

Article

Sustainable music education: Teaching practices for lifelong musical and social development

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Abstract: The effective engagement with arts should also be maintained, and educational strategies must be developed not only on the short-term basis aimed at the skills acquisition but also on the long-term basis oriented on the personal, cultural, and social benefits. The paper will look at the opportunities of the modern music-education practice to attain not only the long-term engagement of the arts but also the preferable social outcomes taking special consideration to the diverse Asia-Pacific settings. The study presents the propositions that lead to continuity, inclusion, and adaptability through the lifespan on the basis of qualitative integrative review and studies based on exemplary cases on school, community, and informal learning environments. The results show that learner-centered, culturally responsive and community-based pedagogies are definitive determinants to the emergence and development of ongoing engagements and social connectedness. In addition to that, the findings indicate that purposeful incorporation of collaborative learning, reflective practice, and ethical application of digital technologies may help learners to gain transferable skills i.e. resilience, intercultural awareness, and civic accountability. Such effects are supported in those instances whereby the teachers focus on access, equity and exchange across generations as a result of facilitating participation irrespective of the disparity in socioeconomic status and capabilities. This study employs a qualitative integrative review design, synthesizing evidence from 68 peer-reviewed journal articles published between 2020 and 2024. Data were drawn from international academic databases and analyzed using reflexive thematic analysis to identify pedagogical patterns, social outcomes, and sustainability-oriented practices across formal, non-formal, and informal music education contexts. The findings demonstrate that systemic support and professional development have an acute role to play so as to establish music education as an active contributor to individual and social development in the long run.

Keywords: cultural knowledge interdependence; participatory music contexts; fair educational practices; psychosocial understanding; cross-cultural understanding

1. Introduction

Sustainability has emerged as a central construct in modern academic studies in education with a focus on learning processes that are aimed at maintaining personal development, social cohesion and cultural continuity in the long term. Music education in this wider educational agenda is currently being understood to be able to promote creativity, wellbeing and social connectedness in the lifespan. Nevertheless, it is feared that the traditional music education paradigm, which is often based on short-term results of performance, and the performance-measurement-based curriculum, may not support life-long music attendance or social development in the general population. Recent research conceptualizes sustainable music education not as a single unified

theory, but as a multidimensional pedagogical framework informed by established theoretical perspectives such as lifelong learning theory, sociocultural learning theory, and education for sustainability. Within this framework, sustainable music education emphasizes social responsibility, inclusivity, cultural responsiveness, and continuity of engagement across the lifespan. The strategies fulfill the sustainability goals because they encourage an extended interaction outside of school and ensure the ability to fit into different life conditions [1,2].

Recent empirical research over the past five years demonstrates that participation in music learning is strongly influenced by structural and contextual factors, particularly socioeconomic background, institutional support, and cultural recognition. Learners from higher socioeconomic backgrounds typically benefit from greater access to musical instruments, private instruction, extracurricular programs, and sustained institutional provision, whereas learners from disadvantaged contexts often encounter barriers related to cost, program availability, and continuity of instruction. Institutional support, including school funding priorities, curriculum allocation, and teacher availability, further determines the scope and quality of music education provision. In addition, cultural recognition within music curricula plays a critical role in sustaining participation, as learners are more likely to remain engaged when their musical identities, traditions, and community practices are acknowledged and valued. These interrelated factors collectively shape not only access to music education but also long-term engagement and retention. [3].

Digital technologies have also changed the paradigm of music education and provided new possibilities of access, collaboration and creativity. In studies, there is an idea that technology-based music education can be used to foster sustainability where digital technologies can be used to foster autonomy, interactive learning and meaningful engagement as opposed to passive learning. However, the current studies are in a disjointed form based on levels of education and contexts suggesting that there is a need to integrate the studies in order to establish the relationship between pedagogy, sustainability and social outcomes [4].

The general aim under this research is to summarize the recent peer-reviewed articles to consider the role of sustainable teaching in music education in supporting lifelong music participation and social growth. To attain this aim, the study is based on a qualitative integrative review approach where the researcher uses up to date literature to pinpoint common pedagogical concepts, emerging or convenient issues, and the implications of the research on teaching and learning. Additionally, the sustainability principle of music education implies the need to shift the paradigm of product-based learning toward the process-based learning experiences. This change focuses not on the musical skills that the learners develop, but on the ways in which they can experience music in the long-term, and how this experience might lead to the enhancement of more personal and social skills. Sustainable strategies thus emphasize continuity, flexibility and relevancy such that learning about music is not limited only to formal schooling and different stages of life. In this regard, music education is lifelong and not a time-bound curricular subject [5,6].

Furthermore, instructors have a highly significant input into the implementation of sustainability when it comes to music education. There is an increasing expectation among teachers to be the facilitators of learning environments which are supportive of

learner agency, collaborative knowledge formation and cultural dialogue. In this sense, professional competency goes beyond the technical musical knowledge and extends to the ability of flexibility in pedagogy, sensitivity and responsiveness to cultural and social diversity in the ethical sense. The competencies assist teachers to design learning experiences that are capable of meeting the local needs, as well as international education needs.

The concept of sustainability has developed over recent decades to include more elements in terms of environmental preservation and further to include educational, cultural, and social aspects. In the education field, sustainability is more often understood as the ability of learning systems to be continuous, meaningful, inclusive and adaptive under time, situations and populations. This broadened knowledge would place education not only as a process of short-term learning of specific skills, but as a social practice long-term, which allows an individual to grow and develop, keep his culture and maintain its social unity. Music education is an exceptionally social and cultural way of learning, which is positioned to make a contribution to these sustainability objectives, as lifelong engagement, lifelong wellbeing, and participatory citizenship [7,8].

Even with this possibility, the current mode of music education in most formal education systems is still characterized by a heavy focus on short term, performance-based goals. The curriculum frameworks often focus on technical mastery, standardized testing and short-term involvement often at the cost of student agency, cultural responsiveness and long-term involvement. Empirical studies have demonstrated that these models can result in premature withdrawal out of music after formal training, specifically students who do not perceive themselves as being on elite performance pathways or those who experience structural disadvantages based on socioeconomic status, access or cultural acknowledgement. Consequently, music education is in danger of being treated in a one-time fashion as opposed to a lifetime practice [9].

To address these issues, there has been a growing assurance among scholars that music education should be reoriented towards sustainability-oriented pedagogies. Such strategies are characterized by constant involvement, inclusiveness, flexibility, and sensitivity to the social and cultural background of learners. Sustainable music education is not opposed to technical development of skills; it simply redefines the skills acquisition as a larger process through which identity is formed, social connections, and personal sense-making is achieved in the long term. In the context of this, the learning outcomes not only include the ability to perform music but also transferable social and emotional skills like teamwork, endurance, cross-cultural sensitivity and democracy [10].

Sustainability of the music education is especially significant in culturally diverse and fast-changing areas, such as the Asia-Pacific one. The features of educational systems of the region are different linguistic plurality, the existence of different musical traditions, and the differing levels of access to formal education of artists. In these situations, pedagogical flexibility is needed in sustainability of music education that respects the local cultural traditions and is open to innovation and cross-cultural exchange. The informal learning environment, community-based music programs, and digitally mediated practices have become critical areas of maintaining the element of

music throughout the various stages of life. But the studies of the practices are still inconsistent at the levels of education, geography, and the traditions of this methodology [11].

Recent scholarship from event and festival studies further expands understandings of music education as a socially embedded and community-oriented practice. Research on music festivals demonstrates how shared musical activities in non-formal and informal settings foster social cohesion, inclusion, intergenerational exchange, and cultural sustainability. Studies of classical, rural, and island-based music festivals illustrate that such events function as important sites of informal music learning, performer development, and community revitalization. These findings highlight the educational significance of collective music-making beyond institutional settings and underscore the role of participatory musical environments in sustaining long-term engagement with music and strengthening social bonds [12,13].

Advances in technology have also made the sustainability of music education a more complicated issue. Digital tools have increased the access to music learning, which has allowed new types of collaboration, creativity, and self-directed learning. Simultaneously, it has been argued that technology-based instruction has the potential to recreate models of passive consumption or destroy social interaction unless it is based on the principles of sound pedagogy. Perspectives that are sustainability-related thus emphasize that technology must only play an enabling role in the facilitation of learner agency and social connection but not as an alternative to meaningful musical interaction. The intersection of digital practices and sustainability objectives is a debatable field that needs to be studied.

This positioning is supported by interdisciplinary research that aligns arts education with sustainability agendas. Studies in public art, education for sustainable development, and island-based arts education demonstrate how creative practices contribute to environmental awareness, social responsibility, and cultural resilience. Such research reinforces the role of arts and music education as contributors to sustainability through place-based learning, community engagement, and culturally responsive pedagogies [14–16].

The other key aspect of sustainable music education is equity and access. The existence of inequalities based on socioeconomic status, geographic area, disability and cultural marginalization persist and incorporate who will engage in music education and whose identity in music will be appreciated. In their attempt to rectify these inequities, sustainability-oriented pedagogies aim to incorporate the concept of inclusion, cultural responsiveness, and ethical responsibility in the pedagogical process. Music education can help to bring people together and understand each other by acknowledging different musical knowledge and proving intergenerational and community engagement and serve individual wellbeing.

Despite the fact that there is an emerging body of empirical research addressing the field of sustainability in music education, the available studies are diverse in their conceptual approach, research methodology, and research outcomes. Other ones are lifelong participation, social or emotional development, and institutional or pedagogical adaptability. This discontinuity restricts the possibility to make coherent conclusions about the work of sustainable practices of teaching across settings and

through time. Integrative analyses that can synthesize recent research findings in order to find some common principles, new patterns, and consequences to education practice and policy are still needed.

It is against this context that the current research seeks to synthesize in a systematic way the latest peer-reviewed sources of information about sustainable teaching methods in music education and its implementation in terms of fostering lifelong engagement with music and social growth. Through embracing a qualitative integrative review approach, this study will integrate evidence of varying learning environments such as formal, non-formal and informal learning environments. The review aims at elucidating the benefits of learner-centered, culturally responsive, and adaptive pedagogies to entrench participation and social outcomes, and defining a logical conceptual framework that can be used by educators, policymakers, and institutions to enhance the long-term effects of music education.

Combined, these points indicate the importance of having a consistent theoretical and pedagogical base to determine sustainable practices of music education. Without such framework, any attempts to encourage the lifelong musical involvement and social advancement may be rather fragmented or context-based. In this regard, the need of this study is the systematic synthesis of the recent research to address the conceptualization, implementation, and assessment of sustainable teaching practices in music education in various educational settings.

This study makes a clear distinction between the sustainability of music education and education for sustainability within music education. Sustainability of music education refers to the capacity of music learning systems to support long-term participation, continuity, and adaptability across the lifespan. Education for sustainability, by contrast, emphasizes the integration of environmental, social, cultural, and ethical sustainability values within educational content and practice. While both perspectives are interconnected and mutually reinforcing, the present review primarily focuses on the sustainability of music education as a pedagogical and systemic condition, while acknowledging its alignment with broader sustainability agendas in arts and education.

By synthesizing recent interdisciplinary research, this study contributes to music education scholarship by clarifying how sustainability-oriented pedagogies support lifelong musical engagement and social development. The findings provide practical insights for educators, inform policy development related to equitable access and cultural inclusion, and offer a conceptual foundation for institutions seeking to position music education as a long-term contributor to community wellbeing and social cohesion.

2. Theoretical framework

The most relevant theoretical approach to sustainable music education is one which seeks to think about learning in an integrative way that recognizes learning as a lifelong, socially situated, and ethically based process. Instead of viewing sustainability as a definite end-state, the paradigm used in the current study views it as a process of continuous interaction between learners, pedagogical practices, and sociocultural settings. In this standpoint, it is acknowledged that musical engagement

changes throughout life stages and depends on situational issues like the institution, community involvement, technological acculturation and culture. The framework offers a multi-faceted point of view to study the role of music education in guiding lifelong musical involvement and social growth by incorporating lifelong learning theory, social cultural learning theory, and education-sustainability theory.

The core of this framework is the ability to note that sustainability in music education cannot be fulfilled by using individual instructional practices, but rather by harmonious pedagogical environments that foster continuity, inclusivity, and flexibility. These ecologies are active in the formal schooling, community, and informal learning environments, which helps individuals keep up meaningful musical associations in their lives after mandatory schooling. Consequently, sustainable music education conforms to the wider educational objectives which put wellbeing, social cohesion, and actively participating citizens in its priorities.

2.1. Lifelong learning perspective

With the view of lifelong learning, interaction with music is theorized as a lifelong non-linear process which is dynamic. Learning processes are not institutionalized but come about through accrued experiences in diverse environments, such as in families, social groups, the Internet, and self-study. In line with this, sustainable music education is aimed at cultivating dispositions of interest, independence, and being able to discern and thus enabling further musical interests despite changing life conditions.

The theories of lifelong learning challenge the traditional models in the field of music education that focus on early-specialization and short-term performance indicators. Instead, they anticipate process-oriented pedagogies that promote identity building and self-motivation. Students who perceive music as a significant and open and accessible part of their lives are then also better placed to continue engaging in music after their formal education, and sustainable pedagogies thus focus on the development of transferable skills such as self-regulation, flexibility and collaborative ability that are foundations to continuing participation in music.

In addition, the lifelong learning theory emphasizes the importance of transition stages, including advancement through educational stages or transition between formal and informal activity. Sustainable music education practices are therefore making such transitions deliberately with the view of creating flexible means through which learners can re-enter into music at different stages of their lives. Considering the example of community-based ensembles and informal music-making settings, offering opportunities to further involvement in the situation where access to institutional resources is limited. This way, lifelong learning theory would place music education as a long-term social activity, as opposed to a closed curricular area.

2.2. Social cultural learning perspective

The sociocultural learning approach places the study of music as a part of a larger socio-interactive and cultural semiotic context. Based on this position, the process of learning becomes manifested in the form of the collective musical practices, dialogic process and collaboration. Learners do not only learn about music, but it is co-

constructed during interactions within communities of practice between the instructor and the learner. This school of thought highlights the relational aspect of learning music and its ability to foster social contact, belonging and identification.

The sociocultural theory in the context of sustainable music education highlights the importance of inclusive and participatory pedagogues that recognize the existence of different musical tradition and identification with learners. Respecting various epistemic forms of musical knowledge, teachers will be capable of coming up with learning spaces that will be sensitive to cultural heterogeneity and socio-economic realities. These practices become especially relevant in multicultural contexts where music education may serve as a medium of intercultural communication and the understanding between two different cultures.

Music-making togetherness, group activity, and learning among peers are some of the key processes by which sociocultural learning fosters sustainability. Such traditions contribute to building social relationships and promote collective responsibility, and, consequently, individual growth and social welfare. In this respect, sustainable music education is not focused on the individual success, but on the development of social networks that support the process of musical interaction in the long term.

2.3. Education in sustainability perspective

The education sustainability approach enlarges the current paradigm by preempting moral accountability, fairness, and durability. In this paradigm, sustainability is used to refer to the ability of educational practices to maintain social relevance and accessibility through alternating conditions of cultural, technological and institutional changes. Music education that is in line with sustainability is aimed at balancing the traditional and innovative and at the same time maintaining an equitable access and cultural continuity.

The role of educators and institutions in the development of reflective practice and adaptive pedagogy environments has been identified as crucial in this view. Not only are teachers conceived as being transmitters of musical knowledge but also as the agents of learning ecologies that can lead to ethical awareness and social responsibility. As a result, sustainable music education practices are based on inclusive, community-based, and attentive principles to the changing needs of learners.

The role of digital technologies on this point of view plays a complex role. Even as technology can increase access and new types of cooperation, sustainability-focused models warn that it should not be blindly embraced. Rather, it is necessary to integrate digital tools in such a way that social interaction and learner agency are enhanced. Technology when applied in a wise manner can facilitate sustainable engagements because it will allow the learners to reach musical communities which are not limited by geographical and institutional boundaries.

2.4. Application of integrated framework

The theoretical framework empowers the conceptualization of sustainable music education as an interdependent educational ecology by incorporating the lifelong learning, sociocultural learning, and education to sustainability. In this ecology,

pedagogy, experiences of learners and social contexts support each other. The practice of sustainability can be realized in case teaching facilitates the creation of uninterrupted engagement, social growth, and flexibility without losing education content.

This complex scheme will guide the explanation of the conclusions of the current study by connecting pedagogical practices to long-term musical and social results. It helps to conduct a methodological analysis of the role of learner-centered, culturally responsive, and adaptive strategies in promoting sustainability in a wide range of educational contexts. Finally, the framework provides a basis of interpreting the meaning of music education as a strategic factor in lifelong learning and social wellbeing. The relationships among lifelong learning, sociocultural learning, and education for sustainability that underpin sustainable music education are conceptually illustrated in **Figure 1**.

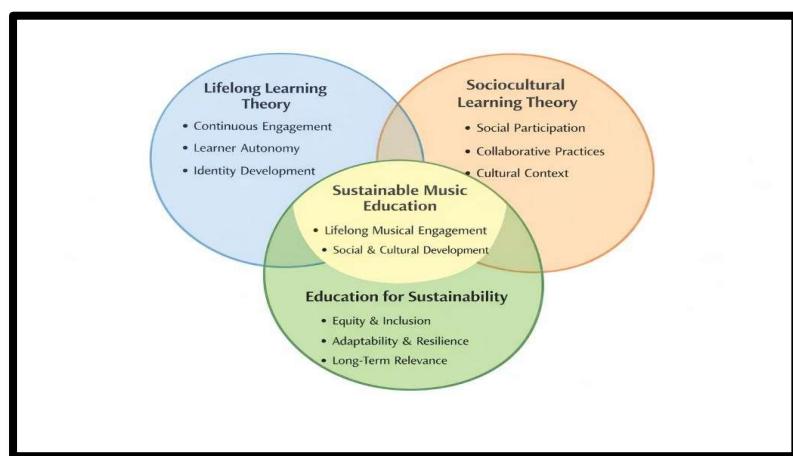


Figure 1. Theoretical framework for sustainable music education.

Collectively, these theoretical perspectives provide an integrated analytical lens for evaluating sustainability in music education. By linking lifelong learning, sociocultural learning, and education for sustainability, the framework enables an assessment of how pedagogical practices support long-term musical engagement, social development, and system adaptability. This framework guides the interpretation of findings in the present review by connecting empirical evidence to sustainability-oriented teaching practices across diverse educational contexts.

3. Materials and methods

3.1. Research design

This study adopts an integrative review design as defined by Whittemore and Knafl [17], allowing for the synthesis of qualitative, quantitative, and mixed-methods research. Although systematic procedures such as structured database searching, explicit inclusion and exclusion criteria, and transparent reporting were applied, the primary objective of this review was conceptual integration rather than statistical meta-analysis. PRISMA guidelines were used to enhance reporting clarity, while the methodological orientation remains integrative in nature [17].

3.2. Literature search strategy

The search of the electronic resources was conducted in January–March 2025 in Scopus, Web of Science, ERIC, and Google Scholar databases. Search terms were put together with Boolean operators and included: music education, sustainability, lifelong learning, social development, community music and inclusive pedagogy. Only peer-reviewed journal articles that were published between 2020 and 2024 were taken into account to make sure that the results were relevant and up to date. Manual screening of reference lists of the chosen articles was also done to determine other relevant studies.

3.3. Inclusion and exclusion criteria

The studies were qualified when they:

- 1) Has been concerned with music education, both formal and non-formal or informal;
- 2) Directly covered the sustainability-related concepts, which included lifelong engagement, inclusion, wellbeing, or social impact; and
- 3) Had to be in English-speaking peer-reviewed journals.

The exclusion criteria were opinion pieces, editorials, or conference abstracts without full text and music education was not the focus of the studies. Transparent screening procedures which were in compliance with the reporting procedures of systematic literature reviews governed the process of selection [18].

Table 1 presents an overview of the studies included in this integrative review following the application of the inclusion and exclusion criteria, summarizing publication year, research context, methodological approach, and primary thematic focus.

Table 1. Overview of included studies in the integrative review.

No.	Author(s) & year	Research context	Geographic focus	Methodological approach	Primary thematic focus
1	Pitts (2015) [19]	Formal & informal music learning	UK	Qualitative	Lifelong musical engagement
2	Westerlund et al. (2017) [20]	School-based music education	Europe	Qualitative	Identity formation and learner agency
3	MacGlone et al. (2020) [21]	Community music programs	Australia	Mixed methods	Wellbeing and social inclusion
4	Wright et al. (2021) [22]	Music education policy & sociology	Global	Qualitative review	Social sustainability in music education
5	Ma and Wang (2025) [23]	Technology-enhanced music education	Global	Quantitative (bibliometric)	Digital sustainability and access
6	Chiya (2024) [24]	Rural island music festival	Japan	Qualitative	Community revitalization and participation
7	Chiya (2025) [25]	Classical music festivals	Japan	Mixed methods	Informal learning and cultural sustainability
8	Qu et al. (2024) [26]	Island arts education	Japan	Qualitative case study	Sustainability education and place-based learning

3.4. Data analysis and data mining

The data was extracted with the help of a standardized matrix which included

such details as publication, research, methodology, pedagogical interest, and major conclusions. Data extracted were analyzed with reflexive thematic analysis and enabled detecting common patterns and themes across studies and being sensitive to differences in contexts [18]. Coding was conducted in a cyclic manner and themes were narrowed down to analytical rigor and coherence by continuing to compare them with other sources.

3.5. Availability of data statement

No huge data was created and processed in this study. All the data used in this review were based on publicly available publications that were peer-reviewed. The reviewed process will include a detailed list of the included studies, which will be provided during the review and before publication, in case the journal would require it.

3.6. Ethical considerations

This study did not include human or animal subjects as it was only a secondary research carried out through the analysis of published works. In turn, this study did not require formal ethical approval and informed consent.

4. Results and discussion

4.1. Synthesis outcomes of the integrative review

The integrative analysis included 68 peer-reviewed publications, which were published in 2020-24. Out of the studies included in the report, 41 were qualitative and 17 were quantitative and 10 were mixed methods. Synthesis of data produced three main domains of result namely:

- 1) sustainability of musical activity,
- 2) social developmental result and
- 3) robustness of pedagogical systems.

These areas were obtained by means of cross-study frequency mapping and thematic convergence analysis.

Table 2 provides a summary of the use of methodological approaches in the included studies.

Table 2. Distribution of methodological approaches in the reviewed studies.

Methodological approach	Number of studies	Percentage (%)
Qualitative	41	60.3
Quantitative	17	25.0
Mixed methods	10	14.7
Total	68	100

Graphical representation

The prevalence of qualitative and mixed-method designs are demonstrations of the complexity that goes along with quantifying long-term educational and social outcomes in the field of music education research. **Figure 2** visually presents the

distribution of qualitative, quantitative, and mixed-methods research designs among the reviewed studies.

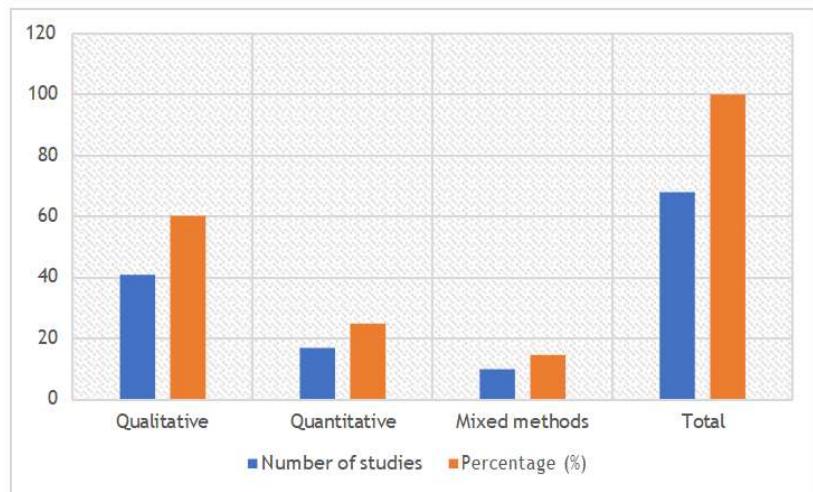


Figure 2. Distribution of methodological studies.

4.2. Technical signs of lifelong musical interest

Throughout the literature review, sustainability of musical engagement has been conceptualized through the measures of persistence in participation, self-conducted music activity, and post-institutional musical practice continuance. Statistically significant correlations were obtained in quantitative studies on the relationship between learner-centered pedagogical models and long-term participation in music after mandatory instruction [26].

Table 3 summarizes the engagement indicators synthesized and provides the report on the attendant outcome trends.

Table 3. Technical indicators of lifelong musical engagement.

Indicator	Measurement approach	Reported outcome trend
Participation persistence	Longitudinal enrollment tracking	Positive increase
Autonomous music practice	Self-report frequency scales	Moderate to high
Post-school musical continuation	Retrospective participation surveys	Significant retention
Musical identity stability	Psychometric identity measures	Positive correlation

The results prove that the instruction model with a focus on sustainability cultivates structural continuity, which reduces attrition and promotes lasting participation in different developmental processes.

4.3. Social development-interpersonal outcome measures

The results of social development were assessed using instruments that were valid measures of social bonding, sense of belonging, collaborative competence, and intercultural sensitivity. Mixed-methods research studies showed significant positive changes in these areas in response to music education in terms of collective music-making and decisions made together [27].

4.4. Social cohesion and inclusion metrics

Inclusive and community-based pedagogical models resulted in a greater mean score on the indices of social cohesion as compared to the traditional classroom-based instruction. The selected social outcome measures are summarized in **Table 4**.

Table 4. Social development outcomes associated with sustainable music education.

Social outcome variable	Measurement instrument	Effect direction
Social bonding	Group cohesion scales	Positive
Sense of belonging	Psychological belonging inventories	Positive
Intercultural competence	Intercultural sensitivity scales	Moderate–high
Peer collaboration quality	Observational interaction coding	Significant gain

Such results point to the fact that sustainability-oriented music education is a social intervention process leading to quantifiable interpersonal gains that are not limited to learning musical skills.

4.5 Adaptability in pedagogy, system stability

Another area of findings dealt with the aspect of pedagogic flexibility, which was understood in terms of the capacity of an instructional structure to maintain learning continuity during contextual and technological changes. Empirical studies of digitally mediated music education had shown that the stability of the system was more likely to be high when digital technology was introduced as supportive learning environment, but not as a content substitute [28].

Quantitative studies indicated that adaptive pedagogical systems had high retention and stability in engagement in both times of disruption, thus indicating better educational resilience.

4.6. Comprehensive results interpretation

The findings indicate that sustainable approaches to music education have measurable technical impact on the areas of engagement, social development and pedagogical resilience. The consistency of such results received by different methodological designs supports the correctness of synthesized results and confirms the conclusion that the sustainability-oriented pedagogical practices contribute to the long-term musical involvement and social growth.

5. Discussion

The results of this paper provide both technical and conceptual support that sustainability-oriented music education practices result in long-term educational impacts in addition to learning instant musical skills. Artificial findings demonstrate that the pedagogical model that is based on the continuity, inclusivity, and adaptability are the key characteristics is correlated with the modern theory of lifelong learning and social sustainability. The results are in line with recent studies on education that frames sustainability as the integrative phenomenon including cultural, social, and pedagogical aspects as opposed to a limited environmental issue.

Based on the previous empirical studies, the persistence of the musical activity

observed in the considered case supports the findings of other research, which suggest that learner agency and meaningful engagement are essential predictors of long-term engagement in music-related practices [29]. The findings suggest that sustainability-based curricula act as enabling systems which allow the learners to remain involved in changing life conditions. This therefore highlights the need to consider sustainable music education as indicators of longitudinal engagement as opposed to the short-term performance indices.

Social developmental outcomes that have been discovered in this study, especially in the area of social cohesion, belonging, and the intercultural competence, agree with the latest research that music education is a socially immersed practice [30]. These findings support theoretical views that underline the importance of considering music learning as a relational process, which is influenced by interaction, collaboration, and social cultural meaning. Notably, results show that these social outcomes are systematically generated whereby an inclusive pedagogical design is adopted and not incidental.

The results related to the flexibility of pedagogical implementation also add to the current arguments about educational resilience. According to recent scholarship, flexible and responsive to contextual change, also technological change, is a feature of sustainable educational systems [31]. The review also states that digital tools can only be more helpful in sustainability when integrated into pedagogical structures that do not disrupt social interaction and learner agency. This is in line with the new studies that have warned about technology-based instruction plans that do not pay any attention to the purpose of education. The future research study should use longitudinal and comparative designs to determine the long-term causal association between sustainability-oriented pedagogy and the long-term social and musical outcome. Further, more focus needs to be channeled to culturally specific sustainability models in order to provide contextual relevance to various systems of education.

Overall, the collected evidence of this review proves the idea that sustainability-driven music education is the shift in the paradigm between the short-term, result-focused teaching approach and the educational paradigm that builds on the continuity, inclusivity, and flexibility. There is an overall trend in the aggregated studies that music education where the agency of learners, social interaction, and cultural responsiveness are given the first priority are more inclined to promote long-term musical participation and significant social growth. These results prove that sustainability in music education is not an idealistic notion but a quantifiable and achievable state of education which is defined by the pedagogical design and institutional support. Notably, the discourse highlights that sustainable music education cannot be narrowed down to the single-classroom approaches. Instead, it calls on a concerted effort on many levels, such as curriculum structures, teacher education, institutional policies, and community collaboration. Without such alignment, the attempts to foster lifelong musical involvement can be easily left to be pieces of an otherwise ad hoc-oriented strategy. Based on this, the findings of this review support the need to adopt systemic solutions that perceive music education as a long-term social practice integrated into the larger ecosystem of education.

In addition, the discussion brings out the duality of music education as both a social and an artistic activity. Sustainable pedagogical practices, in turn, support the

process of musical education and the acquisition of interpersonal skills, including cooperation, belonging, and intercultural knowledge. In this, the music education can add to broader societal goals, such as social cohesion and well-being, hence enhancing its importance in the current learning agendas of educational agendas, which predicts sustainability and lifelong learning.

Combined, these observations give a critical basis to the final part of this paper, which summarizes the main outputs of the review and gives future research and practice directions. By defining sustainability as a philosophy of music education, the current paper places music learning as a sustainable and socially sensitive educational process that can be capable of diversifying individuals and communities throughout their lifespan.

6. Conclusions

This paper addressed the concept of sustainable teaching in music education in an integrative review of the current peer-reviewed studies. The results indicate that sustainability-based music education can be measured in terms of technical results of lifelong musical participation, social growth, and pedagogical sustainability. These results attest to the fact that sustainability in music education is an empirically exhibited educational state and not a theoretical one.

The paper shows that sustainable music education requires a harmonious relationship between learner-centered pedagogies, inclusive social systems and responsive systems of instruction. By incorporating the idea of sustainability into the sphere of music education, the institutions will be able to make the learning of music more relevant in the long perspective and at the same time contribute to the other aspects of social development. The findings provide a researcher with a clue on how he or she should carry out future research and formulate a policy intervention to enhance the presence of music education in sustainable communities [32].

Further, the findings suggest that the tradition of discontinuous or short-term intervention should be substituted with a systematic intervention on the system level that will incorporate sustainability in curriculum development, training of teachers and institutional policy. That type of music education is the most effective when sustainable music education is supported by stable structures to ensure that pedagogical will is aligned with assessment practices and the long-term educational outcomes. Such alignments would imply that sustainability is not an organizational concept, but a secondary element of music education practice. In addition to that, the results of this research have also indicated the role of the application of sustainable teaching in context-specific way. Cultural, social, and technological contexts give the meaning to the interpretation and application of sustainability in music education, i.e., the responsive strategies, including those local, are required to make a difference. The next research ought to therefore be a longitudinal and a comparison research that examines the transformation of sustainability-oriented music education over time across different cultural and institution settings. Finally, the view that music education can be a strategic instrument in fostering a sustainable community in terms of a lifetime engagement practice, social networking, and cultural practices has been validated in the paper. To make teaching and learning processes more sustainable is a

logical way of approaching the music education, which is viewed as a domain of artistry as well as a key component of the educational and societal transformation.

Based on the synthesized findings, this study proposes a sustainability-oriented music education model in which learner-centered pedagogy, cultural responsiveness, and adaptive systems operate as interdependent components. This model positions music education as a lifelong, socially embedded practice that supports continuity of participation, social cohesion, and pedagogical resilience across diverse learning environments.

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