A Systematic Literature Review of Chinese Music Education Studies during 2007–2019

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Based on findings from a large meta-data-based literature survey, this article is intended to provide a comprehensive synthesis of key features of China's music education system as seen through the lens of n = 116 major research studies. drawn from a total of N = 3,257 high-impact Chinese journal articles published during 2007–2019. The synthesis suggests that (1) education reform, aesthetic education, Chinese traditional music, and cultural identity were found to be the most prominent topics across all levels of formal music education; (2) in most studies, government financial support, policy priorities, curriculum enforcement, and pedagogical innovation are proposed as general cures to address perceptions of an unsatisfactory situation within music education. However, (3) by relating these findings to national statistics, a clear gap is identified between some research studies and actual social contexts, suggesting a possible deviation of academic communities from realistic educational and social challenges. Thus, external validity issues related to these studies are also discussed critically, along with their potential influence on views of what counts as Chinese music education in domestic and international research communities.

Keywords: music education, educational study, education reform, systematic review, research bias

Introduction

The formal Chinese education system comprises four levels (pre-school, Primary, Secondary, and Tertiary), in which compulsory education includes Primary school (Years 1–6) and Lower Secondary school (Years 7–9). National policies generally apply to all phases, although unified national curricula are only available for Primary and Secondary education. Since 1999, the landscape of formal education has been rapidly changing because of a nationwide focus on "Quality education [素质教育]" reform in China (State Council, 1999), and which has been realised in four primary areas of

education related to moral, intellectual, physical, and aesthetics [德育, 智育, 体育, 美育]. Meanwhile, the rapid national expenditure on education—which increased by 500% from 2006 and 2019—has been the principal driver of comprehensive education reform and appears to have triggered a related increase in music education research studies across all levels of the school system and broader social sectors. However, no formal study has been undertaken to systematically review the impact of these full-scale policy updates on music education since the 2006 Compulsory Education Law. New search results of the China National Knowledge Infrastructure (CNKI) database showed that 50 literature reviews were published out of 42,332 journal articles about 'music education' during 2007–2019. But only three literature reviews referred to over 50 academic sources. Chinese music education studies were found severely underrepresented in English literature due to a language barrier (Ryan, 2013) and research quality issues (Zhao, Beckett, & Wang, 2017). Therefore, it seems crucial to develop an up-to-date review of Chinese literature in this area that relates to music education issues concerning one-fifth of the world's population.

Objectives

The current article focused on emergent popular research topics and themes from n = 116 empirical research studies published between 2007 and 2019. The review approach is summative, covering a broad range of educational settings, and analytical, referring to "factual" evidence, such as national statistics and trustworthy organization reports. It is intended that this approach can help the reader to contextualize the revised studies within a large-scale education reform in China (as the background) and engage with research discussions and findings critically. The article seeks to provide answers to these questions:

- 1. What are the major research findings for each educational context: Preschool, Compulsory, Senior Secondary, Tertiary, Special, and Non-formal?
- 2. What are the prominent research topics within each phase?

Methodology

Research design

This review reports findings from the qualitative strand of a standalone systematic literature review based on Okoli's (2015) model. Derived from information science, a systematic literature review is a standardized methodology that offers an explicit and reproducible method for identifying, evaluating, and synthesizing an existing body of research literature (Jesson et al., 2011; Okoli & Schabram, 2010). It incorporates both quantitative and qualitative methods to (a) strengthen the validity of a metadata-based literature review by using a thematic approach to justify the captured characteristics of a large volume of research studies and (b) resolve methodological constraints in typical thematic and critical analyses, which tend to present a comprehensive picture of the reviewed research discipline using a limited number of articles based on "expert selection" (Moher et al., 2015; Okoli, 2015).

Database and literature selection

Based on Joh's (2013) research quality check framework, the selected journal articles in this review is based on specific criteria related to dependability (reliability), confirmability (objectivity), credibility (internal validity), and perceived transferability (external validity; *cf* Marshall & Rossman, 2015). Validity issues demand further evaluation as these relate to potential research biases (such as source bias, publication bias, and sample selection/allocation bias), which is less often addressed and more

difficult to defend in narrative reviews (Jesson et al., 2011; Khorsan & Crawford, 2014; Loh, 2013). By setting reliability and validity as the axes of a two-dimensional Cartesian system (see Figure 1), the current review focuses primarily on literature captured in the two quadrants of "reliability" (see Figure 1). In contrast, conceptual research studies are not directly used in the analysis due to apparent differences in chosen research paradigms (Mora et al., 2008) and literature review strategies (Grant & Booth, 2009; Ocoli, 2015).

All articles in this study were selected from the China National Knowledge Infrastructure (CNKI), covering academic journals, dissertations/theses, conference proceedings, yearbooks, and reference works published as early as the 1900s. Due to quantity and quality concerns, two high-impact academic journal source subsets under CNKI were eventually selected for literature scoping: the Chinese Social Sciences Citation Index (CSSCI) and Core Journals of China (CJC). During 2007–2019, the CNKI database returned 42,332 articles that contained both "music" and "education" in a combined search across Title, Keyword, and Abstract strings, of which N = 3,257items were from high-impact journals covered by the CSSCI and CJC. Based on the initial metadata analysis (see Table 5 in Yang et al., 2021), n = 116 empirical studies were selected for the current review. The selection process included scrutiny of the rigor of the research design, data collection process and analyses, as well as referencing accuracy, citations, and research ethics (see Table 1). Working definitions for what counts as educational research and each sub-category were drawn from established work by Johnson and Christensen (2014). Studies that reported data generated from observational activities or practical fieldwork experiments were deemed empirical (Duran et al., 2006; Given, 2008).

Summative Review Findings

In response to the two research questions on major findings prominent topics amongst the literature, the review is developed according to the five educational phases motioned above.

Pre-school

Whilst the Guidelines for Kindergarten Education were released in 2001 (Ministry of Education, 2001), pre-school music education (from toddler to 6 years of age) seems to be a much less studied research area, with only 80 journal articles during 2007–2019. Huang (2008) suggested that the intended "experiential curriculum" policy emphasized consolidation of goal setting, process design, learning facilitation, and evaluation, in which Li (2011) identified four major issues to be resolved within the educational provision at that time. These were (a) children's individual needs and pursuits were not addressed in teaching planning/design; (b) children's creativity was constrained by rigid teaching activities; (c) there was a need for a more communicative teacher-child relationship; and (d) a general shortage of teaching facilities existed. In 2017, the "Music as the Core of Aesthetic Education" [尚美乐心] program was proposed as a good example of an embodied experiential curriculum that encompassed the five musicrelated domains (health, language, society, science, and arts) specified in the Guidelines to the Learning and Development of Children Aged 3–6 (Ministry of Education, 2012a). The program emphasised educational output, contextualized learning, game-like teaching activities, and interdisciplinary knowledge building (Wu, 2017).

In terms of teaching content, many studies focused on the practice of introducing traditional Chinese music into classrooms (Cheng, 2009; Shi, 2013; Xu, 2013; Zhao & Adalet, 2018), which translates curriculum reform from a policy level to its educational

implementation. These include initiatives that combined (a) folk music appreciation with visual arts and folklore (Xu, 2013) and (b) music activity with storytelling and role-playing (Gao, 2014). For learning, music perception is one of the major topics in children's development. Multiple pedagogies, such as Orff (Hu & Luo, 2014), Dalcroze, and Kodaly (Liu, 2013), are reported as being beneficial to enrich participatory music experiences. Positive non-musical benefits of music participation are reported in decreasing anxiety about school (Li, 2011), increasing young children's adaptability to the school environment (Su, 2012), creative thinking and personality development (Zhou & Song, 2012), visual-spatial ability (Wu, 2014), linguistic skills (Yang, 2015), emotional regulation (Gao, 2016), as well as improvements in working memory and task switching (Yang, 2017). Concerning the developmental characteristics of children's music perception, Chen and Lü (2016) reported that children aged 5–6 years (n=70) scored higher on some music perception dimensions (such as timbre, tempo, and dynamics) than aspects of rhythm and emotion, whilst pitch perception seemed to be underdeveloped. It was theorized that children's perception at this age tends to be creative, comparative, simple, intuitive, and empirical, whereas greater achievement in pre-school education is dependent mainly on the richness of musical engagement and the collaboration between the school and the children's families (Cai, 2007). Apart from non-profit public sectors, the business market for pre-school education was estimated to be US\$27 billion in 2017 and to reach US\$42 billion by 2020 because of the two-child policy (Li, 2016). The policy also prompted a baby boom in 2017 and projected new opportunities and challenges in children's education (Xinhua News, 2018).

Compulsory Education

Because the nine years of compulsory schooling in the current system comprise six

years of Primary plus a three-year Junior Secondary phase, most articles on school music education covered both Primary and Secondary Education at the same time.

Senior Secondary education is administered under a different set of government policies and regulations. Surveys have been the most popular research approach in school education studies, contributing to 18% of the selected articles. The topics included students' learning, teachers' professional development, school facilities, and music education policy support across a wide range of regions and communities.

For Compulsory Education, teacher development is one of the popular research topics, influencing several aspects of compulsory schooling. In a study of school music teachers in south China, Peng (2008) identified conflicting accounts of teachers' professional identity as essential for their professional development. On the one hand, about 70% of the teachers (n = 199, 155 primary and 44 secondary) expressed a clear intention to quit their jobs once the opportunity arose. But most participants regard their teaching career choice as a personal preference, and half of them had been rewarded for teaching excellence or music performance in schools. On the other hand, most teachers were keen to develop their teaching professionalism in the long term, which often requires the gaining of teaching awards, research experience, and academic outputs in China. However, 40% of participants had never participated in a research project, and over 60% did not have any publication experience.

Consequently, the lack of adequate academic and research support seemed to prevent teachers from developing reflective instructional practices that are arguably essential to convert curriculum-designated content—as contained in music textbooks—into tailored teaching resources that better suit local educational needs. Textbook issues are often reported in culturally diverse regions. Zhou and Hou (2009) surveyed 67

music teachers from 12 multi-ethnic schools in Xiangxi, mid-west China using stratified samples. The teachers' criticism mostly focused on textbook content, which was believed to be disconnected from local needs and negatively influenced students' learning motivation. Additionally, the situation had been reportedly worsened by interruptions to regular music lessons. In a study of 30 school music teachers and 800 students in Yulin city, north China, Zhou (2012) found a rapid decrease in music lesson time in the final year of Primary school (from 100% to 60% of the recommended hours), and even more so in Junior Secondary schools (from 80% to 20%). Although 60% of the teachers held bachelor's degrees (or above) in music, only 35% of them taught music full-time. It was reported that 30% of the music teachers and 70% of students expressed slight dislike for music courses when most students said they "like music" in general. Due to a perceived weakness in teaching resources, 90% of the students regarded music as an unimportant subject. Nevertheless, some plausible solutions were proposed to increase students' music learning motivation and participation at schools in rural areas. Based on a study with 500 first-year university students, Chen (2010) believed that it would be helpful to develop a separate set of textbooks for undeveloped regions and invite local folk musicians into school-based curriculum development. However, apart from the massive costs (financial and staffing) implied, the real challenge could be expecting expert folk musicians from a generation (aged 20–40 in the 1970s) with a reported adult un/semi-literate population of about 35% in today's classrooms. This dilemma was identified in a recent study (Liu & Hao, 2018), where 94 out of 124 folk musicians were found to have no school education. Similar research interest was also seen in the inheritance of traditional music culture in urban school studies (Fu, 2016; Song, 2013). From psychological aspects, Meng (2013) studied the influence of music education on junior secondary students' (n = 97)

emotional intelligence by using a translated version of Parker's Emotional Quotient Inventory (Bar-On & Parker, 2000). The results suggested that the intervention of redesigned music lessons based on the same textbook had a significant favourable influence on students' emotional intelligence development in general. But no comparative group data were provided in the study.

Senior Secondary Education (General and Vocational)

Since 2001, the School Music Curriculum standards have been updated several times (Ministry of Education, 2012b, 2013, 2018b). Research studies of this phase focused primarily on three major themes: curriculum (including textbooks), course development, and teaching quality. The current curriculum standards integrated with key values (such as moral, recreational, and aesthetic) from previous curricula and were expected to (a) consolidate the implementation of "Quality Education" (Cheng, 2004; Wang & Wang, 2010); and (b) foster all-round development of "core competencies" (Chen, 2018, p. 61). As a result, music in Senior Secondary education was further extended to six modules: Music Appreciation, Instrumental Music, Singing, Composition, Theatre, and Dance (Ministry of Education, 2003). Accordingly, eight officially authorized textbooks were developed to enrich the music syllabus in Senior Secondary schools. However, researchers often criticised the high priority afforded to Music Appreciation, being the only compulsory module in the 2017 National Curriculum standards. It was argued that (a) emphasis should also be put on musical expression, including both performance and appreciation, and (b) students' learning preferences should also be considered (Guo, 2009).

Some proposals seemed to be very attractive in the competition between these new ideas. In government-funded research, Peng (2018) introduced arts education programmes in Boston (US) schools to Chinese readers, suggesting a well-designed

school music curriculum should have the capacity to connect and provide collaboration between performing art subjects, such as music, visual arts, and theatre. Several school experiments were conducted in China in the following years, but later tailed off with little success due to a lack of continuous financial support, experienced teaching staff, and course timetable clashes. Arguably, suppose these potential risks had been projected and evaluated ahead of implementation. In that case, it might have been easier to forecast that China's current public education system could not support such heavy demands on diverse educational resources. But the case study model could be possible in a few large metropolitan centres, such as Beijing and Shanghai, where regional, instead of national, school music/arts curricula have been implemented with extra financial support from local districts.

In terms of access to music learning, the central government reported (2019) that (a) 87% of Chinese students received music education during Primary and Secondary education, and (b) that the proportion of weekly total teaching hours for arts courses (including music and fine arts) was meeting the 9% requirement in the 2002 national regulations within all administrative districts, apart from Hong Kong and Macau where the national curricula are not mandatory (Ministry of Education, 2019a). The 2018 National Statistics for Primary and Secondary Education reported that 90% of schools met the basic requirements for music course facilities by 2018, suggesting a significant improvement from the previous official census in 2006 (see Figure 2). However, ensuring the standards of learning outcome remained a challenging task in terms of teaching content selection and pedagogical strategies. For example, a comparative study of groups of Zang (n = 51) and Han (n = 60) ethnic students in two schools found that student music learning traits were psychologically different and associated with students' ethnicity (Ren, Shan, & Chen, 2009). Although both schools were in

Shijiazhuang city, mid-east China, Han ethnic students showed higher overall levels compared to Zang ethnic students in terms of cognitive, meta-cognitive, and global functioning, where the latter (Zang) students showed a greater extrinsic motivation in their music learning. Despite similarities in traditional cultural values and linguistic characteristics, the "immigrant" Zang students were reported to experience difficulty in their adaptation to a somewhat "distant" cultural or learning context, as reflected in aspects of self-concept, self-regulation, and self-monitoring. Therefore, the lack of "native" music content and "non-contextualised" music teaching was seen as being primarily responsible for a passive learning approach reportedly used by most Zang students. This implied that the selection of music modules could be a challenge in particular teaching scenarios, even when elective modules were available. Another research on music-specialist students (n = 550) in ethnically diverse regions found that (a) Han students showed a strong intrinsic motivation in their music learning, being significantly influenced by their parents' profession and education level, whereas (b) the motivation of students from ethnic minorities appears to be more associated with external factors, such as family location and economic status (Ren, 2013).

At a macro level, most suggestions and proposals in the analysed literature infer that there has been an overhaul of the Chinese music education system in aspects of state financial support, teachers' professional training, and regional curricula development. But several important issues have not been addressed adequately. Firstly, whilst the overall spending quota for students had increased by over 500% from 2006 to 2018 (see Figure 4), the lack of effective budgeting at municipal and school levels appeared to have been more critical to student outcomes than increasing the budget alone. Secondly, there was considerable growth in the population of music teachers, with the numbers in Primary education almost doubling from 135.3k to 252k (see

Figure 3), alongside a significant increase in the number of music teachers with bachelor's degrees in both Primary (up from 14.0% to 64.0%) and Junior Secondary education (from 30.0% to 83.0%). The steady and rapid increase in music teacher supply could resolve the "severe shortage of qualified music teachers" (Ma, 2003, p. 51), which was accompanied by a considerable decrease in school numbers as a result of urbanisation since 2006 (see Figure 2). Therefore, the reallocation and retention of experienced rural and urban music teachers may be more crucial than boosting the annual supply of new teachers. Lastly, evaluating teaching and learning quality can be highly challenging within a context in which curricula contain various local music content within a relatively unified curriculum system.

Tertiary Education

General Music Education

According to the Guiding Plan for General Art Courses in Higher Education (Ministry of Education, 2006), all undergraduates are required to complete at least one of eight elective courses: Introduction to Art, and another seven appreciation courses in Music, Fine Art, Movie, Drama, Dance, Chinese Calligraphy, and Xiqu (Chinese Theatre). The 116 top-tier universities (so-called "211" and "985" universities) were obligated to implement the plan thoroughly and provide all eight courses by 2006, while the other higher education institutions were advised to accomplish the same goal by 2009. In general art education, a significant portion of Chinese music content was introduced to (a) support the inheritance of cultural traditions, (b) facilitate aesthetic education, and (c) improve individual and social well-being in general (Li, 2009; Niu, 2008; Zhang & Zhao, 2012). The general music education policy advocated a celebration of a "humanistic spirit" that was perceived to be achieved through mindful thinking [思考],

in-depth experiences [体味], and immersive engagement [沉醉] (Zhang, 2011). However, the implementation of the 2006 plan was hindered by diversified needs in music learning (Wu, 2016) and a substantial low-music-literacy student population in higher education (Lü, Fan, & Liu, 2006; Wang, 2012; Zhang, 2014); especially in the science and engineering universities (Qin, Chen, & Teng, 2013; Su & Li, 2011; Zhang & Zhao, 2012).

Some studies expressed serious concerns regarding the quality assurance aspects of music courses and related textbooks (cf Chen, 2011). More recent studies suggest that the situation seems to improve gradually in most face-to-face teaching environments (Zhang, 2017; Zhang & Zhao, 2012) and Massive Open Online Courses (Yang, 2015), which were adopted recently to increase class size capacity and music content richness. These courses were often designed and delivered solely by music scholars and professionals. Then, a lack of collaboration with education experts was reported to increase the gap between the prepared content and students' actual needs in general music education (Ge, 2012). In addition, Zhang's (2014) empirical study suggests that, apart from intellectual quality, music education appears to have no evident influence on university students' moral and psychological well-being in the long term. If so, the aesthetic and moral benefits of the current approach to general music education would be questionable. Nevertheless, Zhao (2016) believed that courses about music education philosophy could positively influence students' worldviews and, therefore, should be introduced into the general education curriculum. Although music education philosophy was amongst the top four topics in academic publications from 2007 to 2019 (Yang et al., 2021), it is also in the least popular course group in the general education course database provided by Chinese Universitas MOOC (中国大学 MOOC) since 2012. This

disparity suggests that "theoretical significance" in the academic world may not directly translate to importance from the students' perspective.

For policy initiatives to curricula support, it seems clear that great efforts have been made to improve the educational resources available to serve a much wider student community. However, pedagogical challenges are emerging as a central issue in this enormous expansion of music education serving over 400 million new university students every year (Ministry of Education, 2021).

Professional Music Education (Performance and Composition)

Singing and piano are two predominant research areas in professional music education, while a small percentage of publications have focused on violin and several Chinese string instruments, such as Erhu, Guzheng, and Pipa (Ren, 2015; Song, 2016). For singing pedagogy, Western and Chinese classical remain the major styles for study (Xie, 2005), whereas pop, jazz, and other contemporary styles are much less discussed. A strong focus on different teaching pedagogies highlights the prevalence of a European conservatory tradition in professional music training. Amongst these, a fusion of Western and Chinese music styles has been intensively discussed and critiqued in much of the literature (e.g., Feng, 2008; Zhang, 2009; Zhao, 2016), suggesting an awakening self-awareness of indigenous music traditions, related to what has been termed "cultural self-confidence [文化自信]" (Liu, 2013). Consequently, a fusion of contemporary aesthetics and Chinese traditional music features was encouraged in music learning and performance (Han, 2007; Yang, 2007). Learning strategies, evaluation, and assessment have not been well researched and are relatively absent in the empirical literature.

Music composition teaching/learning is the second most-reported topic, comprising four key components: harmony, polyphony, musical analysis, and

orchestration. Interestingly, the primary focus of the discussion showed little interest in a possible clash between traditional and contemporary compositional techniques or philosophies. Instead, a long-lasting debate ensued concerning the reported conflict between the domination of Western music theories over Chinese music theories (Yang, 2012). The search results from the CNKI database support a general conclusion that studies of Western classical music are predominant within professional music education in general. Very few studies have focused on the learning of compositional elements in Chinese traditional music, such as instrumentation, notation and musical forms, which composes Banqiang [板腔] (metrical types and lyrics-based tune arrangements) and Qupai [曲牌](melodic models of limited space for elaboration and variation). To "counteract" the reported massive expansion of Westernisation in music education, several strategies were proposed and echoed throughout many studies, claiming a strong influence from an ethnomusicological standpoint. Zhao (2005) suggested that an approach to multicultural music education should be introduced to increase the compatibility between Chinese and non-Chinese music content, as well as the capacity for diverse music practices. It has been further argued that music identified by UNESCO and the National Intangible Cultural Heritage representative lists should be regarded as prime sources to support a "more Chinese social-ecological system" in music education (Han & Xu, 2015). In such a system, the foundation for indigenous music learning would be formed upon a series of academic courses, for example, ethnomusicology, musical temperament [乐律学] (the study of musical tuning systems), musical morphology [音乐形态学], and organology [乐器学]. Folk master performers—as authentic culture carriers—would be invited to support the course system and conduct teaching duties in universities (Yang, 2005). At an individual level, it would be anticipated that learners could develop "bi-musicality" [双重乐感] through

a "deep cultural immersion" that could (a) demolish inappropriate Western-music-based judgements of indigenous music traditions; (b) revitalise the "real meaning of music" by upholding socio-cultural, rather than musicological, values in contemporary society; and (c) support a wholistic and "humanistic" approach in professional music education based on anthropology, sociology, and cultural studies (Zhang & Wang, 2011, p. 27; Zhou, 2012).

Guan (2011, p. 8; 2013) strongly argued against this "suppression" of indigenous music in professional music education. This was considered a disturbing outcome of "science-based instrumental rationalism" and logical positivism under the notion of "modern Eurocentrism," which emphasises specialisation and division in music practice and an empirical paradigm in research studies. Consequently, there was a line of thought that these inherent characteristics of Western epistemological traditions seem to prevent learners from engaging with indigenous music as part of their native culture and, instead, make it a distant art form (or object) to be inspected and analysed. To defuse this potential "epistemological bias," Huang (2009, p. 22) proposed a thorough rehabilitation of research practices in seven disciplines: cultural value, education philosophy, teaching content, pedagogy, textbook, curriculum, and indigenous music education.

Professional Music Education of Music Teachers

Music education programs (often termed teacher education) have the largest enrolments within tertiary education (an estimated 250,000 annually). Generally, they comprise two cohorts of students—self- or state-funded—who study similar curricula for college certificates or bachelor's degrees. Since the release of the 2007 Free Education for Students in Teacher Education Program, seven "Normal Universities" under the direct

supervision of the Ministry of Education was chosen to offer state-funded undergraduate and postgraduate degree programs for students enrolled in the state-planned teacher supply scheme. Additionally, in-service music teacher training programs are regularly organised by local education bureaus or departments.

In music teacher education, quality assurance has been the primary focus of study. With the release in 1998 of the Education Promotion Plan of Action for the 21st Century, the Ministry of Education decided to accomplish (a) the full implementation of a nationwide nine-year compulsory education for children and young people by 2000, (b) set "quality education" as the long-term goal, and (c) increase the gross enrolment rate for tertiary education students to 15% by 2010. These targets were realised, alongside a considerable increase in the enrolment rate to 48%—about 8 million undergraduates in 2018 (Ministry of Education, 2019b). This movement led to a sudden increase in schooling, which placed extra enrolment pressure on colleges and universities that were ill-prepared to cope with such an intense demand for qualified teachers. Although the severe shortage of school music teachers has been alleviated in terms of quantity, it is reported that the quality of the schoolteacher population remains a long-term challenge to be resolved in both developing and underdeveloped regions (Liao & Zhang, 2021).

As the central impetus of the policy, higher education institutions have been struggling with a high student-teacher ratio, which was officially regulated to be 2.5:1 in the 1980s. The rate increased to approximate 20:1 on average in the 2000s, far beyond the recommended maximum threshold of 5.8:1 (Wang, 2010). But high expectations on music teachers are evident in terms of the ability to possess all-round-development, comprehensive knowledge about music, and creativity in educational practices (Wang & Wan, 2009). In the professional development of student teachers, practical music

skills have been emphasised as the foundation of all courses, whereas solfeggio training was reported as "the weakest link in the chain" (Ma, 2011, p. 58; Zhan, 2014).

However, some researchers suggest that "educational subjects" underpin the fundamental elements of students' knowledge, whereas "music subjects" are the embodiment of specialised professional practices and should, therefore, be undertaken at a graduate level (Zhao & Gan, 2007). The curriculum reform of music teacher education programs has been fast-paced since 2005, showing a strong emphasis on indigenous music culture (Wang & Yang, 2012), multicultural practices (Zhao & Gan, 2007), and—to a limited extent—learning evaluation and assessment (Yang, 2010). To solve the regular neglect of context-sensitive teaching practices, Huang (2010) proposed a combination of short-term and long-term mechanisms to support students' teacher professional identity development. The mechanisms include four phases: professional introduction, learning target achievements, teaching practices, and practical knowledge implementation across the typical four-year timespan of these programs.

In short, the first 20 years of the 21st century have been a favourable time for tertiary music education in terms of government funding, policy support, student enrolment, curricular enrichment, and (to an extent) research inputs. However, it has also been a "confusing" time during which educators and students were led and driven by proposals in pursuit of an authentic "Chinese music education." Although the battle between "Western" and "Chinese" perspectives makes the practices of written music and solfeggio less prominent, both in general and in teacher education, little evidence exists in the available literature that oral learning approaches have helped students to learn and engage with music with greater confidence and to foster better music outcomes in general. When the perceived emphasis on knowledge-based music learning was criticized repeatedly by (Guan, 2011), the proposed shift towards a cultural practice

of music only appeared to offer a somewhat blurred vision of multicultural education, in which teachers are expected to be music culture experts. However, suppose future music teachers are not adequately equipped with knowledge and skills in music performance and teaching. We can hardly expect school students to develop a good understanding of music and sustain a lifelong interest in music activities and related culture (*cf* Pitts, 2017). Perhaps one fundamental question could be: Are music teachers and music courses still needed in formal education, whereas perhaps pure "cultural immersion" could supposedly do a better job? These competing propositions seem to imply a disconnect between (a) the academic community with its emphasis on theoretical inquiries and (b) the needs of individuals during their university education under the current policy to foster music as a cultural practice.

Special Education

Although the first decree from the Ministry of Education was dedicated to special education (Ministry of Education, 1998), music has been a less-studied research area in the special education sector. From 2006, about 9,000 CNKI journal articles were published concerning special education, of which only 150 articles related to music. Based on the Second China National Sample Survey on Disability (Office of the Second National Sample Survey of the Disabled, 2007) and the Sixth National Population Census (Population Census Office of the State Council, 2011), the estimated population of people with disabilities was 80 million by 2010, categorised within three age groups: 0–14 years (5%), 15–59 years (42%), and 60 years and over (53%). During 2006–2019, the population of special schoolteachers increased from 33,400 to 58,700, of which 74% were female (Zhang, 2018). In terms of teacher supply, there were significant improvements in teachers' specialised qualifications and degree levels, with

the number of teachers holding bachelor's degrees increasing substantially (see Figure 5). Meanwhile, it was reported that the majority of the 58,000 school students (66% male) were classified as having either intellectual (48%), hearing (16%), or extremity (15%) disabilities. In contrast, visual, speech, mental, and multiple disabilities occur with less frequency in the broader population (Ministry of Education, 2007, 2018a). Annual government funding has been increased from 0.2 billion in 2009 (Xie, Qian, Yang, & Jiang, 2009) to over 1.3 billion in 2018, supporting 58,700 teachers and 665,900 students in 2,152 special schools across the country (Ministry of Education, 2019a). In the same year, the school enrolment rate was raised to 90% amongst children aged 6–14, and 10.74 million people received essential rehabilitation services, including music therapy (Ministry of Education, 2019b; Zhang, M.Y., 2019; Zhang, Z. Y., 2019).

In general, there has been an imbalance in the development of special education across regions. Most special schools are situated in urban areas, whilst rural areas rely on visiting teacher programs (Deng, 2012; Qian, 2013). Regardless of financial status, survey studies suggest several common difficulties amongst all types of provision in the special education sector: chronic understaffing, a severe shortage of specialist teachers, few opportunities for pre-service and in-service training, outdated textbooks, and a lack of extra-curricular music activities (Cheng, 2008; Li, 2006; Peng, 2011). A case study in Shen Yang city suggested that the state-endorsed music textbooks for special schools had remained unchanged since 1993, although the number of music lessons had increased from two to three lessons per week from 2007 to 2015 (Zhang & Hao, 2015). The implementation of therapeutic or clinical approaches was advocated to support children with autism and, separately, hearing impairment, as music education was regarded as support music-mediated socialisation (Chen, 2013; Hou, 2016; Wang, 2011), as well as being a practical approach to enhance possible recovery or reduction

for certain kinds of impairment (Liang & Liang, 2018; Wang & Xu, 2015). These treatments were elaborated into a four-stage pedagogical intervention that the authors suggested should include initiation into the art form, music exploration, music expression, and consolidation (Liang & Liang, 2018). Zhang's (2019) longitudinal case study suggested that music education has great potential to reduce social interaction difficulties and prevent the development of related intellectual disabilities amongst over 2 million children at an early age who have this diagnosis. Noticeably, although people with autism are estimated to account for 1% of the country's population (1.4 billion), they have not been included in the scope of special education until recently (Wucailu Child Development Center & SED-BJNU, 2017, 2019).

The expansion of music content, coupled with the diversity of children with different needs also implied a need for a thorough revision of music textbooks, curricula, and teaching pedagogies. To support speech and physical recovery and rehabilitation for visually impaired students, Du (2009) proposed four foci: touch perception, behaviour modification, verbal induction, and eurhythmics expertise in music teaching. When considered alongside similar studies (Li, 2013; Liu, 2015; Wang, 2015), the research findings were synthesised as a need across the special education sector for three generic teaching strategies: encouragement and acceptance, situating and interaction, and restriction and induction (Zhang & Hao, 2015). Liu (2015) further suggested that a newly developed 42-course framework for special schools can suit the practical needs of most students and would also be compatible with the curriculum standards for mainstream schools. However, the development of appropriate textbooks for these courses would be challenging due to specialists' increased professional requirements in music education and psychotherapy. At a macro level, there was (and is) an urgent need for teachers with specialised therapeutic and music qualifications

(Hu, 2013). This, in turn, implies a comprehensive redesign of the current special education degree programs to incorporate and integrate the latest theories, pedagogies, and sustained practicum experiences (Li, 2016; Ministry of Education, 2015).

Non-Formal Music Education

In this review, non-formal music education refers to organised out-of-school music education and training experiences that include, but are not limited to, community music education, non-professional music examinations, and family and private music education across all age groups. While community music research shows a rapid increase in volume from 2006 (with over 500 publications in the CNKI database), empirical research has been even rarer than in special education. Before a substantial nationwide increase in the number of commercial education companies in the 2000s, community music education used to be provided primarily by state-funded arts and cultural organisations, such as so-called children's palaces, cultural centres, and senior citizens' universities. But it has been facing severe challenges in rural and some urban areas because of increased commercialisation, weak administration, and market adaptation (Sun, 2009). During 2007–2019, over 50 survey-based studies were published in community music. Many of the research participants seem to be keen to learn music, although over half of them were reported to be not very competent in music practices (Xia, 2014). Due to a rapid urbanisation process (1.35% per year), community education became a major channel for further education since the early 2000s amongst the new urbanised and aged populations (Xiao, 2013). The vast reported gap between market demand and limited service-suppliers was seen to hasten a large expansion of private educational providers, who were seen as a supplement to statefunded organisations on the quest of "lifelong learning for all" by 2020 (Wu, 2013, p. 169).

Currently, the resources available for community education are still underdeveloped, with singing and dance (or a combination of the two) being reported as the major activities because of their relatively low cost (Cen, 2012). In big cities, people older than 40 years were regular participants in these activities, who are likely to be very familiar with traditional music and interested in modern music styles (Cen, 2012). Yet, over half of the surveyed respondents reported no organised music activity in their community, and only 10% of participants suggested that music activities were organised regularly. There was a clear difference between residents' high aspirations for community-based music activities compared with an apparent low investment in the required facilities (Wang, 2012). Consequently, public open places, such as squares, parks, and sports fields, were reported to be often taken over by groups of singers and dancers. These self-organised evening activities attracted many children to join, but occasionally provoked complaints from local people (Liu & Zhao, 2017). Research also found positive elements to these communal social activities, believing that these could be introduced into pre-school education as informal learning approaches (Cui, 2015).

Public music examinations and certifications represent a massive internal market worth approximately US\$10 billion in 2017 and helped 1.4 million examinees within this provision and the music training for the National College Entrance Examination (Communication University of China, 2017). The available music examinations comprised 44 subjects in two prime categories (instrumental and vocal). They were provided by either prestigious national or international music conservatories or state educational organisations under regulations from the Ministry of Culture (2004, 2016, 2017). However, with the rapid growth in sector investment from enterprise capital, branded chain store operations are becoming an influential power that drives public music education in a more market-oriented direction (Guo, Luan & Guo, 2017).

Recently, business companies have started to attract a considerable population of individual music learners and even government-funded public schools in big cities because they can offer advanced music technologies, innovative educational resources, and tailored training programs. In return, these offerings have already brought the companies a significant profit on their short-term investment (Communication University of China, 2018).

Discussion

Drawing research evidence from 116 educational studies of a large journal article dataset (N = 3,257), the review identified four issues that raise concerns relating to research external validity. Firstly, it was found that researchers noted a profound impact from the ongoing reform of the education system. Across most phases and contexts of music education, the publications are built around a policy initiative favouring "aesthetic education" and have shown a strong emphasis on ensuring the survival of Chinese music traditions as part of the formal education system. Several philosophical terms, such as historical-materialism, postmodernism, and postcolonialism, were constantly identified as critical challenges in some influential (in terms of reference rate) academic studies that relate policy initiative, curriculum design, and teaching pedagogy (Guan, 2011 & 2013). However, due to the lack of fieldwork reports in many selected studies, the meaning of these terms has not been fully unpacked. Thus, the gap between academic discourse and education practices is noticeable (Li, 2016).

Secondly, greater financial support is proposed as a general cure for what is seen as an unsatisfactory music education situation, policy priority, curriculum enforcement, and pedagogical innovation. These claims are valid but could be an over-simplification if the diversity of regional and system differences is not adequately considered. Seen through the lens of the published literature, discussions on quality issues in education

reform seem to be overly focused on aspects of quantity. Given that a minimum time for music each week were specified in the current national curriculum standards, it would be necessary to, for researchers and the ministry, focus more on what counts as successful music education at local and individual levels. While there is no denying that extra support is always likely to help, it would be very optimistic or a misconception that quality issues in formal music education can be solved by state investment alone.

Third, the geographic distribution of research participants (about 42,000 in total) from the selected n=116 articles suggests that most empirical studies were conducted with cohorts from economically developed areas, namely Eastern and Central China (see Figure 6). Given that educational resources usually are sufficient to support better implementation of education policies, it could be argued that the reported research findings and suggestions for policy action reflected issues that are valid in certain conditions only. Thus, the publication and participant selection bias (Pigott, 2013) will affect the practicability of theory adoption in diverse educational practices and the reliability of large-scale educational reviews in policy consultation. It would be a risky practice to form a comprehensive review without further consideration of external contexts (Khorsan & Crawford, 2014), such as education system design, values, and developmental phases. Meanwhile, the lack of a global view in music education studies weakened the power of arguments on major policy changes from decentralisation to recentralization after 2005 (Xiang et al., 2020). Current music education issues include, but are not limited to, gender differences in teacher supply (Figure 5), equality of financial support (Figure 4) and economic diversification (Figure 6).

Fourthly, by comparing the findings from the current summative review and the previous meta-data-based literature analysis (Yang et al., 2021), theoretical research studies were particularly reliant upon selective individual experiences to emphasise the

importance of music education. This practice may conceal potential researcher bias with formalised accounts of observation and analysis. As a result, it seems to be often the case that the common (if not popular) educational practices, which were believed to be valid, were not much challenged until new policies emerged. This was exemplified by a loop of sudden increases of critics on the expiring/expired curricula and favourable reviews on the ones to take effect. Also, music psychology, teaching and learning assessment, music technology, diversity and inclusive education, and community music are the fields currently lacking research attention. Therefore, a possible deviation of academic study from real-world problems was indicated by the contrast between prominent education issues, such as diversity and equity (Xiang, Stillwell, Burns, & Heppenstall, 2020), and research interests in the reviewed publications, which could present a very limited or "corrected" perception of music education development in China.

Conclusion

The article has been designed to present a contextualised overview of research trends and strands in a group of selected research studies publications from 2007 to 2019. The findings would be particularly relevant to researchers undertaking studies about Chinese music education and comparative studies in an international context. As was exemplified in this study, validity issues may result in vague research topics, altered presentations of educational status, and, consequently, undermine the practicability of research recommendations for music education in China's large and complex system. Therefore, careful observations of research contexts would (a) be necessary before developing narrative/critical accounts on the findings and opinions, and (b) help researchers to identify and clarify inconsistencies and avoid any replication crisis (Siddaway et al., 2019; Khorsan & Crawford, 2014). Given that practicability is a key

value of educational studies, a systematic review can provide research-based evidence to support decision-making in educational policy and practices (Jessen et al., 2011, pp. 73–76), where reliability and validity are interrelated properties.

Like all the other literature review types, this review also has limitations in terms of availability and selection biases (Xiao & Watson, 2019) by using journal articles only. While a total of 3,257 articles were analysed initially, conceptual and empirical studies that suffer from internal validity issues were not covered in this article due to methodological constraints. A dedicated narrative review from sociology—political and educational perspectives would be necessary to conclude a data-informed literature review. It will initiate critical inquiries into relevant research findings relating to China's music education using Chinese and English literature.

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Table 1

Descriptive Information of the 116 reviewed journal articles

Tables

Category	Count	Category	Count	Category	Count
Publish year		Research type(s)		No. of Author(s)	_
2007	5	Qual. (Empirical)	4	1	75
2008	6	Quan. (Empirical)	106	2	29
2009	8	Quan. (Experimental)	6	>3	12
2010	10	_			
2011	6	Research context(s)		No. of references	
2012	14	Pre-school	9	0-10	101
2013	13	Primary	9+26*	11-20	11
2014	10	Secondary	11+26*	>21	4
2015	15	Tertiary	51		
2016	11	Other	10	Ref. accuracy	
2017	7	Fieldwork & research eth	nics	Yes	73 (63%)
2018	8	Full	94	No	32 (28%)
2019	3	Adequate	22	N/A	11 (9%)

^{*}Note: 26 articles include participants from both primary and secondary schools.

Figures

Figure 1

Research quality cartesian system for literature selection

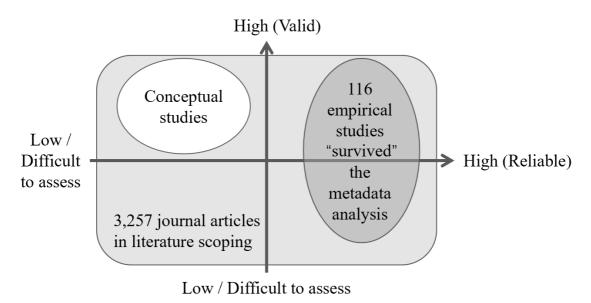


Figure 2

Schools that meet the basic music course facilities requirements in 2006 and 2018

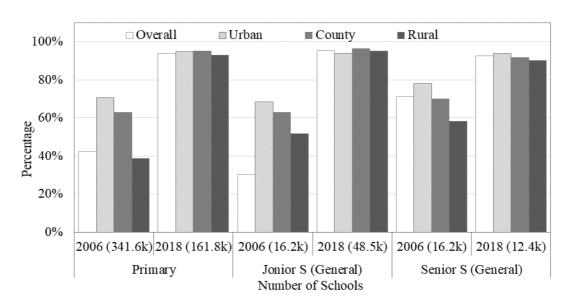


Figure 3School music teachers' qualification compositions in 2006 and 2018

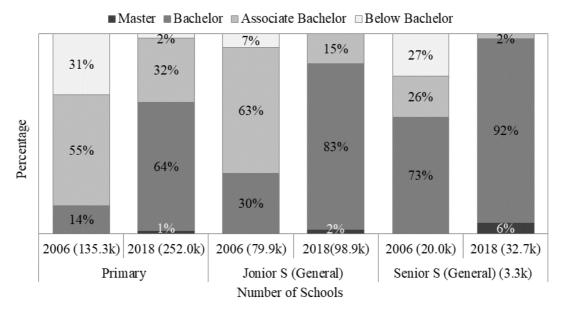


Figure 4General education expenses and budget per student in 2006 and 2018

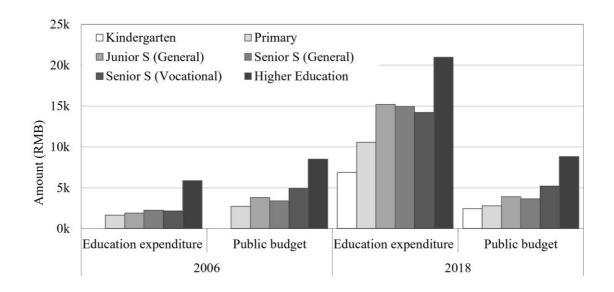


Figure 5Nationwide music teacher supply in 2006 and 2018 by degree level and gender

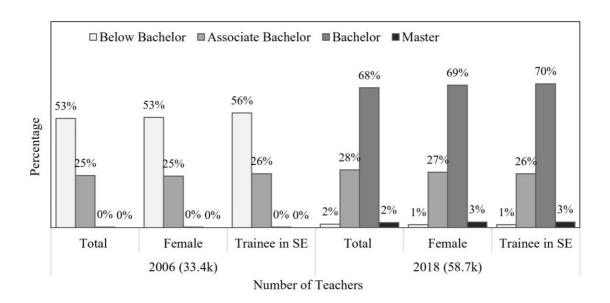
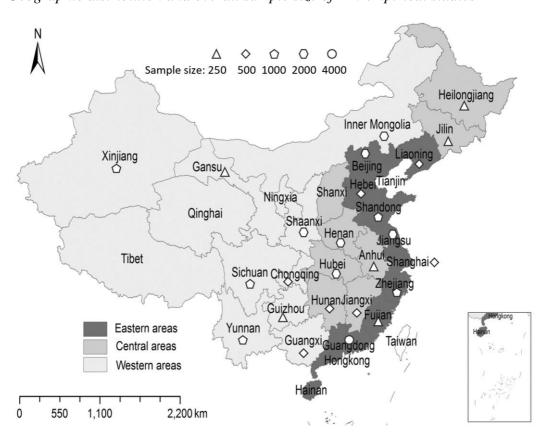


Figure 6Geographic distribution and overall sample size of 116 empirical studies



Note: The base map was adopted from Xiang et al. (2020), showing three macro-regions of China and cartogram inset with per capita GDP (2014) for provincial level units.