. This method injects new vitality into secondary school music education and contributes to the cultivation of students' artistic literacy and cultural confidence.

Liu Yanyan [21] explored the integration of exemplary traditional Chinese culture into secondary school music education. The focus was on elevating the quality of aesthetic education and instilling patriotic sentiments and cultural confidence in students. Traditional culture, accumulated throughout the evolution of civilization, reflects the characteristics and features of the nation, constituting a collective of thoughts, culture, and concepts in the nation's history. Integrating outstanding traditional Chinese culture into music education is a requirement of the times for promoting traditional culture. The article points out that teachers should analyze the achievements in the construction of railways, roads, and waterways in various minority regions in the new era, considering the impact of narrowing the wealth gap and economic development. Simultaneously, teachers should connect with the spirit of "Energetic Progress in New Chapters" in the song "Love My China" and combine music teaching with current political considerations to provide multiple entry points for music education. Integrating outstanding traditional culture into secondary school music education is a complex process that places high demands on teachers. Teachers should combine music with traditional culture, such as in the teaching of "Beautiful Grassland, My Home," where teachers can use the historical development of culture to help students understand the cultural background of music, awakening students' musical cognition with cultural context. Additionally, teachers can use multimedia electronic courseware to display different facial makeup styles, introduce relevant cultural knowledge, and help students understand that Peking Opera, a national quintessence, is an art form integrating literature, singing, speech, dance, martial arts, and visual arts. By incorporating outstanding traditional culture into music education, students can develop an understanding and appreciation for traditional culture, enriching music teaching content, enhancing cultural confidence, and promoting the development of students' musical literacy. This teaching method helps improve students' overall quality, cultivate their aesthetic tastes, and promote their comprehensive

development. Therefore, integrating outstanding traditional Chinese culture into secondary school music education is of positive significance for students' growth and development.

Liu Yangyang [22] discussed Gan Nan Tea-Picking Opera as a locally distinctive form of opera, characterized by a stylized, colloquial dramatic style and music elements infused with a strong rural flavor. This opera form, with a long history dating back to the Song Dynasty, portrays the production and life of the working people, embodying rich elements of Gan Nan Hakka music. Therefore, incorporating Gan Nan Tea-Picking Opera into secondary school music education has significant cultural heritage and artistic enlightenment implications. To achieve this goal, schools can advocate for the construction of a school-based curriculum with Gan Nan Tea-Picking Opera as an element, allowing students to actively participate, interact, and cooperate. Simultaneously, teacher training is crucial, requiring teachers with professional competence to integrate Gan Nan Tea-Picking Opera with school music education to ensure the depth and professionalism of teaching content. Schools can also organize students to participate in the rehearsal of Tea-Picking Opera, allowing them to experience artistic culture and outstanding traditional Chinese culture in practice. By incorporating Gan Nan Tea-Picking Opera into secondary school music education, students' comprehensive development can be promoted. Art education helps guide students to establish positive and correct values, and incorporating Tea-Picking Opera into the school-based curriculum can play a positive and guiding role among students, subtly promoting their comprehensive development from various aspects. This colorful cultural form not only provides students with a broader perspective, enhances their aesthetic abilities and intellectual qualities but also serves as a good supplement to textbook knowledge education. Such measures not only contribute to the inheritance and promotion of local culture but also provide students with a more diverse learning experience.

Wang Xiaoli [23] discussed the impact of combining music education with ideological and political education on students. The article first points out the importance of music education in students' moral development, emphasizing that music works not only express aesthetics but also carry political and cultural information. However, music education faces challenges such as limited class hours and students' lack of interest in

traditional music. To address these issues, the article suggests combining music education with ideological and political education, believing that this can enhance students' moral levels and understanding of ideology. The article also emphasizes the importance of teachers' own ideological and political literacy and proposes using patriotic songs to cultivate students' love for the country. The article further explores the significance of combining music education with ideological and political education, including enhancing students' patriotic sentiments and sense of mission. By conveying patriotism through music works, deep influences on students' patriotic sentiments can be achieved, fostering a sense of responsibility for the country during music learning. In conclusion, the article acknowledges its limitations, including limited writing and theoretical levels, as well as insufficient research materials.

Feng Yanjuan [24] discussed how outstanding traditional culture of ethnic minorities can be integrated into the practical aspects of secondary school music education against the backdrop of China's steady economic and social development. The article first points out that despite increased international exchanges, secondary school students have insufficient understanding of the outstanding traditional culture of ethnic minorities, creating significant issues. In this context, the article emphasizes the importance of deeply integrating the outstanding traditional culture of ethnic minorities into secondary school music education to enhance students' cultural confidence and ethnic identity. The article highlights that secondary school music education not only helps cultivate students' aesthetic appreciation but also helps them understand and identify with various outstanding traditional cultures, thereby strengthening cultural confidence. Meanwhile, with ongoing deepening of international exchanges, students are exposed to an increasing variety of music types and forms, providing new opportunities and challenges for the inheritance and development of outstanding traditional cultures of ethnic minorities. In the era of advocating "cultural confidence," the outstanding traditional cultures of ethnic minorities not only preserve their own elements but also continuously draw from and absorb excellent elements from other ethnic groups, forming inclusive, open, and diverse cultural characteristics. Therefore, integrating the outstanding traditional culture of ethnic minorities

into secondary school music education has significant meaning and value.

Miao Qitian [25] discussed the rich history and unique charm of Chinese traditional opera, aiming to explore how local Qin Opera can be integrated into secondary school music education. The article provides comprehensive insights into the historical background of Chinese opera, offering readers a holistic understanding of traditional opera music. In the survey section of the article, results from a survey of 160 individuals reveal the current cognitive deviations and lack of interest among students in traditional opera music. The article thoroughly analyzes the reasons behind this phenomenon, including factors such as the popularity of contemporary music, media influence, insufficient young music teachers, and incomplete curriculum content, providing profound insights into the resolution of the issue. To address this problem, the article proposes a series of recommendations. Firstly, it suggests updating educational concepts, bringing Qin Opera into campuses, forming high-quality and high-level teaching teams, and adopting various teaching methods. Secondly, it recommends inviting experts in the field of opera music to schools for lectures and guidance to enhance teachers' and students' cognition and interest in opera music. Finally, it suggests improving teaching methods, using stage performances and other means to stimulate students' love for Qin Opera culture, enhancing their national pride and confidence. These suggestions are specific and practical, providing feasible solutions to address the current issues in secondary school music education.

## 9. CONCLUSION

This study explore an interdisciplinary in-depth review of secondary school music education, exploring issues such as the comprehensive relationship between music and other disciplines, the application of STEAM education philosophy in secondary school music classrooms, the implementation methods of party history learning education in secondary school music teaching, and the status of Chinese opera music in secondary school music education. The research findings indicate that, to cultivate students' comprehensive abilities, music education needs to be deeply integrated with other disciplines. The introduction of the STEAM education philosophy requires substantial hardware resource support and the establishment of a comprehensive educational assessment system.



Music teachers should take on the responsibility of nurturing students' national spirit, actively inviting professional experts for lectures and guidance. To address the challenges faced by secondary school music education, this paper proposes a series of recommendations, including updating educational concepts, forming high-quality teaching teams, and improving teaching methods. These suggestions aim to provide beneficial insights for the sustainable development of secondary school music education.

### COMPETING INTERESTS

Author has declared that no competing interests exist.

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