

Original Paper

The Impact of Music Education on the Academic Achievement of Chinese Primary School Students

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Received: September 29, 2023 Accepted: October 21, 2023 Online Published: November 4, 2023
doi:10.22158/fet.v6n4p54 URL: <http://dx.doi.org/10.22158/fet.v6n4p54>

Abstract

Nowadays, it is widely acknowledged worldwide that music education is a beneficial activity for students' cognitive, social, and emotional development (Ho, 2021). However, there is limited empirical evidence on how music education affects academic achievement in primary schools, especially in China. The aim of this literature review is to examine the existing research on the impact of music education on the academic achievement of primary school students in China, focusing on three aspects of music education: instrument-vocal training, music composition and music appreciation. The review synthesised the results of different research approaches and highlighted the importance of music education in enhancing Chinese primary school students' motivation, creativity, and self-esteem, as well as in promoting cultural diversity and social harmony (Bao, 2020; Wang, 2021). Limitations of the current literature are then discussed and directions for future research are suggested, concluding that the main conclusion - that music education has a relatively positive impact on academic achievement in Chinese primary schools - requires more rigorous and comprehensive research to explore the underlying mechanisms and contextual factors that influence this relationship.

1. Introduction

For many years, researchers and educators have focused on music education, and there is growing evidence that music education can have a significant impact on the academic performance of elementary school students (Ho, 2021). This literature review seeks to investigate the effect of music education on the academic performance of Chinese elementary school students. Examining the impact of music education on the cognitive, social, and emotional development of Chinese primary school students, as well as the potential impact of music education on the promotion of academic achievement in subjects such as mathematics, language, and science. This article explores the underlying

mechanisms and contextual factors that contribute to the relationship between music education and academic achievement among Chinese primary school students. Understanding how music education affects various aspects of the academic performance of Chinese primary school students from multiple perspectives by examining how different aspects of music education affect academic performance in different subjects.

The context of the research review is China's primary school system, which consists of six grades for students aged 6 to 12 years old. China's education system is distinctive in that it emphasises academic achievement, and students are under pressure to pursue higher education. In recent years, the Ministry of Education has sought to alleviate academic pressure on students by promoting a more holistic approach to education, with an emphasis on music education at the elementary school level. Nevertheless, research indicates that only 6 percent of China's 190,000 primary schools have qualified music teachers, indicating a lack of resources and support for music education in Chinese primary education (Xiong, 2020). In the current educational climate, where education systems around the world are challenged by academic pressures, mental health issues, and social inequalities, it is essential to investigate alternative approaches to education that can help address these issues. In such a context, this study is valuable because it provides the opportunity to investigate whether music education can address the various challenges facing education systems by influencing the academic performance of Chinese primary school students in a more relaxed and inclusive manner. Based on this research topic, the author has extensive experience working in primary school music education and has a strong desire to investigate this topic. This literature review is part of the author's professional development, and it is hoped that it will contribute to the discussion on "Music education and the academic achievement and overall development of primary school students".

2. Scope of the Literature Search

This literature search will search ERIC, JSTOR, Manchester University Library, Google Scholar, and China Knowledge Network for relevant research. "Music education", "academic achievement", "primary school students", "China", and "academic achievement" will be used to search. To ensure the literature review's comprehensiveness, studies published between 2000 and 2023 in English and Chinese with a focus on contexts conducted in China will be included, as will selected studies from other contexts assessing the impact of music education on primary school students' academic achievement in China. The literature review excluded studies on music therapy or music interventions for specific conditions (e.g., ADHD) and studies on adult populations that were not directly related to the research questions to ensure generalisability and relevance. Non-peer-reviewed and small-sample studies will be excluded. To better understand how music education affects academic performance, reference studies will include a mix of qualitative and quantitative studies. The authors will choose the most representative and authoritative literature, paying attention to research method diversity and innovation and retaining some of the best relevant literature from outside China for comparison,

reflection, and field gaps. The research review covers China's six-grade primary school system from 6 to 12. In China's unique education system, students are pressured to go to college. The Ministry of Education has emphasised primary school music education in recent years to reduce academic pressure on students. According to research, only 6% of China's 190,000 primary schools have qualified music teachers, indicating a lack of resources and support for music education (Xiong, 2020). In a world where academic pressures, mental health issues, and social inequalities plague education systems, alternative approaches to education are crucial. This study examines whether music education can help education systems by influencing Chinese primary school students' academic performance in a more relaxed and inclusive way. The author has extensive experience teaching primary school music and is interested in this research topic. This literature review is part of the author's professional development and hopes to contribute to the discussion on "Music education and primary school students' academic achievement and overall development".

3. Critical Analysis of the Literature

3.1 The Importance of and Challenges for the Development of Music Education at Primary Level in China

Music education is increasingly valued by students, parents, and educators in China's primary schools because it improves students' musical and artistic skills, overall development, and physical and mental health. Academics have found that students enjoy music the most. Most students enjoy music classes, singing, dancing, developing their own hobbies, and participating in school music clubs. They can learn, relax, gain self-confidence, and be happy by attending club rehearsals, performances, and competitions (Xie, 2017; Liu, 2020). Some parents supported music education in schools because their children's life experiences and outlook on life were enriched by music education and school activities (Wu, 2020; Zhou, 2020). Teachers of different subjects say music education isn't detrimental to other subjects and expect students to engage in additional artwork to develop creative thinking (Duan et al., 2018). The Ministry of Education found that primary school children's music education improves mental health and promotes cultural diversity and social cohesion (Jiang, 2020). Despite most studies showing the importance and benefits of primary music education, music education development is still challenging. Parents prefer their children to attend more prestigious junior high schools based on their Primary exam score rather than a nearby school due to China's unique educational pressures (Huang, 2021). Music, which is not included in primary school examination rankings, is marginalized. Some primary school music teachers reported that their classes are often used by other subjects to give students exam practice (Yang, 2019). Schools may ignore this behaviour if it improves students' primary school exam scores (Yang, 2019). Some students avoid music lessons, do homework on other subjects in class and ignore class participation due to schoolwork pressure. They preferred doing homework and doing what they liked to do instead of music lessons.

Parents sometimes ask schools not to let their children participate in non-academic music activities and rehearsals, worried that music education will distract students and take up a lot of study time, affecting academic performance and competitiveness (Bian, 2022; Huang, 2021). To understand how music education affects primary school academic achievement in China, one must first understand their relationship. Thus, this study examines music education's impact on primary school students' academic performance in the next section.

4. The Link between Music Education and Academic Achievement of Primary School Students

4.1 Under Certain Conditions, Music Education Can Have a Significant and Relatively Positive Impact on the Academic Performance of Chinese Primary School Students

The academic results of Chinese primary school students are mainly made up of Chinese, Mathematics, English, and the total score of these three subjects is used to rank them in the Primary School Entrance Examination. Many factors influence academic achievement in primary school, starting with the internal factors such as intelligence, self-discipline and learning methods (Banner & Cannon, 2008).

4.2 Internal Factors—Intelligence, Self-discipline and Learning Methods

Intelligence is the organic combination of cognitive abilities necessary to enable a person to successfully perform certain activities, and it includes components such as observation, memory, attention, imagination and thinking, with thinking as the core. American scholars have found that music education can promote the development of the right brain and the coordination of the left and right brains, which has a significant impact on students' intellectual development (Battro et al., 2014). At the same time, the brain contains numerous nerve cells and music teaching is a specific technique for training students in observation, listening, memory, rhythm, expression, and mastery of performance methods. Therefore, in terms of human physiological functions, music education not only develops the right brain and promotes the development of the whole brain, but also improves the brain's reaction speed and promotes all types of cognitive levels thus enabling the development of human intelligence to a great extent (Thaut, 2008). Even though research has shown that the causal relationship between intelligence and academic performance is positive and significant, the effect of intelligence on academic performance is only about 20% (Campbell & Ramey, 1994). These findings do not prove that music education can absolutely improve the intelligence of all students, as music education is only one of the ways in which intelligence development is affected, and there is no research to prove an absolute causal relationship between the two.

Self-discipline is also an internal factor that affects academic performance. Studies have found that students with high self-discipline are more likely to control their emotions, concentrate on their studies, and complete their tasks more easily, thus achieving better results. In addition, students with high self-discipline are more likely to develop good study habits, such as completing homework on time and reviewing lessons, which can help improve academic performance (Banner & Cannon, 2008). Music education, in turn, can facilitate the development of self-discipline, whereby students are able to reduce

anxiety and stress by playing music, which can enhance their emotional management skills (Hallam, 2010). As learning music takes time and effort, it can help students to set and work towards goals and develop good study habits, thus increasing their self-discipline. However, there is no research that can demonstrate a clear positive relationship between music education and self-regulation, and most of these studies have focused on music appreciation and instrumental practice in music education as the main subjects of research.

In addition to intelligence and self-discipline factors, learning methods are also important in helping students to better master their independent learning skills. For example, methods such as identifying appropriate learning styles, self-monitoring and self-adjustment can help students to better master their learning skills (Arnold, 2023). In this regard, students use multiple senses to perceive, understand and express music in the process of music education, including auditory, visual and tactile senses, and develop self-awareness by using diverse learning styles to identify problems and deficiencies through continuous practice and reflection (Hallam, 2010). In addition, good learning methods can help students gain more in-depth understanding of learning content. For example, asking questions, exploring the principles behind the learning content and seeking practical applications of the learning content may help students to fundamentally understand the learning content (Leonard, 2022). In this regard, students are taught music in the same way, and it is only through deep exploration and perception of the musical context and emotions that they can complete their understanding of the work, and then be able to reflect this understanding in the performance of musical tempo, notation, and musical terminology, which in part promotes the ability to learn systematically and facilitate deeper learning in the future. It is worth noting, however, that proven good learning methods may not be applicable to everyone and are influenced by a variety of factors, both from within and outside the individual, so it is important to actively explore the appropriate learning methods in the process (Banner & Cannon, 2008).

Besides this, external factors can also affect academic performance, such as environmental factors and the quality of schooling, with environmental factors being mainly dominated by the family environment and to a lesser extent by the social environment (in China only) and therefore only briefly described here.

4.3 External Factors—Environment and Quality of Schooling

Research shows that primary school student's academic performance is significantly affected by their home environment. Primary school students' academic performance is affected by their parents' education, income, and family environment (Habibullah & Ashraf, 2013). High-educated parents support their children's education more, motivating and monitoring their children's learning attitudes and academic progress. However, the lower family economic status may affect primary school students' learning opportunities and resources, making it harder for them to get support for their hobbies and participate in practical activities, preventing them from exercising and expressing themselves (Abitew, 2019). Due to regional disparities in educational resources and social factors, some students will have

poor learning opportunities. These can cause students to lose perspective and self-confidence, which hurts academic performance. To allow all primary school students to develop their interests, music education is compulsory. Statistics show that many governments fund music competitions, performances, training, summer camps, and international exchanges. The National Music Education Programme will receive £79 million in 2022 from the UK government (Gu, 2022). Beijing alone spends 60 million yuan on school music education (Liu & Chen, 2010). Most students reported positive gains, developing their interests through music education, gaining courage and confidence in competitions and performance exchanges, becoming more motivated to study, and improving their learning attitudes and academic performance (Wang, 2019). Music education is just one way to use practical activities like speech, debate, sport, and dance to achieve the same developmental goals and produce positive results (Moss et al., 2018).

Lastly, the quality of education and teaching in a school significantly impacts the academic performance of primary school students, particularly in terms of teaching methods and teacher quality, as well as school resources and administration (Banner & Cannon, 2008). Good resources allow the school to offer a wider range of facilities and options, such as science laboratories, music rehearsal halls, and gymnasiums, giving students a deeper education and an academic advantage. Good management also improves teacher training and learning, which boosts student achievement (Aronson, 2002). Studies have shown that Chinese primary schools have innovated by integrating music education into their curricula (Chao, 2020; Chen, 2022; Chi, 2020). It motivates students, enhances knowledge, and improves academic performance. However, due to regional differences in the quality of education and teaching levels of schools, this type of innovative curriculum that incorporates music education is still in its infancy and requires time to develop into a fully mature teaching system.

This paper concludes that, under certain conditions, music education can have a significant and positive impact on the academic performance of primary school students in China, by analysing the effect of music education on both internal and external factors affecting the academic performance of primary school students. This is illustrated in Figure 1.

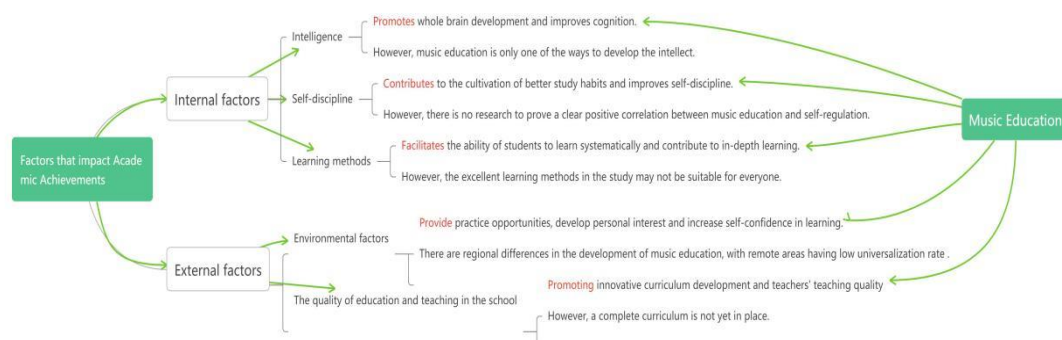


Figure 1. Relationship between Music Education and Factors Affecting Academic Achievement

5. How Different Aspects of Music Education Affect Academic Performance in Different Subjects

Chinese primary school music education includes music appreciation, vocal/instrumental training, and music composition, which can affect academic performance in different subjects. Research shows that students learn music theory, analyse music structure, and understand composers' emotions and motivations in context when music appreciation is the main teaching objective. This process of calculating and analysing intervals and chords can help students understand mathematical concepts like equivalence, proportionality, addition, and subtraction, and students are more motivated to learn music in a way that helps them solve mathematical problems in practise, which can improve their math performance (Ding, 2018). Students must understand the composer's personal experiences, family, and social environment to analyse the music's emotions. This approach and learning mindset helps students connect with the work and its context in reading comprehension and writing, improving comprehension and Chinese and English performance (Chen, 2022). However, some primary school music teachers report that music appreciation lessons receive the least attention and love from students in music education and that students are often inert and lack motivation to learn music appreciation due to the mathematical issues involved in learning about music theory and pattern analysis as well as comprehension issues (Li, 2021). Thus, music appreciation lessons may not improve academic performance for most primary school students.

When vocal and instrumental training is the main teaching objective, it can help students to understand scientific concepts, such as experiencing and understanding the concepts of sound waves, resonance, and frequency in the process of learning an instrument. Learning to play an instrument can also enhance students' spatial perception and hand-eye coordination, which are useful for scientific experiments and diagram analysis to positively impact on students' performance in science (Zhang, 2010). In vocal training, students learn to use breath and placement better to sing and develop oral expression skills such as clear bite and fluency in speech (Chen, 2012). It has a positive impact on students' performance in Chinese and English. However, some parents are eager to achieve certain goals through music education in a utilitarian manner, which can be counterproductive. Because music education is a gradual process, it is mainly through the artistic temperament of the student under the influence of the arts that the student will be able to influence various aspects of their abilities and thus achieve the purpose of human development. The immediate effects on academic achievement are not obvious (Beach et al., 2011).

Students are encouraged to be creative with new ideas and express their individuality when music composition is the main teaching objective (Veloso, 2017). Students create their own music through the arrangement of notes as well as chords, and this creativity and self-expression can be translated into learning in other subjects and may make students more willing to engage in learning and try new approaches (Luo, 2020). In addition, music composition requires students to memorise the melody, lyrics and chords of a piece of music. Such exercises may facilitate students' memory and apply it to memory tasks in other subjects. The training of creative skills described above has a positive impact on

students' performance in mathematics and science to some extent, while the training and enhancement of memory plays an important role in the accumulation of general knowledge and memorisation skills required for Chinese learning, which has a positive impact on Chinese performance. These effects may not be directly causal, but rather because the training and experience students have in music composition transfers to other aspects of their learning. In addition, music composition may not represent a strength for all students; each student has their own talents and interests and the decision to engage in music composition activities needs to be made on an individual basis.

It is worth noting that there is no clear research to prove a causal relationship between these influences and academic performance per se, and that most of the positive influences described in this study stem from the various types of learning skills and experiences that students acquire through their training in music education and translate these to other subjects, thus contributing to academic progress.

6. Conclusion

The purpose of this paper is to examine the impact of music education on the academic achievement of primary school students in China. Through analysis and interpretation of the literature, it summarises the importance and challenges of music education development for the primary school level in China, explores the links between music education and primary school students' academic achievement, and summarises how different aspects of music education affect academic achievement in different subjects. The main conclusion drawn is that music education has a relatively positive impact on the academic performance of Chinese primary school students and that more rigorous and comprehensive research is needed to explore the underlying mechanisms and contextual factors that influence this relationship. The main limitation of this study is that it has not found a perfect model to explain and prove the causal relationship between music education and primary school students' academic achievement. Therefore, a model of this topic will be further explored from the perspective of the teacher in future research.

References

- Abitew, E. B. (2019). Factors Affecting Female Students' Academic Performance in Second Cycle of Primary Schools in Bahir Dar, Ethiopia. *International Journal of Educational Research Review*, 4(3), 403-419. <https://doi.org/10.24331/ijere.573898>
- Arnold, M. (2023). *Handbook of Applied Teaching and Learning in Social Work Management Education: Theories, Methods, and Practices in Higher Education*. M. Arnold, Ed. Cham: Springer. <https://doi.org/10.1007/978-3-031-18038-5>
- Aronson, J. (2002). *Improving Academic Achievement: Impact of Psychological Factors on Education*. Amsterdam: Academic Press.
- Banner, J. M., & Cannon, H. C. (2008). *The Elements of Learning*. New Haven, CT: Yale University Press.

- Bao, D. W. (2020). Talking About the Role of Primary School Music Education in Developing Students' Creative Thinking. *Journal of Intelligence*, 33, 25-27.
- Battro, A. M., Fischer, K. W., & Lena, P. (2008). *The Educated Brain: Essays Inneuroeducation*. A. M. Battro, K. W. Fischer, & P. Lena (Eds.). Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9780511489907>
- Beach, N., Evans, J., & Spruce, G. (2011). *Making Music in The Primary School: Whole Class Instrumental and Vocal Teaching* (1st ed.). London: Routledge.
- Bian, J. W. (2022). *A Brief Discussion of the Current Problems of Primary School Music Education in China and Countermeasures to Solve Them*. Proceedings Of The 2022 Education And Teaching Modernization And Precision Management Summit (Primary Education Chapter) (pp. 14-19). Retrieved May 15, 2023, from <http://www.cnki.net>
- Campbell, F. A., & Ramey, C. T. (1994). Effects of Early Intervention on Intellectual and Academic Achievement: A Follow-up Study of Children from Low-Income Families. *Child Development*, 65(2), 684-698. <https://doi.org/10.2307/1131410>
- Chao, R. Y. (2020). *Exploring the integration of "Curriculum Civics" in the primary school music classroom*. Inner Mongolia Normal University. Retrieved May 15, 2023, from <https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CMFD202002&filename=1020635405.nh>
- Chen, L. F. (2022). Exploring the integration of music and language teaching in primary schools in the context of curriculum integration. *Introduction to the New Curriculum*, 20, 38-40.
- Chen, S. M. (2012). Experimenting with the role of chorus in primary school music education. *Voices of the Yellow River*, 8, 52-53.
- Chi, S. J. (2020). Practices and Reflections on Integrating Music Teaching into Mathematics Lessons. *Educational Practice and Research (A)*, 5, 53-55.
- Ding, Z. F. (2018). A musical approach to teaching and learning in the primary school mathematics classroom. *Examiner Journal*, 99, 83.
- Duan, Y. L. et al. (2018). A study on the impact of music education on students' personal literacy development. Research Management Office of "the 13th Five-Year Plan". In *Compilation of Scientific Research Results of "the 13th Five-Year Plan "* (Volume 5, pp. 93-99). Retrieved May 15, 2023, from <http://www.cnki.net>
- Griffin, D. (2014). *Education Reform: The Unwinding of Intelligence and Creativity*. Cham: Springer International Publishing. <https://doi.org/10.1007/978-3-319-01994-9>
- Gu, Y. F. (2022). With £79 million a year allocated over the next three years, the UK National Music Education Plan is formally enacted. *Music Weekly*. 17 July. Retrieved May 15, 2023, from <https://mp.weixin.qq.com/s/CxFNliDiKrfWjWYwF4Vzqw>
- Habibullah, S., & Ashraf, J. (2013). Factors affecting academic performance of primary school children. *Pakistanjournal of medical research*, 52(2), 47-61.

- Hallam, S. (2010). The power of music: Its impact on the intellectual, social and personal development of children and young people. *International journal of music education*, 28(3), 269-289. <https://doi.org/10.1177/0255761410370658>
- Ho, W. (2021). *Globalization, nationalism, and music education in the twenty-first century in Greater China*. Amsterdam: Amsterdam University Press. <https://doi.org/10.2307/j.ctv1htpfc4>
- Huang, Q. (2020). *A study on the problems and countermeasures of parental involvement in home-school cooperation in primary school education*. Huazhong Normal University. Retrieved May 15, 2023, from <https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CMFD202202&filename=102>
- Jiang, C. Y. (2020). The important role of primary school music education in “building moral character”. In *Proceedings of the Workshop on “Integration of Regional Quality Education Resources” in 2020* (pp. 1074-1076). Retrieved May 15, 2023, from <http://www.cnki.net>
- Leonard, D. C. (2002). *Learning theories*. Ato Z. Westport, Conn: Oryx Press.
- Li, N. (2021). Problems and solutions in primary school music appreciation classes. In *Proceedings of the 2021 Symposium on Educational Reform in Classroom Teaching* (pp. 1703-1704).
- Liu, J. T., & Cheng, C. (2010). Beijing invests 60 million yuan a year in music education in schools. *Xinhua Daily News*. 4 Agust. Retrieved May 15, 2023, from <http://wap.177liuxue.cn/info/2010-8/136301.html>
- Liu, Y. B. (2020). A study on the impact of music education on students’ development. *Think Tank Times Journal*, 5, 166-167.
- Luo, Y. X. (2020). Exploring the importance of music composition in the primary music classroom. *Hwa Hsia Teachers*, 10, 43-44.
- Moss, T. E., Benus, M. J., & Tucker, E. A. (2018). Impacting Urban Students’ Academic Achievement and Executive Function Through School-Based Arts Integration Programs. *SAGE Open*, 8(2), 215824401877313. <https://doi.org/10.1177/2158244018773131>
- Thaut, M. H. (2008). *Rhythm, music, and the brain: Scientific foundations and clinical applications* (1st in paperback edition). New York: Routledge.
- Veloso, A. L. (2017). Composing music, developing dialogues: An enactive perspective on children’s collaborative creativity. *British journal of music education*, 34(3), 259-276. <https://doi.org/10.1017/S0265051717000055>
- Wang, Y. (2019). Summer camp for young people in civilization and arts. In *Beijing entougou Almanac*. Chinese Communist Party History Press.
- Wang, Z. M. (2021). The important role of primary school music education in the establishment of moral education. *Knowledge Window (Teacher ‘s Edition)*, 1, 56.
- Wu, Q. X. (2020). The important role of primary school music education in establishing moral education. *Contemporary Family Education*, 27, 162-163.

- Xie, X. H. (2017). Experimenting with the impact of primary school music education on students. *Northern Music*, 19, 188.
- Xiong, X. W. (2020). *A Study on the Current Situation and Development Strategies of Music Education in Primary Schools*. Jiangxi Normal University. Retrieved May 15, 2023, from <https://kns.cnki.net/KCMS/detail/detail.aspx.dbname=CMFD202101&filename=1020637984.nh>
- Yang, T. J. (2019). *A study of the emotional labour of primary school music teachers*. Northeast Normal University. Retrieved May 15, 2023, from <https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CDFDLAST2020&filename=1020617313.nh>
- Zhang, B. (2010). Analysis of the role of keyboard instruments in brain development. *Popular Literature and Arts*, 21, 278.
- Zhou, X. R. (2020). An introduction to the importance of family education in primary school music education. *Contemporary Family Education*, 4, 35.