

A Systematic Literature Review: Teaching Methods in K-12 Music Curriculum

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Abstract

Teaching methods play a crucial role in the programme of K-12 music education as the effective teaching methods can efficiently stimulate students' interest on music, engage them to explore the world of music, and improve learning outcomes. Building on the framework of PRISMA, this systematic review will measure the applications, advantages, and challenges of various instructional strategies through journal articles analysis from Web of Science and Scopus (2016–2024). Although innovative methods such as using high-technology and cultural-responsive teaching have shown the potential in improving student's engagement and interest on music, the negative impact such as insufficient resource, the adaptability of students for curriculum, and insufficient training of teachers should be also concerned. This review stresses the significance of using mix teaching models (traditional and innovative), and it also provides valuable insights for educators and curriculum designer in order to optimize music education for K-12 students.

Keywords: Teaching Methods, K-12 Students, Music Education, High-Technology, Cultural-Responsive

Introduction

The extant literature has indicated that teaching methods play a crucial role in K-12 music education, it is beneficial to foster students' musical appreciation and creativity. (Greenhow et al., 2020). Although traditional methods, such as stressing music theory, notation, and instrumental training, are still deemed foundation of learning music, the current teaching strategies have gradually moved toward interactive, namely student-centered, emphasizing the interaction between students and teachers (Muhonen, 2016; Tabuena et al., 2021). To realise the interaction, digital music tools, culturally responsive teaching, and interdisciplinary integration are adapted by teachers in order to improve students' classroom experience (Saetre, 2018; Uludag & Satir, 2023).

Substantial literature has discussed the student outcomes that K-12 music education is affected by adopting different teaching methods (Greenhow et al., 2020; Wu et al., 2024; Tabuena et al., 2021). Scholars proposed that traditional methods such as teacher-centered stressing the role of teacher in music knowledge delivery cannot better attract diverse students into music classroom, although these methods are essential to build theoretical

foundation on music (Concina, 2023; Yun, 2024). By contrast, using high technology (digital tools) such as the software of music composition and the interactive platforms of digital music can positively stimulate students' creativity and improve their learning experiences (Avdiu et al., 2022; Biasutti et al., 2023; Olvera-Fernández et al., 2023). Moreover, adopting cultural-responsive method enable to enrich the curriculum design through integrating different students' backgrounds, facilitating multicultural exchanges (Bennett, 2023). However, unequal resources allocation, insufficient teacher training, and difficulties in interdisciplinary integration as challenges still exist, slowing the use of high technology on music education (Concina, 2023; Yi, 2023).

Due to the development of K-12 music education, a deeper knowledge of teaching methods is fundamental to improve students learning experience. The extant literature prefers to concentrate on either traditional or technology-driven methods, however, the discussion of combining both less involves. Therefore, this study adopts a systematic review to appraise strengths, limitations, and the possible integration in terms of K-12 teaching methods on music. This study aims to provide valuable references to underpin educators in designing effective and attractive music curriculum through the comprehensive analyzing the extant literature.

Research Objectives

The aim of this systematic literature review (SLR) is to provide useful guidance for educators and future research in terms of teaching methods in K-12 music education through comprehensive reviewing the extant literature from 2016 to 2024. By reviewing the previous findings such as using traditional methods, digital tools, and cultural-responsive teaching methods, seeks to effective methods to improve instructional performance and facilitate curriculum design on music.

Research Questions

RQ1: How do use various teaching methods affect student learning and participate in K-12 music education?

RQ2: What are the pro and cons of integrating digital tools in music education?

RQ3: How do traditional and innovative approaches be efficiently integrated to improve and optimize learning performance?

Methodology

In order to ensure methodological rigor, PRISMA criteria is employed to conduct this systematic literature review. Scopus and Web of Science (WoS), as two major databases are employed to seek and identify relevant literature on teaching methods in K-12 music education through a systematic process of searching, screening, and evaluating sources. Finally, a synthetic analysis will be implemented to discuss the applications, strengths, and challenges of diverse instructional strategies in K-12 music education from the final settled studies. The investigation process comprises six key phases: planning, literature search, assessing literature quality, obtaining data, integrating data, and combining findings. This systematic method strongly increases the reliability of the review.

Article Selection Process

Based on The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA), it can establish a well framework to improve the transparency, consistency, and reliability of systematic literature reviews (Tugwell & Tovey, 2021). It provides an effective method to identify and obtain the required literature through offering a clear, structured process for identifying, selecting, and analyzing relevant research. Therefore, the quality of systematic reviews is effectively improved by using PRISMA.

The PRISMA framework in this study is employed to implement the systematic literature review in terms of teaching methods in K-12 music education. The process comprises three key phases: identification, screening, and inclusion, as shown in Figure 1. During the phase of identification, a comprehensive search is utilized across major academic databases including Scopus and Web of Science (WoS) in order to collect a wide range of relevant research. The phase of screening contents optimizing the choice through removing duplicates, using the criteria of inclusion and exclusion, and appraising titles and abstracts. Eventually, the phase of inclusion focuses on the review of a full-text and decide the required literature for deeper analysis. This structured method guarantees the rigor of methodology and provides a concrete foundation for facilitating research in K-12 music education. The flowchart shows the process of selecting articles is building on the PRISMA statement and the flowchart is updated from the official PRISMA document.

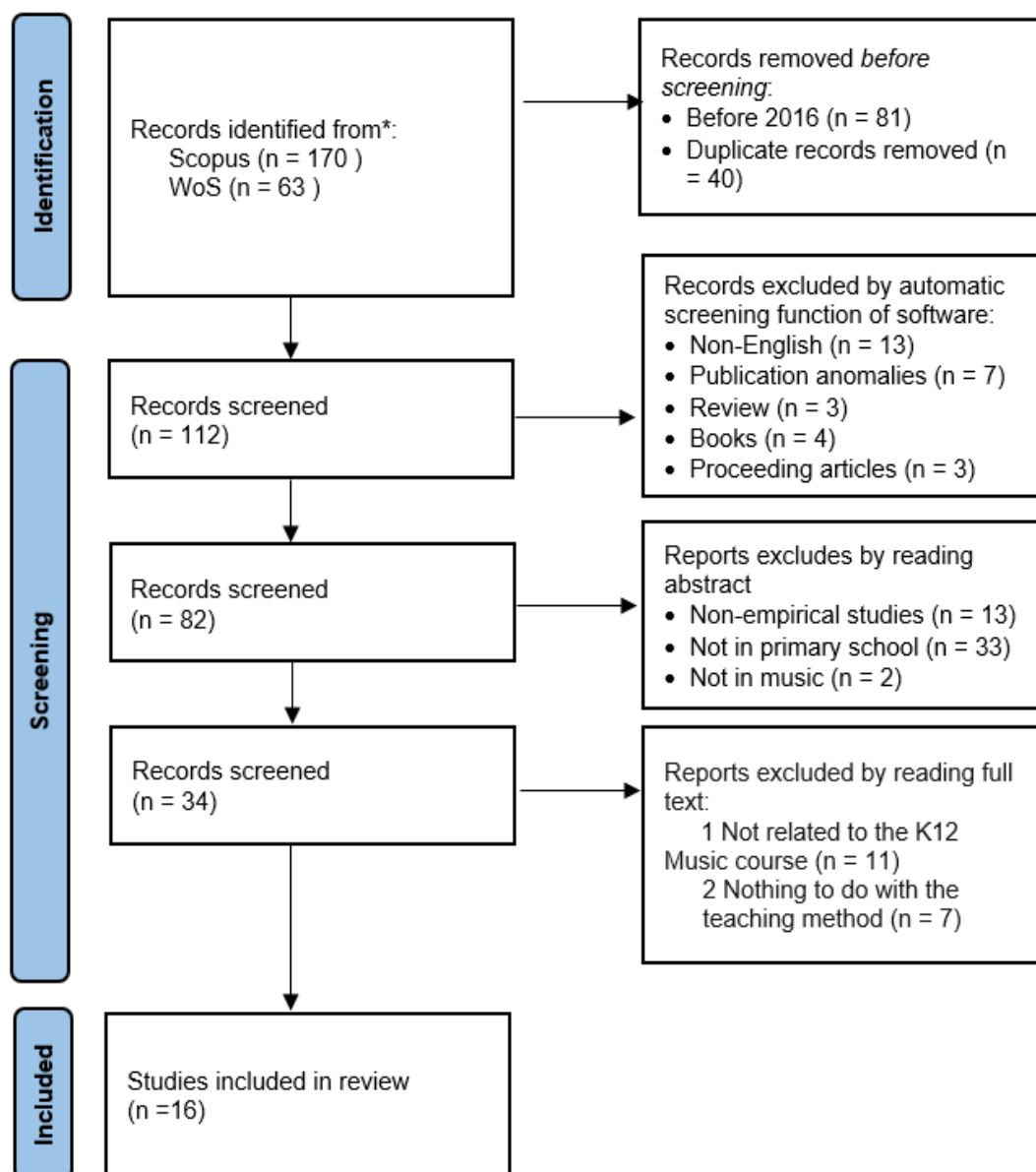


Figure 1 The Process of Article Selection

Note: this figure shows the process of screening articles based on PRISMA framework.

Following the guidance of the PRISMA, this study guarantees that the selection of literature is systematic and transparent. The structured methodology reduces bias, increase the credibility of the outcomes, and provide valuable reference for future research in K-12 music education.

Phrase 1: Identification

The phase of identification, as the primary phase of the systematic review process, aims to conduct a comprehensive and high-quality collection of literature relating to teaching methods in K-12 music education. Considering the rigor and credibility, Scopus and Web of Science (WoS) were chosen as two major databases because their rigorous criteria of selecting journals and articles. Importantly, their wide recognition and extensive coverage of education study make them be reliable source of high-quality literature.

In order to improve accuracy and relevance, the method of structured search was employed. The setting of Keywords was carefully based on the core of study themes. Keywords such as “teaching methods”, “K-12 music education”, and synonyms and abbreviations were incorporated to optimize the search and capture the relevant studies. The details of search formula used in Scopus and WoS is revealed in Table 1.

Table 1

Database and Search Methods

Database	Search Method
Scopus	TITLE-ABS-KEY (“Teaching Methods”) and TITLE-ABS-KEY (“K-12 music curriculum” or “K-12 music education”)
WoS	TS= (“Teaching Methods”) and TS= (“K-12 music curriculum” or “K-12 music education”)

Note: this table shows the database utilized in this study and the method of searching articles.

A total 233 articles are collected from two major databases in the initial search, wherein 170 articles were found from Scopus and 63 from Web of Science (WoS). Specifically, a set of filtering criteria was conducted in order to optimize dataset and guarantee relevance; primarily, the period of publication was limited to the recent nine years (from 2016 - 2024) as this enables to hold current trends and the latest practices in K-12 music education. As results, this stage excluded 121 articles published before 2016. Subsequently, duplicate articles across both databases were removed through employing an automated screening tool, resulting in 112 articles were maintained for further appraisal.

This review guarantee that the retained literature is high-quality, the most recent, and relevant on teaching methods in K-12 music education through the use of systematic screening criteria. This rigorous method concretes a foundation for subsequent analysis and discussion, improving the reliability of the findings.

Phrase 2: Screening

The phase of screening plays an important role in this systematic literature review. It aims to identify high-quality research relating to teaching methods of K-12 music education for further analysis. The first stage, the automatic screening tool was used by the researcher following criteria such as language, articles type, and publication date to filter the unnecessary literature. Second, screening out unsuitable articles from the retained literature through reading titles and abstracts. Finally, selecting the optimal articles that matched the requirement included in this study by reading the full text, the details shown in Table 2.

Table 2

The Criteria of Screening

Criteria	Inclusion	Exclusion
The focus of the article	Teaching methods in K-12 music education	Articles do not relate to the teaching methods or K-12 music education
Publication type	Journal	Book, proceeding
Publication date	From 2016 to 2024	Before 2016
Article Type	Empirical	Review, Musical concept paper
Language	English	Non-English

Note: this table shows the criteria for screening literature.

The stage of filtering, all information of articles such as title, author, and article type, was organized into a document, then automatic screening tool was adopted to identify the required articles based on the information categories. As a result, 13 non-English articles were excluded primarily. Subsequent exclusions comprised 7 articles with irregular publication status (e.g., "withdrawn" or "in press") and review articles (n=3), conference papers (n=3), and books/book chapters (n=4). This rigorous screening yielded 82 articles for further.

In the second screening stage, the titles and abstracts of the 82 remaining articles were manually reviewed to assess their relevance to teaching methods in K-12 music education. Articles were excluded based on two criteria: (1) non-empirical studies, such as theoretical papers or policy-focused articles (n=13); (2) studies not specifically addressing K-12 music education, including those focused on general pedagogy, vocational training, or post-secondary education (n=33); and (3) studies mentioning music teaching strategies without examining their effectiveness, implementation, or challenges in K-12 contexts (n=2). This process resulted in 34 articles for full-text evaluation.

The stage for final screening, 34 articles would be read completely. A few articles were excluded as they did not refer to the investigation between instructional strategies and learning outcomes (n=11) or offer unbiased definitions on critical pedagogical method (n=7).

Phrase 3: Including

Sixteen articles were finally selected into this systematic review after the rigorous screening, Table 3 indicates the details. These empirical articles were published between 2016 and 2024, which are high-quality and closely follow the current trends of innovative methods on instruction. Specifically, these articles investigated the application of teaching methods in different countries and different levels (elementary, middle, and high school) on K-12 music education such as instrumental performance, music composition, and digital music integration.

Table 3

Summary of Selected Studies

No.	Authors	Year	Publication	Doi	Region
1	Muhonen	2016	British Journal of Music Education	10.1017/S0265051716000176	Finland
2	Metić & Svalina	2020	Metodicki Ogledi	10.1177/1321103X211061978	Croatian
3	Kalanjoš & Ružić	2021	Magistra Iadertina	10.1177/02557614221107190	Croatian
4	Avdiu & Holzinger	2022	Journal of Educational and Social Research	10.36941/jesr-2022-0044	Austria
5	Boal-Palheiros & Ilari	2023	Frontiers in Psychology	10.3389/fpsyg.2023.1093832	Portugal
6	Udakarn et al.	2022	Journal of Higher Education Theory and Practice	10.25304/rlt.v27.2259	Thailand
7	Biasutti et al.	2023	International Journal of Music Education	10.1155/2022/4699719	Italy
8	Uludag & Satir	2023	International Journal of Music Education	10.3389/fpsyg.2023.1093832	Turkey
9	Tuinstra	2019	International Journal of Music Education	10.29333/iji.2023.16111a	Canada
10	Drobac-Pavićević et al.	2024	International Journal of Cognitive Research in Science, Engineering and Education	10.33828/sei.v34.i2.7	the Republic of Srpska
11	Del Pozo et al.	2016	International Journal of Medical Education	10.4102/sajce.v11i1.899	Spain
12	Wu et al.	2021	Computers and Education: Artificial Intelligence	10.1016/j.caeai.2024.100295	China
13	Saetre	2018	Music Education Research	10.14689/ejer.2019.84.2	Norway

14	Bennett	2023	Journal of Research in Music Education International	10.2196/14097	America
15	Yun	2023	Journal of Music Education	10.1177/025576142311904	China
16	Tabuena et al.	2021	Journal of Arts Research and Education	10.15294/harmonia.v21i2.32872	Philippines

Note: this table show all 16 articles information selected into this systematic review.

Results

Review of literature included

The research methods utilised by 16 articles are indicated in figure 2. Qualitative method were employed by 8 articles (Muhonen, 2016; Metić & Svalina, 2020; Tabuena et al., 2021; Avdiu et al., 2022; Bennett, 2023; Biasutti et al., 2023; Drobac-Pavićević et al., 2024; Yun, 2024). 5 articles employed quantitative method (Del Pozo et al., 2016; Saetre, 2018; Cvitković Kalanjoš & Ružić, 2021; Boal-Palheiros & Ilari, 2023; Wu et al., 2024). And adopting mix methods are preferred by 3 articles (Tuinstra, 2019; Udakarn et al., 2022; Uludag & Satir, 2023).

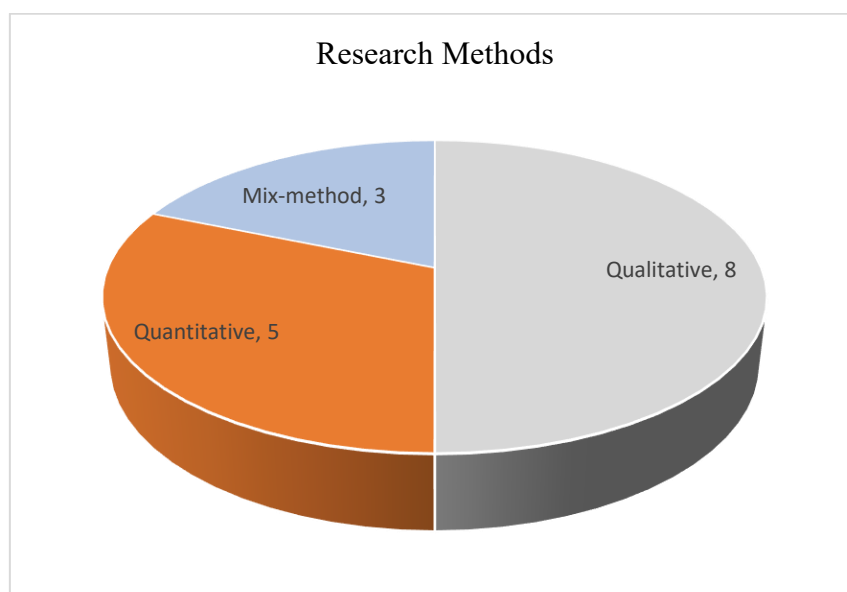


Figure 2 Research Methods

Note: The figure shows the research methods used by the final 16 articles.

Teaching methods in K-12 music education have transitioned from traditional approaches, which emphasized foundational skills such as music theory, singing, and instrumental performance through direct instruction and repetition, to more innovative, student-centered strategies (Tuinstra, 2019; Su et al., 2022; Concina, 2023; Uludag & Satir, 2023; Yang & Welch, 2023). Contemporary methods prioritize project-based learning, digital tools, and collaborative activities that promote creativity, critical thinking, and cultural exploration (Uludag & Satir, 2023; Drobac-Pavićević et al., 2024; Wu et al., 2024). This change reflects a broader shift toward active student engagement, technological integration, and the inclusion of diverse global music traditions, fostering a more dynamic and culturally responsive learning

environment. As illustrated in Figure 3, an analysis of 16 selected articles reveals this trend: only one article focuses on traditional methods, 13 emphasize innovative approaches, and two compare traditional and innovative methods. This distribution underscores the growing prominence of progressive pedagogies in K-12 music education.

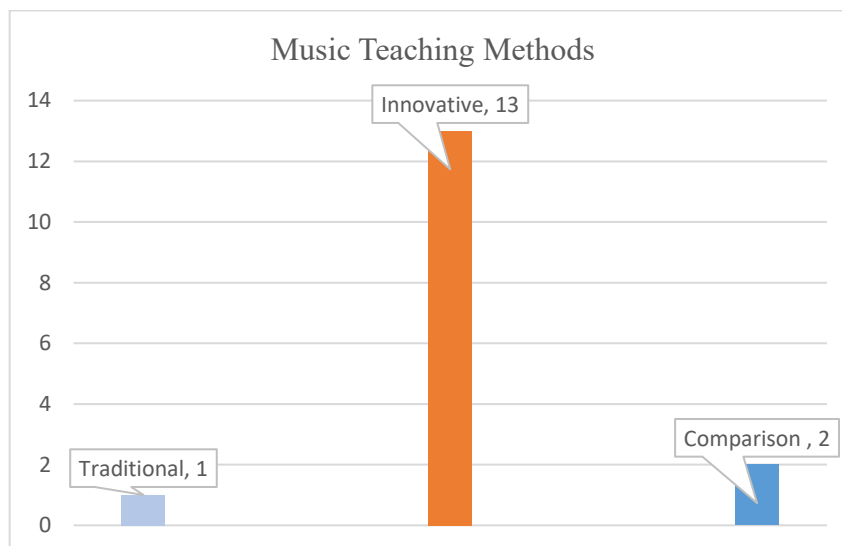


Figure 3 Music Teaching Methods

Note: The figure shows the discussion of teaching methods used in music.

RQ1: How do use various teaching methods affect student learning and participate in K-12 music education?

Student-centered teaching methods, such as collaborative creation and song crafting, significantly enhance student engagement in K-12 music education (Muhonen, 2016; Yun, 2024). These approaches shift students from passive learners to active participants, empowering them to take ownership of the musical creation process. As demonstrated in Muhonen (2016), co-creating music fosters creativity and self-expression, deepening students' emotional and cognitive connection to the material. This emphasis on student agency not only boosts engagement but also facilitates deeper learning by increasing students' intrinsic motivation and investment in the content (Muhonen, 2016).

Furthermore, culturally responsive teaching amplifies engagement by making the material more relatable. Bennett (2023) stressed that integrating students' cultural backgrounds into classroom is important to create an inclusive learning environment, in particular it is beneficial to facilitate a sense of belonging, facilitating students to link with personality with the learning process of music (Bennett, 2023). By integrating diverse musical characteristics, educators view music as a medium to positively improve students' engagement and learning performance.

Currently, the rise of using digital tools and mobile applications has significantly impacted music education, increasing the interactive and accessible between students and teachers. Uludag and Satir (2023) proposed that mobile applications such as GarageBand and Rhythm Cat positively engage students to do music creation, improving their creativity with valuable feedback. In other words, these digital platforms significantly satisfy the personalized learning needs of students, in particular, students who may not have significant interest in traditional

music education are beneficial (Uludag & Satir, 2023). This method enhances the engagement of student through using innovative technology to build a learn way with flexible and interactive.

Biasutti et al. (2023) noted that online learning has widely accepted due to the pandemic (COVID-19). Although the challenges such as limited resources and insufficient technology support need to be confronted when using remote learning, it provides opportunities to widely stimulate innovative musical engagement (Biasutti et al., 2023; Uludag & Satir, 2023). Educators can effectively integrate in-person instruction with online platform to offer dynamic experiences of learning so that significantly improve student engagement on music education (Wu et al., 2024). In addition, combining game into music education indicates that the engagement of student can be also positively improved by transforming learning to interactive challenges (Uludag & Satir, 2023). In specific, Uludag and Satir (2023) noted that utilizing music games can not only enhance the acceptance of fundamental concepts on music but also benefit to intensify the practice; therefore, adopting gamification to learn music assists in increaseing students' interest comparing to rote memorization.

Notably, the current music education has begun to emphasize the importance of integrating interdisciplinary such as language arts and history into music teaching methods as it can provide a comprehensive and valuable learning experience. Udakarn et al. (2022) stressed that combining music with different subjects can assist students in better understanding the world, making music closely relate to their lives. Similarly, Muhonen (2016) highlighted that the integration of humanities into music education can positively link students' learning experiences with their feels so that it provides an opportunity to stimulate students to explore culture and history of music and cultivate a deeper emotional connection to the subject. This method not only improve students' knowledge on music but also promote students' desire to explore he unknow area on music. Through the integration of interdisciplinary, music education can be viewed a medium to stimulate and improve student engagement and learning performance.

RQ2: What are the pro and cons of integrating digital tools in music education?

Digital tools combined into music education have been indicated that it can promote student participation and creativity. Mobile apps such as GarageBand and Rhythm Cat offer platforms to encourage students to explore music through manual practice and cultivate creativity (Uludag & Satir, 2023). Using digital tools or platforms provide unique learning experience to students through offering feedback timely and gamification of music to build a flexible and easily accessible environment; this particularly assists in improving the learning experience for students who are limited resources on music education (Concina, 2023; Uludag & Satir, 2023). In addition, using digital tools strongly enhance students' ability on self-learning and critical thinking, stimulating students to better explore the field of music (Uludag & Satir, 2023). Although using digital tools in music education can assist in improving students on engagement and creativity, the challenges of over-reliance digital tools need to be awarded (Biasutti et al., 2023). The authors proposed that using digital tools significantly rely on users' skills on technology, thus educators should consider the balance of whether students can equally use digital platforms. For example, students from underdeveloped areas or poor families have inadequate resources to learn skills of using digital platforms, thus they may have to confront barriers accessing digital platforms (Uludag & Satir, 2023).

The use of digital tools builds a flexible and accessible way to obtain kinds of resources in order to enhance music education (Olvera-Fernández et al., 2023; Muhonen, 2016). However, over-reliance on using digital tools may lead to reducing the interaction between teacher and students, restricting the guidance from teacher such as using musical skills and theory interpretation (Biasutti et al., 2023; Olvera-Fernández et al., 2023). Moreover, a substantial of digital content may have an issue - overload information, leading to the challenge for teachers and students in using digital content (Yi, 2023). In specific, teachers may struggle to integrate relevant content aligning with learning objectives so that they cannot better provide structural interpretation to students (Concina, 2023; Yang & Welch, 2023). One of another key advantage of using digital tools is that it can provide feedback and evaluation timely, this help teachers improve their efficiency and track individual performance (Biasutti et al., 2023; Concina, 2023). Wu (et al. 2024) stressed that adopting digital platforms can save teachers time and provide feedback to students timely. Importantly, this method can help teachers adjust their teaching strategies based on students' performance promptly to help students better improve their skills (Wu et al., 2024; Montiel & Gomez-Zermeño, 2021). Nevertheless, the drawbacks of using digital tools to evaluate musical expression deeply are concerned such as inadequate interpretation and emotion (Biasutti et al., 2023; Uludag & Satir, 2023). Wu et al. (2024) noted that using digital tools to evaluate students may lead to students focusing on the accuracy of rhythm and ignore the artistic performance creativeness. Therefore, teachers should carefully consider the balance of using digital tools with in-person guidance when they make study strategies.

RQ3: How do traditional and innovative approaches be efficiently integrated to improve and optimize learning performance?

Traditional methods such as oral transmission and teacher-centered strategy construct foundation in music education, offering basic skills and theory support (Concina, 2023; Yang & Welch, 2023; Yun, 2024). Yun (2024) highlighted the significance of personalized guidance in terms of helping students understanding individual strength and weakness. Specifically, traditional methods stress the priority of core skills including music theory, rhythm, and repeat the exercise in order to build the foundation for advanced musical understanding (Yun, 2024; Yang & Welch, 2023). This step-by-step method, from fundamental rhythms and melodies to dealing complex repertoire, helps students develop confidence and deeper understanding. Nevertheless, using digital tools such as GarageBand or NoteWorks can assist in enhancing participation and accessibly, constructing an interactive and flexible learning environment to students (Uludag & Satir, 2023). The integration of conventional methods with digital platforms is able to help educators design an effective teaching strategy in order to ensure students having a positive learning experience.

Adopting innovative methods usually focus on students' creativity, encouraging students to positively participate the process of music creation during the study (Su et al., 2022; Olvera-Fernández et al., 2023). For instance, Muhonen (2016) emphasized the role of student in songcrafting, the author stated that students included in the process of creating music are positively expressed their creatively and learning ability. Teachers are beneficial from students' performance through providing a structured guidance to stimulate students using their creativity for improving their engagement (Muhonen, 2016). Therefore, the combination of these two methods (traditional focusing on skills development and innovative preferring creative exploration) enables to construct a more comfortable learning

environment for students (Concina, 2023). This balanced method guarantees that students not only establish a strong theoretical foundation but also obtain the freedom to express their artistic ideas (Concina, 2023; Olvera-Fernández et al., 2023).

Notably, although conventional methods (teacher-centered) in music education can help students build a strong foundation on musical theories and concepts but students sometimes are passive to participated (Yang, 2023). The previous research noted that teacher-centered method is essential, however the method may struggle to adapt to retain long-term participation, thus, putting interactive and gamified into teaching instructions can promote teaching methods to be more dynamic and adaptable to students (Bennett, 2023; Boal-Palheiros & Ilari, 2023; Uludag & Satir, 2023). In specific, digital tools such as online lessons (face to face) and digital platforms for composition intensive the interactive instruction between teachers and students, also it makes the learning process be more flexible and inclusive. Therefore, the integration of teaching methods can stimulate students to apply for their knowledge from teachers and deeper cultivate their creativity on music (Yang, 2023; Yang & Welch, 2023).

In addition, the integration of traditional and innovative methods further intensifies the objectiveness of evaluation. The traditional evaluation usually concentrates on teacher's observations, providing appraisal comments based on learning performance (Yun, 2024). However, using this method needs massive time and may have strong subjective judgment, thus, using digital tools such as music software and online platform not only provide objective comments to teacher and students on music theory and composition skills but also the evaluation is timely (Wu et al., 2024). Due to the combination of digital appraisal methods and traditional assessments, teachers enable to provide promptly and objective comments to each student so that teachers can guarantee to provide sustained, comprehensive, and personalized method to help students development on music (Liu et al., 2023; Uludag & Satir, 2023).

Discussion

The importance of integrating traditional and innovative methods to improve student engagement and learning performance in K-12 music education has been indicated that it is essential (Olvera-Fernández et al., 2023). Conventional methods such as oral transmission and teacher-centered instruction construct a strong foundation on learning music (Yun, 2024). However, these methods may not positively stimulate students due to the lack of flexibility. Therefore, innovative methods incorporating digital tools and student centered learning are widely accepted as these approaches can strongly promote student engagement and improve their creativity (Muhonen, 2016). Digital platforms such as GarageBand and Noteworks make the music education be interactive and dynamic, allowing students to create their own music and provide feedback timely. Therefore, educators should carefully consider how to better combine the advantages from traditional and innovative to increase student participation.

The benefits of utilizing digital tools in music education such as flexibility, personalization, and timely feedback have been widely accepted (Casal-Otero et al., 2023; Uludag & Satir, 2023). These tools provide an avenue to students allowing them to explore their own music, also these tools offer wider resources to facilitate students seeking their preferred music increasing their cultural awareness (Wu et al., 2024). However, challenges such as insufficient

resources and training exist, in particular for students who are lack of accessing to necessary technology support (Yi, 2023). Moreover, using digital tools may not provide subjective evaluation on artistic performance of music (Casal-Otero et al., 2023). Lam (2024) also noted that over-reliance on technology could also lead to the restriction of developing students' skills on music because students may tend to focus on the accuracy of rhythm rather than creativity.

In short, the integration of traditional and innovative methods is essential because a balanced teaching method assist in achieve optimal learning performance. For example, traditional methods such as teacher-centered can help students intensify theoretical foundation of music, and innovative methods such as gamification of music can improve students engagement and creativity (Muhonen, 2016; Yi, 2023; Yun, 2024) This integration of teaching methods facilitates students' development on technological skills through establishing structured practices, stimulating creativity and improving the interactive capability on music.

Limitations

This systematic review has examined the use of teaching methods on K-12 music education over the past nine years through searching two main databases Scopus and Web of Science (WoS). Although these two databases are high quality and credibility, several possible relevant research may exclude because they were not included in these two databases. Moreover, the nine-year timeline may more focus on the current teaching methods on music education and neglect some key previous studies offering valuable insights into fundamental teaching methods. These limitations may impact the comprehensiveness of the review on K-12 music education.

Avenue of Future Research

In terms of future research in K-12 music education should focus on investigating the long-term impacts of integrating digital tools with traditional teaching methods. Specifically, future research should concern about the use of high technology on music education such as virtual reality (VR) and artificial intelligence (AI) as these innovative technologies not only improve teachers' efficiency but also more promote students' creativity. In addition, future research should also deeply examine the different cultural background impact on music education as diverse cultural background has different music preference. Finally, the impact of interdisciplinary on K-12 music education can be considered as an important component in the future research as it can better facilitate student development completely.

Conclusion

This systematic review depicts K-12 music teaching methods through analysing 16 essential articles (from 2016 - 2024). It provides a comprehensive evaluation in terms of traditional and innovative methods used in music education. Across the review, the use of digital tools and stressing student-centered learning have become the mainstream as these methods show the advantages of enhancing student engagement, creativity, and individual experience of learning. This review also highlights the importance of interactive learning through the use of mobile platforms on music creation. Significantly, it reveals that the strengths and weaknesses of integrating conventional teaching methods with digital tools, highlighting the balance is necessary of combining both methods on music education. Through the

comprehensive analysis, this review provides valuable insights for educators and policymakers, helping them better understand the development trend of K-12 music teaching methods.

References

- Avdiu, E., & Holzinger, A. (2022). Modeling of innovative teaching in an Austrian primary school. *Journal of Educational and Social Research*, 12(2), 191.
- Bennett, C. (2023). A grounded theory of culturally responsible music teaching. *Journal of Research in Music Education*, 71(2), 229-259.
- Biasutti, M., Antonini Philippe, R., & Schiavio, A. (2023). E-learning during the COVID-19 lockdown: An interview study with primary school music teachers in Italy. *International Journal of Music Education*, 41(2), 256-270..
- Boal-Palheiros, G., & Ilari, B. (2023). Music, drama, and social development in Portuguese children. *Frontiers in Psychology*, 14, 1093832.
- Casal-Otero, L., Catala, A., Fernández-Morante, C., Taboada, M., Cebreiro, B., & Barro, S. (2023). AI literacy in K-12: a systematic literature review. *International Journal of STEM Education*, 10(1), 29.
- Concina, E. (2023). Effective music teachers and effective music teaching today: A systematic review. *Education Sciences*, 13(2), 107.
- Cvitković Kalanjoš, I., & Ružić, V. (2021). Interest of Primary School Students in Music. *Magistra ladertina*, 16(2), 23-40.
- Del Pozo, F. J. F., Alonso, J. V., Velis, N. B. C., Barahona, M. M. A., Siggers, A., & Lopera, E. (2016). Basic life support knowledge of secondary school students in cardiopulmonary resuscitation training using a song. *International journal of medical education*, 7, 237.
- Drobac-Pavičević, M., Babić, O. B., & Đurđanović, M. (2024). Implicit Theories of Teachers About the Importance of Teaching Music. *International Journal of Cognitive Research in Science, Engineering and Education*, 12(1), 145-156.
- Greenhow, C., Galvin, S. M., Brandon, D. L., & Askari, E. (2020). A decade of research on K–12 teaching and teacher learning with social media: Insights on the state of the field. *Teachers College Record*, 122(6), 1-72.
- Johnson, C. C., Walton, J. B., Strickler, L., & Elliott, J. B. (2023). Online teaching in K-12 education in the United States: A systematic review. *Review of Educational Research*, 93(3), 353-411.
- Lam, C. K. (2024). Technology-enhanced creativity in K-12 music education: A scoping review. *International Journal of Music Education*, 42(4), 691-703.
- Liu, C., Hwang, G. J., Tu, Y. F., Yin, Y., & Wang, Y. (2023). Research advancement and foci of mobile technology-supported music education: a systematic review and social network analysis on 2008-2019 academic publications. *Interactive Learning Environments*, 31(7), 4535-4554.
- Metić, M., & Svalina, V. (2020). Potential use of music therapy elements in Music teaching. *Metodički ogledi: časopis za filozofiju odgoja*, 27(1), 149-173.
- Montiel, H., & Gomez-Zermeño, M. G. (2021). Educational challenges for computational thinking in k–12 education: A systematic literature review of “scratch” as an innovative programming tool. *Computers*, 10(6), 69.
- Muhonen, S. (2016). Students' experiences of collaborative creation through songcrafting in primary school: Supporting creative agency in 'school music' programmes¹. *British Journal of Music Education*, 33(3), 263-281.

- Olvera-Fernández, J., Montes-Rodríguez, R., & Ocaña-Fernández, A. (2023). Innovative and disruptive pedagogies in music education: A systematic review of the literature. *International Journal of Music Education*, 41(1), 3-19.
- Saetre, J. H. (2018). Why school music teachers teach the way they do: a search for statistical regularities. *Music Education Research*, 20(5), 546-559.
- Su, J., Zhong, Y., & Ng, D. T. K. (2022). A meta-review of literature on educational approaches for teaching AI at the K-12 levels in the Asia-Pacific region. *Computers and Education: Artificial Intelligence*, 3, 100065.
- Tabuena, A. C., Morales, G. S., & Perez, M. L. A. C. (2021). Music Assessment Techniques for Evaluating the Students' Musical Learning and Performance in the Philippine K-12 Basic Education Curriculum. *Online Submission*, 21(2), 192-203.
- Tugwell, P., & Tovey, D. (2021). PRISMA 2020. *Journal of Clinical Epidemiology*, 134, A5-A6.
- Tuinstra, B. (2019). Embracing identity: An examination of non-Western music education practices in British Columbia. *International Journal of Music Education*, 37(2), 286-297.
- Udakarn, N., Sapaso, P., & Kaenampornpan, P. (2022). The Leonard Bernstein Music Method Education Model: Young People's Concerts for Thai Primary Students. *Journal of Higher Education Theory and Practice*, 22(16), 63-73.
- Uludag, A. K., & Satir, U. K. (2023). Seeking alternatives in music education: The effects of mobile technologies on students' achievement in basic music theory. *International Journal of Music Education*, 02557614231196972.
- Wu, D., Chen, M., Chen, X., & Liu, X. (2024). Analyzing K-12 AI education: A large language model study of classroom instruction on learning theories, pedagogy, tools, and AI literacy. *Computers and Education: Artificial Intelligence*, 7, 100295.
- Yang, Y. (2023). Assessing alignment between curriculum standards and teachers' instructional practices in China's school music education. *Research Studies in Music Education*, 45(1), 56-76.
- Yang, Y., & Welch, G. (2023). A systematic literature review of Chinese music education studies during 2007 to 2019. *International Journal of Music Education*, 41(2), 175-198.
- Yi, T. S. (2023). Challenges and potential of a diverse music teaching force: A review of the literature. *Update: Applications of Research in Music Education*, 87551233231198242.
- Yun, X. (2024). The evolution of the method of 'oral and heart-to-heart teaching' in contemporary times: Based on the observation of Shandong opera classroom. *International Journal of Music Education*, 42(4), 613-629.