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A scoping review of empirical studies on informal music learning

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Abstract

Informal music learning, pioneered by Green (2002, 2006, 2017), presents an alternative approach that integrates students' interests in popular music, bridging the informal and traditional styles of Western music education in schools. We conducted a scoping review adhering to the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines to investigate informal music learning. Our scoping review encompasses 28 empirical, peer-reviewed articles published from 2006 to 2023. First, we analyse the diverse contexts, methodologies and geographic locations in which informal music learning has been investigated. Second, we explore how different stakeholders perceive and engage with informal music learning in various educational settings. Lastly, we summarise the implications derived from the analysed studies on informal music learning. Our findings reveal that across various educational contexts, informal music learning has consistently demonstrated its positive impact in motivating students. We also find that researchers have extended their investigations from programme reform to exploring pupil and teacher's musical identities. Recommendations for future research include exploring informal music learning in ensembles and elementary music classrooms and employing quantitative or mixed methods to assess its effectiveness and impact.

Keywords: Informal learning; music education; music identities; programme reform; scoping review

Introduction

For years, there has been a separation between informal music learning practices and formal music learning, despite the intrinsic learning values of informal music. This has resulted in a need to rediscover and reintegrate these practices into the classroom (Green, 2008, p. 21). Wright and Kanellopoulos (2010) suggest that informal learning could be understood as a deliberate attempt to immerse oneself in intense situations of non-formal learning, thereby resulting in the creation of non-traditional social learning environments that combine interactive, non-linear and self-directed processes (p. 73). Thus, the adaptation of informal music learning practices within formal education, pioneered by Green (2002, 2006, 2017), offers an approach to incorporate pupils' interests in their music, creating a space that diverges from the formal and traditional styles of Western music education. Green's (2002, 2006, 2017) contribution to music education extends beyond the mere inclusion of popular music in the curriculum, a practice already adopted in various countries such as the United Kingdom, Australia, Canada and some Scandinavian nations. The core innovation of Green's approach lies in the transformation of pedagogical methods, shifting the focus from traditional, structured teaching methods to those that embrace the informal techniques commonly utilised in informal music practices. This pedagogical shift, from a more formalised instruction to an informal, learner-centred approach, was the true novelty of her

work (Green, 2002, 2006, 2017). Since then, many scholars in music education have been called to implement informal music learning and have advocated for the inclusion of music from various cultures and genres in the classroom.

The inclusion of informal music approaches in school curricula is often employed as a means to enhance motivation and address the global declining interest in studying music (McPherson and O'Neill, 2010; Hargreaves and Marshall, 2003). Among young people, music-making is typically a social activity involving collaborative composition, aural musicianship and the exchange of ideas and skills. This activity is often self-directed, resembling the practices of amateur musicians and jazz musicians (Jaffurs, 2004; Davis, 2005; Green, 2008; Abramo, 2011). It is precisely this type of music-making that inspired Green to pioneer informal music learning in schools. According to Green (2002), the strategies for implementing informal music learning include incorporating pupils' music choices, following their preferred learning methods, integrating aural learning, listening, performing, improvising and fostering autonomy through self-teaching and peer-directed learning (Hallam et al., 2017). While many educators have successfully incorporated popular music in their curricula, reports also highlight resistance to change and a lack of preparedness among teachers (Feichas, 2010; Abramo and Austin, 2014; Kastner, 2014; Kastner, 2020; Papazachariou-Christoforou, 2023).

The term 'informal music learning' may appear open-ended and subject to individual interpretation. It is often used interchangeably with non-formal music learning and popular music pedagogy, leading to discourse among researchers (Rodriguez, 2009; Ericsson and Lindgren, 2010). In Mok's (2011) study, Mok put forth the term 'non-formal learning' as a more appropriate description for teacher-guided experiences. However, it is worth noting that the term 'non-formal learning' can sometimes be misconstrued or create confusion; Colardyn and Bjornavold (2004) define non-formal learning as activities that are not explicitly designated as learning but still possess significant learning elements. Folkestad (2006) suggests that 'formal – informal should not be regarded as a dichotomy, but rather as the two poles of a continuum' (p. 135). Allsup (2008) stressed that researchers must exercise caution in equating informal learning directly with popular music. Additionally, he asserted that informality does not inherently result in openness or the transformation of classrooms into environments conducive to the cultivation of democratic thought and practice (p. 3). Many scholars have also urged that, instead of the 'either – or' approach, learners engage in both formal and informal learning and navigate along a continuum that spans between these two. By doing so, students can access the optimal learning and performance opportunities presented by the musical situation (Folkestad, 2006; Green, 2002). Green (2006) states that informal music learning does not only limit to the sphere of popular music but also to classical music and, by implication, other music as well (p. 101). For the sake of clarity, in this paper, we will use Green's (2002, 2006, 2017) informal music learning as a framework, where she defines informal music learning as 'an adaptation of some informal popular music learning practices for classroom which positively affect pupils' musical meanings and experiences' (p. 101).

With the growing interest and implementation of Green's informal music learning (2002, 2006, 2017), an increasing amount of research studies have been conducted across various contexts. In order to summarise the existing empirical research, identify possible gaps and resolve the inconsistencies and discourse on topic of informal music learning, this systematic literature review aims to explore the 'what', 'how' and 'what's next' of this field. Through a scoping review of existing empirical studies, we seek to address the following questions:

- RQ1: In which contexts, methodologies and geographic locations has informal music learning been investigated and implemented across different music settings?
- RQ2: How do learners, teachers and musicians perceive and engage with informal music learning in various educational contexts?
- RQ3: What are the implications of research on informal music learning for music education and pedagogy?

Method

Scoping reviews and systematic reviews are alike in that they both employ methodical and transparent approaches for exhaustive identification and analysis of all literature relevant to a research question. This rigorous process is a hallmark shared by both methodologies (Pham et al., 2014). Following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) checklist (Moher et al., 2009), the authors conducted a scoping literature review solely on the empirical studies on informal learning literature. The choice of a scoping review as the methodological approach for our investigation into informal music learning is rooted in its capacity to address broader, more complex questions than those typically explored through systematic reviews. Our goal is to broadly explore perceptions and engagements of informal music across various educational settings and to synthesise research findings for music education and pedagogy.

Scoping reviews are particularly adept at examining expansive fields of study, synthesising and summarising findings across a wide spectrum of topics and pinpointing underexplored or under-researched gaps in the literature (Arksey and O'Malley, 2005). In the context of our research, informal music learning is a multidimensional domain that not only incorporates a variety of pedagogical innovations but also intersects with diverse cultural practices, making it a rich and intricate field of study. Therefore, this study adopts a scoping review methodology to chart the range of empirical research on informal music learning. This approach is chosen for its capacity to navigate the field's complexity. A scoping review enables a comprehensive exploration that is both broad in scope and flexible in application, effectively capturing the varied pedagogical approaches within informal music learning.

Eligibility criteria

Considering the breadth of material available on informal music education and the specific research questions formulated for this study, our review methodically focuses on empirical studies published in peer-reviewed journals. In our study, we utilised a scoping review as an investigative tool, systematically charting the research landscape by identifying evidence bases. This approach is geared towards addressing more expansive research questions that encompass diverse study designs. The aim of a scoping review is not to provide a comprehensive synthesis of all existing research on a given topic. Instead, its purpose is to probe 'the extent, range, and nature of research activity in a topic area' (Pham et al., 2014, p. 371). As such, we have systematically excluded theoretical papers, articles with unclear methodologies, book chapters and dissertations from our search parameters to maintain a clear focus on empirical articles in peer-reviewed journals with well-defined methodologies.

Our review focuses on empirical studies published in peer-reviewed articles, leading us to reference Green's (2006) article as foundational work. Green's (2006) work is considered foundational to the authors due to her pioneering role in advocating for and implementing informal music learning strategies across a significant number of schools, influencing a shift in educational practice. At the same time, we acknowledge the depth and detail provided in Green's books (2002; 2008), which undoubtedly contribute to a fuller understanding of informal music learning. The exclusion of books from our review is a methodological decision designed to maintain consistency in the type of sources considered and to adhere to the scope of this particular inquiry, which is centred around empirical data reported in journal articles.

Search strategy

A search was undertaken from April 2023 to June 2023 using three databases: ERIC, Google Scholar and JSTOR. The search terms were determined collaboratively, resulting in the

following: 'Informal* AND music* (OR class* OR instrument* OR ensemble OR learning OR popular).' The search was limited to English language peer-reviewed articles as a common language of the team. No restrictions were placed on publication dates. The initial search across the three databases yielded a total of 857 articles. Subsequently, the authors began the selection process by removing duplicate articles, book chapters, keynote presentations, conference proceedings and non-music-related articles, which left us with 85 articles. The remaining 85 articles were organised using a research organisation software. In order to address issues of quality and bias, the team of researchers worked independently by reviewing every article carefully. In the next step, four authors conducted a further examination of the articles to exclude those that used the term 'informal' learning but were not relevant to Green's (2002, 2006, 2017) theory. This evaluation involved reviewing the abstracts and introductions of the articles. Any exclusions required consensus among the four authors. At this stage, 54 articles remained for further analysis.

At this stage, all four authors met and decided to further review the article based on the full text on the following basis: (i) articles centred on Green's ideology of informal learning; (ii) research based on empirical studies that with a clear methodology such as case studies, interviews or quantitative analysis; (iii) the number of participant must be one or more to eliminate theoretical, philosophical or meta-synthesis article; and (iv) findings related to music or in the educational spaces. All authors would have to come to a consensus to discard any article. For example, we rigorously evaluated Jenkins (2011)'s article which we decided not to include; however, we recognise its significant contribution to the field of informal/formal music education. Our detailed assessment concluded that it lacked explicit empirical data and a clear methodological description. Therefore, due to the article not providing the empirical evidence necessary to address our first research question effectively, we were compelled to exclude it from our review. We acknowledge that existing research, including book chapters, may encounter similar categorisation challenges and fall outside the scope of this particular study due to our inclusion criteria focusing on empirical research.

Furthermore, we encountered a number of articles that discussed informal music learning within virtual contexts. Considering the significance of this topic, particularly in light of the coronavirus disease 2019 pandemic, we engaged in thorough discussions among the authors. Ultimately, we made the decision to exclude those articles from our analysis. Our rationale was to concentrate specifically on the in-person social aspects of informal music-making within educational spaces, rather than the alternative space of online communities. However, we acknowledge the importance of examining virtual informal music learning separately, especially given its relevance in today's context. We believe that conducting a dedicated systematic review on this topic in the future would be valuable and insightful.

Selected studies

In the initial stage of our scoping review, we identified 857 records from three databases: ERIC, JSTOR and Google Scholar. The first round of screening removed any duplicates and non-peer-reviewed journal articles, narrowing the field to 85 records. Upon assessing the full texts for eligibility, 54 articles were considered. Further examination led to the exclusion of 31 records, with reports omitted for being theoretical, non-educational, based on music psychology, focused on digital music or concerning virtual learning. A few studies that were ambiguous in terms of methodologies were left for voting; studies with unclear methodologies were subjected to a voting process for inclusion. Ultimately, 28 studies met our criteria and were included in the analysis, ensuring a targeted exploration of the empirical literature concerning our research themes (see Figure 1).

At the end of the selection process, we have retained 28 articles for analysis, with publication dates ranging from 2006 to 2023 (see Table 1).
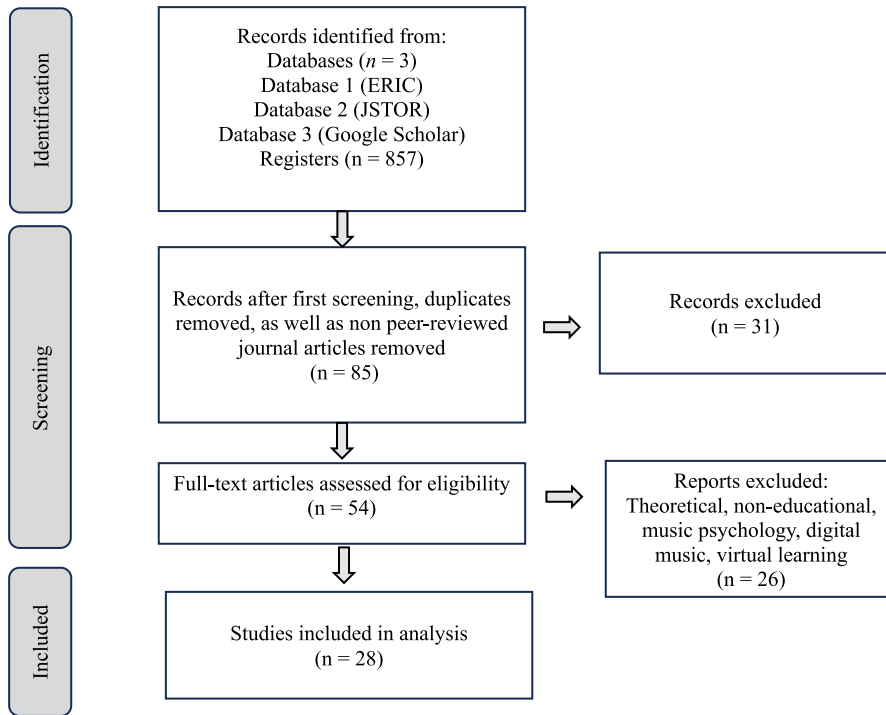
Figure 1. Flow diagram of the studies.

Validity, analysis and limitation

To increase validity, we adhered to the PRISMA checklist for the entire process, ensuring a comprehensive and systematic discussion among the authors. When selecting articles for exclusion, we implemented a collaborative decision-making procedure. Each team member reviewed the potential articles independently, and then, during a collective discussion, authors had the opportunity to present their viewpoints. Votes were cast to reach a consensus on whether a particular article should be included or excluded, ensuring that every author's perspective was considered in the final decision. In cases where a consensus could not be reached, the article in question was retained for a second round of discussion to allow for a more thorough evaluation.

To analyse the selected articles, the four authors manually inputted and cross-checked all 28 final retained articles using Excel. Initially, we colour-coded the articles based on the educational context subgroups, including primary, secondary, college, university and outside contexts such as private studios, pubs and external settings. We then added notes on participants, methodologies and findings to assess the heterogeneity among the articles. We further scrutinised and categorised the descriptive data from the 28 studies, including research topics, prevalent themes and represented perspectives. Subsequently, we conducted a thematic analysis (Clarke and Braun, 2017), linking and contrasting the objectives, methodologies and concepts across different studies. Thematic analysis, as described by Clarke and Braun (2017), is more than just theoretical flexibility; it also involves flexibility concerning research questions, sample size and composition, data collection methods and approaches to generating meaning (2017, p. 297). According to Clarke and Braun (2017), this method can be used to identify patterns within and across data in relation to participants' lived experiences, views, perspectives, behaviours and practices. At this stage, we utilised thematic analysis drawing on our existing familiarity with the field to inform the themes of the retained studies for further data analysis and coding. This flexible approach allowed for the integration of both qualitative and quantitative studies and can be applied across various

Table 1. Articles Included in the Systematic Review

Author	Year	Title	Journal	Country	Context
Green, L.	2006	Popular music education in and for itself, and for 'other' music: current research in the classroom	*International Journal of Music Education*	UK	Secondary school
Waldron, J. and Veblen, K.	2009	Learning in a Celtic community: An exploration of informal music learning and adult amateur musicians	*Bulletin of the Council for Research in Music Education*	Canada	External (Celtic pub session)
Feichas, H.	2010	Bridging the gap: Informal learning practices as a pedagogy of integration	*British Journal of Music Education*	Brazil	University
Wright, R. and Kanellopoulos, P.	2010	Informal music learning, improvisation and teacher education	*British Journal of Music Education*	Greece	University
Abramo, J.	2011	Queering informal pedagogy: sexuality and popular music in school	*Music Education Research*	USA	Secondary school
Cain, T.	2013	'Passing it on': beyond formal or informal pedagogies	*Music Education Research*	UK	Secondary school
Davis, S.	2013	Informal learning processes in an elementary music classroom	*Bulletin of the Council for Research in Music Education*	USA	Primary school
McPhail, G.	2013	Informal and formal knowledge: The curriculum conception of two rock graduates	*British Journal of Music Education*	New Zealand	Secondary school
Abramo, J. M. and Austin, S. C.	2014	The trumpet metaphor: A narrative of a teacher's mid-career pedagogical change from formal to informal learning practices	*Research Studies in Music Education*	USA	Secondary school
Kastner, J. D.	2014	Exploring Informal Music Learning in a Professional Development Community of Music Teachers	*Bulletin of the Council for Research in Music Education*	USA	External (professional development)
Evans, S. E., Beauchamp, G. and John, V.	2015	Learners' experience and perceptions of informal learning in Key Stage 3 music: a collective case study, exploring the implementation of Musical Futures in three secondary schools in Wales	*Music Education Research*	UK	Secondary school
Lonie, D. and Dickens, L.	2016	Becoming musicians: situating young people's experiences of musical learning between formal, informal and non-formal spheres	*Cultural Geographies*	UK	External (music extra-curricular)
Virkkula, E.	2016	Informal in formal: The relationship of informal and formal learning in popular and jazz music master workshops in conservatoires	*International Journal of Music Education*	Finland	External (workshops)

(*Continued*)

Table 1. (*Continued*)

Author	Year	Title	Journal	Country	Context
Brook, J., Uptits, R. and Varela W.	2017	Informal music making in studio music instruction: A Canadian case study	*British Journal of Music Education*	Canada	External (piano studio)
Hallam, S., Creech, A., and McQueen, H.	2017	Can the adoption of informal approaches to learning music in school music lessons promote musical progression?	*British Journal of Music Education*	UK	Secondary school
Mok, A. O.	2017	Informal learning: A lived experience in a university musicianship class	*British Journal of Music Education*	Hong Kong	University
Hallam, S., Creech, A., and McQueen, H.	2018	Pupils' perceptions of informal learning in school music lessons	*Music Education Research*	UK	Secondary school
Mok, A. O.	2018	Formal or informal – which learning approach do music majors prefer?	*Music Education Research*	Hong Kong	University
de Bruin, L. R.	2019	Expert improvisers' formal, informal and situated influences on learning, motivation and self-efficacy: a qualitative study	*Music Education Research*	Australia	External (Jazz musicians)
Poblete, C., Leguina, A. and Masquiarán, N.	2019	Informal and non-formal music experience: power, knowledge and learning in music teacher education in Chile	*International Journal of Music Education*	Chile	University
Vasil M.	2019	Integrating popular music and informal music learning practices: A multiple case study of secondary school music teachers enacting change in music education	*International Journal of Music Education*	USA	Secondary school
Carroll, C. L.	2020	Seeing the invisible: Theorising connections between informal and formal musical knowledge	*Research Studies in Music Education*	Australia	Secondary school
Hess, J.	2020	Finding the "both/and": Balancing informal and formal music learning	*International Journal of Music Education*	USA	External
Kastner, J. D.	2020	Healing bruises: Identity tensions in a beginning teacher's use of formal and informal music learning	*Research Studies in Music Education*	USA	Primary school
Mariguddi, A.	2021	Perceptions of the informal learning branch of Musical Futures	*British Journal of Music Education*	UK	Secondary School
Derges, J. D.	2022	Children's informal music learning: A phenomenological inquiry	*International Journal of Music Education*	USA	Primary school
Gubbins, E.	2023	Musical Futures and Irish primary schools: an investigation into the impact of informal learning and non-formal teaching on music education	*Irish Educational Studies*	Ireland	Primary school
Papazachariou-Christoforou, M.	2023	Incorporation of informal music learning practices in a primary classroom in Cyprus	*International Journal of Music Education*	Cyprus	Primary school

theoretical frameworks and research paradigms. In the final stage, all authors engaged in discussions to identify current gaps, provide interpretations and discuss implications, taking into account the strengths and limitations of the included studies, potential biases and areas for future research. Finally, we formulated recommendations for practice as the conclusion of our analysis.

It is important to acknowledge the limitations of the review. First, some of the retained articles focused on research conducted with a relatively small sample size, primarily due to the qualitative nature of the employed data collection methods. However, we considered these articles valuable due to their provision of rich and descriptive data, which significantly contributed to our understanding of the topic under investigation. Second, although we consulted with an international expert in informal learning to gain insights into diverse educational practices and ensure that our findings are interpreted within the appropriate cultural and pedagogical contexts, we acknowledge the limitations inherent in our analysis, particularly concerning the generalisation of findings across various international educational systems.

Findings

RQ(1) In which contexts, methodologies and geographic locations has informal music learning been investigated and implemented across different music settings?

To answer the first research question, all 28 retained studies for analysis were mostly published among some well-established music education refereed journals, such as the *British Journal of Music Education*, *Bulletin of the Council for Research in Music Education*, *International Journal of Music Education*, *Music Education Research* and *Research Studies in Music Education*. Note that out of the 28 articles, we included Green (2006)'s article as the foundation work.

We organised the context of settings of the 28 articles based on the British education system, which are (a) primary, (b) secondary (including early college), (c) university and (d) external (outside school). Out of the 28 articles, the majority of research contexts are at secondary school level, which yielded 11 articles based on such topic (Green, 2006; Abramo, 2011; Cain, 2013; McPhail, 2013; Abramo and Austin, 2014; Evans et al., 2015; Hallam et al., 2017; Hallam et al., 2018; Vasil, 2019; Carroll, 2020; Mariguddi, 2021), which is unsurprising as Green's Musical Futures (MF) programmes were pioneered at secondary schools. MF is an educational initiative that transforms music teaching by prioritising active music-making, grounded in the cultural interests of the students, rather than being limited to a specific musical style or genre (Musical Future International, n.d.).

There are six articles in which context is considered as external, such as private music studio (Brook et al., 2017), professional musicians (de Bruin, 2019; Hess, 2020), professional development community (Kastner, 2014), youth leadership programme (Lonie and Dickens, 2016) and Celtic community (Waldron and Veblen, 2009). Equally, there are six articles where context is based at the university level (Feichas, 2010; Wright and Kanellopoulos; 2010; Virkkula, 2016; Mok, 2017, 2018; Poblete et al., 2019). The least researched area among all is the primary school setting, which yielded five research articles (Davis, 2013; Kastner, 2020; Derges, 2022; Gubbins, 2023; Papazachariou-Christoforou, 2023).

Table 2 presents the distribution of studies across different research methods conducted in various contexts. The authors initially categorised each study according to its research method and context. Following this individual categorisation, the team convened to review and verify the accuracy of the categorisation results. This collaborative analysis was crucial in ensuring the reliability of the data. By scrutinising the distribution of research methods across different educational contexts, the analysis facilitated the identification of trends and patterns in research methodology usage. These findings offer valuable insights into the preferences and effectiveness of various research approaches within specific educational settings, contributing to a deeper understanding of informal music education research. The research methods listed include case

Table 2. Number of Studies with Different Research Methods in Different Contexts

	Case study	Narrative	Ethnographic	Action research	Phenomenology	General qualitative	Mixed methods	Subtotal
Primary	–	1	1	2	1	–	–	**5**
Secondary (and early college)	8	1	–	–	–	–	2	**11**
University	–	1	1	–	–	2	2	**6**
External	2	–	1	–	1	2	–	**6**
Total	10	3	3	2	2	4	4	**28**

study, narrative analysis, ethnographic research, action research, phenomenology, general qualitative methods and mixed methods. The term 'general qualitative' in this context refers to research methods such as interviews, observations or reflective writing, where the specific type of qualitative approach is not explicitly specified by the researchers. Based on our analysis (refer to Table 2), out of the 28 articles, the most commonly employed methodology was single or multiple case studies, which accounted for a total of 10 articles. This methodology was also used by Green (2006). Additionally, there were four articles that employed mixed methods, combining questionnaires and interviews as their research instruments. These articles include Hallam et al. (2017), Hallam et al. (2018), Mok (2018) and Poblete et al. (2019). The number of participants in the studies varied, ranging from a single participant in articles such as Abramo and Austin (2014), Brook et al. (2017) and Kastner (2020) to several hundred pupils and staff in articles such as Hallam et al. (2017) and Hallam et al. (2018).

While informal music learning initiatives like MF in the United Kingdom have received considerable research attention, our findings indicate that informal music learning has also been extensively studied in other parts of the world. These include Australia, Brazil, Canada, Cyprus, Chile, Finland, Greece, Hong Kong (China), Ireland, the United States and New Zealand. Among the countries mentioned, the United Kingdom and the United States appear to have been the most prominent in terms of research on informal music learning, with eight articles each focusing on these contexts. This suggests a strong interest and active research community in both countries regarding the topic of informal music learning.

RQ(2) How do learners, teachers and musicians perceive and engage with informal music learning in various educational contexts?

To address the second question of how learners, teachers and musicians perceive and engage with informal music learning in different educational contexts, we identified three perspectives through our coding system. These perspectives are categorised as (a) 'pro-informal', (b) 'beyond dichotomy' and (c) 'both/and'. The articles categorised as 'pro-informal' generally present their findings on informal music learning as a positive experience, with only minor problems mentioned. These researchers (Green, 2006; Waldron and Veblen, 2009; Wright and Kanellopoulos, 2010; Davis, 2013; Kaztner, 2014; Evans et al., 2015; Virkkula, 2016; Brook et al., 2017; Hallam et al., 2017; Mok, 2017; Hallam et al., 2018; Vasil, 2019; Mariguddi, 2021; Derges, 2022; Gubbins, 2023; Papazachariou-Christoforou, 2023) consider informal music learning as valuable and effective for learners, teachers and musicians in different educational contexts. On the other hand, the articles classified under the 'beyond dichotomy' perspective present more nuanced discussions, often focusing on the binary issues of 'formal' versus 'informal' music learning and/or highlighting the limitations of informal pedagogical approaches (Abramo, 2011; Cain, 2013; Abramo and Austin, 2014; Carroll, 2020). These researchers have raised possible questions about the effectiveness or drawbacks of informal

music learning compared to formal approaches or about the limitations of the binary terms 'formal' and 'informal'. The final category 'both/and' included articles that heavily emphasise both formal and informal music learning, as well as articles that bridge the gap between the two pedagogies (Feichas, 2010; McPhail, 2013; Kastner, 2014; Lonie and Dickens, 2016; Mok, 2018; de Bruin, 2019; Poblete et al. 2019; Hess, 2020; Kastner, 2020). These researchers recognise the benefits and drawbacks of both approaches and are exploring ways to combine them for a more comprehensive music education experience. It is important to note that while we have attempted to categorise the articles based on our understanding, some articles may fall in between or take a combination of perspectives. These articles may defy non-binary generalisations of formal and informal pedagogy, recognising the complexity and diversity of experiences within music education.

Programme reform

A significant number of research articles we analysed focused on programme reform and evaluation, with a particular emphasis on the learning experiences of various stakeholders, including pupils and teachers. Notably, MF emerged as one of the pioneering studies exploring how pupils connect with and learn popular music within the classroom setting when they are enabled to engage in informal learning practices. Green (2006) describes aural learning as a 'natural learning process', highlighting its role in enhancing listening abilities (p. 108). She also acknowledges several challenges faced by pupils when learning as popular musicians, such as pitch matching, attentive listening and playing in sync with others.

Similarly, researchers Evans, Beauchamp and John (2015); Hallam, Creech and McQueen (2017, 2018); and Mariguddi (2021) examine the implementation of the MF programme in secondary schools. The findings of these studies generally reported positive outcomes, showcasing how the programme facilitated meaningful music engagement, increased motivation, peer learning, the development of extra-musical skills and critical thinking (Evans et al., 2015; Hallam et al., 2017, 2018). However, alongside the positivity, researchers also highlight issues similar to those mentioned by Green (2006) and reveal another significant concern – namely, an implicit hierarchy within the infrastructure where classical music and formal music training are often regarded as more favourable than other genres (Evans et al., 2015; Hallam et al., 2018).

In university settings, informal music learning has also been integrated, although with a more theoretical approach rather than adhering strictly to the M curriculum. The findings of the studies indicated that once exposed to informal music learning, university pupils began to appreciate its value. Mok (2018) discovered that pupils at the university level perceived both formal and informal music learning as effective, with a slight inclination towards informal learning by personal choice. Virkkula (2016) refers to the experiences of informal learning in workshops as 'multi-level learning', fostering the development of a music community (p. 171). Poblete et al. (2019) took a different perspective and examined pupils in the music education programme, revealing a prevalence of individual or group practices focused on musical performance. These practices were found to shape a disciplinary foundation based more on procedural familiarity than on a holistic education grounded in exploration, inquiry and knowledge transmission (p. 282). de Bruin (2019) and Wright and Kanellopoulos (2010) discuss improvisation as a bridge between formal and informal music learning. Wright and Kanellopoulos (2010) propose that improvisation played a crucial role in preparing and connecting informal learning for student teachers, creating a context where implicit understanding is highly valued, acknowledged but not explicitly analysed. This approach fosters sustained engagement with the mechanisms of musical structure and communication from an internal perspective (p. 83).

Among the studies conducted at the primary level, joy emerged as the most prominent theme (Davis, 2013; Derges, 2022; Gubbins, 2023; Papazachariou-Christoforou, 2023). However, similar to secondary pupils, primary pupils also faced challenges in matching pitches by ear on instruments. Overall, informal learning was found to be a valuable approach for young pupils,

promoting their engagement, social development, musical growth and cultural awareness. The research indicates that young pupils derive enjoyment from the process of informal learning, as it encourages peer interactions, freedom of choice and connections between their music-making activities and the music they encounter in their daily lives. This approach allows pupils to bring their musical cultures into their learning experiences. Dergres (2022) highlights one critical issue specific to younger pupils, which is their limited ability to critically assess their own performances and products. Furthermore, the authors noted a lack of research at the primary level, with three of the studies published in 2022 and 2023, suggesting an increasing adaptation of the informal learning approach in recent years at the primary level.

Musical identities

In addition to the codes of (a) 'pro-informal', (b) 'beyond dichotomy' and (c) 'both/and', we noticed the recurring themes of musical identities in many articles. Therefore, we decided to include (d) 'musical identities' as an additional category. After carefully coding them and triangulating the results among the authors, we found that 12 studies (Waldron and Veblen, 2009; Abramo, 2011; Davis, 2013; McPhail, 2013; Abramo and Austin, 2014; Kastner, 2014; Lonie and Dickens, 2016; Virkkula, 2016; de Bruin, 2019; Hess, 2020; Kastner, 2020; Derges, 2022) should be categorised under 'musical identities' due to their frequent discussion of how informal music influences the participants' musical identities. For instance, they discuss the transformation of identities influenced by the traditional infrastructure of music education programmes, societal norms and the implicit hierarchy that exists between classical and popular music genres (Abramo, 2011; Abramo and Austin, 2014; de Bruin, 2019; Kastner, 2020; Derges, 2022). In addition, the shift in teacher identity has been a topic of discussion, particularly as it relates to the transition from formal to informal music pedagogy in the classroom (Davis, 2013; Abramo and Austin, 2014) and the integration of both formal and informal approaches in their teaching practices (Kastner, 2014; Kastner, 2020). Although informal music learning is generally well-received by pupils, principals and parents, findings reveal that teachers faced challenges in adapting their pedagogical approaches, primarily due to their classically trained backgrounds, cultural hegemony and personal beliefs. Kastner (2014) finds that teachers viewed informal music learning as a new way and a potential supplementary pedagogical approach in their classrooms, reinforcing skills and knowledge acquired through formal training.

The examination of pupil identities encompassed various perspectives (Abramo, 2011; Derges, 2022; Lonie and Dickens, 2016). Derges (2022) emphasises that informal music learning provides children with an opportunity to explore and consolidate their musical identities by validating their skills and expressing their musical preferences. This exploration extended to the application of queer theory (Abramo, 2011), which shed light on how informal learning influences pupil identities. Additionally, the conceptualisation of music spaces is another lens through which pupil identities are studied (Lonie and Dickens, 2016). Abramo (2011) discusses how popular music, particularly rock music, could confine pupils to hetero-hegemonic male identities, contrasting with the more traditional music ensemble playing. Lonie and Dickens (2016) expand on this concept by illustrating how young learners assert ownership over the spaces in which they create music, thereby manifesting their unique musical identities, referred to as their 'musical habitus' (p. 99). The exploration of musical identities extended beyond popular musicians to include activist musicians, amateur musicians and jazz musicians (Hess, 2020; de Bruin, 2019; Waldron and Veblen, 2009) within the external context. Despite not being categorised as popular musicians, these individuals often display overlapping musical identities, encompassing elements of both formal and mastery approaches. Their musical journeys involve self-teaching strategies, aural learning and improvisation, highlighting the compelling rationale for embracing a 'both/and' approach that bridges formal and informal music pedagogy (see Table 3).

Table 3. Articles Coded Under Five Prominent Themes

Author	Year	Title	Context	Pro-informal	Beyond dichotomy	Both/ and	Programme reform	Musical identities
Green, L.	2006	Popular music education in and for itself, and for 'other' music: current research in the classroom	Second^	✓			✓MF*	
Waldron, J. and Veblen, K.	2009	Learning in a Celtic Community: An Exploration of Informal Music Learning and Adult Amateur Musicians	External	✓				✓
Feichas, H.	2010	Bridging the gap: Informal learning practices as a pedagogy of integration	Uni+			✓		
Wright, R. and Kanellopoulos, P.	2010	Informal music learning, improvisation and teacher education	Uni+	✓			✓	
Abramo, J.	2011	Queering informal pedagogy: sexuality and popular music in school	Second^		✓			✓
Cain, T.	2013	'Passing it on': beyond formal or informal pedagogies	Second^		✓			
Davis, S.	2013	Informal learning processes in an elementary music classroom	Primary	✓			✓	✓
McPhail, G.	2013	Informal and formal knowledge: The curriculum conception of two rock graduates	Second^			✓		✓
Abramo, J. M. and Austin, S. C.	2014	The trumpet metaphor: A narrative of a teacher's mid-career pedagogical change from formal to informal learning practices	Second^		✓			✓
Kastner, J. D.	2014	Exploring Informal Music Learning in a Professional Development Community of Music Teachers	External	✓				✓
Evans, S. E., Beauchamp, G. and John, V.	2015	Learners' experience and perceptions of informal learning in Key Stage 3 music: a collective case study, exploring the implementation of Musical Futures in three seconds in Wales	Second^	✓			✓MF*	
Lonie, D. and Dickens, L.	2016	Becoming musicians: situating young people's experiences of musical learning between formal, informal and non-formal spheres	External			✓		✓
Virkkula, E.	2016	Informal in formal: The relationship of informal and formal learning in popular and jazz music master workshops in conservatoires	External	✓			✓	✓
Brook, J., Uptits, R., and Varela W.	2017	Informal music making in studio music instruction: A Canadian case study	External	✓				
Hallam, S., Creech, A., and McQueen, H.	2017	Can the adoption of informal approaches to learning music in school music lessons promote musical progression?	Second^	✓			✓MF*	

(*Continued*)

Table 3. (*Continued*)

Author	Year	Title	Context	Pro-informal	Beyond dichotomy	Both/and	Programme reform	Musical identities
Mok, A. O.	2017	Informal learning: A lived experience in a university musicianship class	Uni+	✓			✓	
Hallam, S., Creech, A., McQueen, H.	2018	Pupils' perceptions of informal learning in school music lessons	Second^	✓			✓	
Mok, A. O.	2018	Formal or informal – which learning approach do music majors prefer?	Uni+			✓	✓	
de Bruin, L. R.	2019	Expert improvisers' formal, informal and situated influences on learning, motivation and self-efficacy: a qualitative study	External			✓	✓	✓
Poblete, C., Leguina, A., and Masquiarán, N.	2019	Informal and non-formal music experience: power, knowledge and learning in music teacher education in Chile	Uni+			✓	✓	
Vasil M.	2019	Integrating popular music and informal music learning practices: A multiple case study of secondary school music teachers enacting change in music education	Second^	✓				
Carroll, C. L.	2020	Seeing the invisible: Theorising connections between informal and formal musical knowledge	Second^		✓			
Hess, J.	2020	Finding the "both/and": Balancing informal and formal music learning	External			✓		✓
Kastner, J. D.	2020	Healing bruises: Identity tensions in a beginning teacher's use of formal and informal music learning	Primary			✓		✓
Mariguddi, A.	2021	Perceptions of the informal learning branch of Musical Futures	Second^	✓			✓MF*	
Derges, J. D.	2022	Children's informal music learning: A phenomenological inquiry	Primary	✓			✓	✓
Gubbins, E.	2023	Musical Futures and Irish primary schools: an investigation into the impact of informal learning and non-formal teaching on music education	Primary	✓			✓MF*	
Papazachariou-Christoforou, M.	2023	Incorporation of informal music learning practices in a primary classroom in Cyprus	Primary	✓			✓	

*MF = Musical Futures.
+Uni = University.
^Second = Secondary.

RQ(3) What are the implications of research on informal music learning for music education and pedagogy?

The 28 research studies highlight the effectiveness of informal music learning approaches in engaging pupils, fostering autonomy, cooperation, collaboration, critical thinking and motivation. The informal music learning approach also serves to bridge pupils' social and cultural backgrounds into the educational context. However, during the implementation, common challenges were identified, including the initial difficulties pupils faced when transitioning from rote learning and score reading to self-directed and aural learning (Green, 2006; Mok, 2018; Mariguddi, 2021; Derges, 2022; Papazachariou-Christoforou; 2023). Additionally, some teachers encountered struggles in shifting their pedagogies and effectively employing informal learning pedagogy (Cain, 2013; Davis, 2013; Feichas, 2010; Kastner, 2014; Abramo and Austin, 2014; Kastner, 2020). It is evident that many teacher preparation programmes in higher education are not adequately equipping future teachers to employ informal music pedagogy in their classrooms. This disconnect leads to struggles in identity shifts among teachers and reinforces the implicit hierarchy between traditional, teacher-centred Western music education and the spontaneous, pupil-driven nature of informal music learning as seen in popular music contexts.

Additionally, our analysis reveals a recurring mention of the misconception surrounding the term 'informal' in the literature. Some educators consider informal music learning to be supplementary to formal instruction, using informal activities only to strengthen and reaffirm skills and knowledge gained through traditional teaching methods (Kastner, 2014). Researchers (Feichas, 2010; Cain, 2013; McPhail, 2013; Lonie and Dickens, 2016; Mok, 2018; Hess, 2020) emphasise the importance of looking beyond the binary of 'informal' and 'formal', urging a shift away from a two-dimensional view. It is crucial to break free from this misconception and recognise the multifaceted nature of music learning. Furthermore, there is a subtle misconception regarding the implementation of MF. Mariguddi (2021) observes a common view among educators that MF is predominantly about 'band work' in the genres of pop and rock, which can unintentionally marginalise students grounded in classical music. This perception risks narrowing the scope of informal music learning, undermining its diversity and breadth. Furthermore, educators face the added pressure of conforming to authority and commercialising educational programmes (Mariguddi, 2021). This underscores the importance of dispelling misconceptions about MF and challenging its commercialised perception to fully realise MF's inclusive potential.

Discussion

Research across 12 countries provides unique cultural insights. However, due to differences in educational systems, receptiveness to informal music learning and the varying presence of informal opportunities within formal settings, direct comparisons are avoided in this review process. Research by Feichas (2010), Mok (2017; 2018) and Poblete et al. (2019) highlights that in Brazil, Hong Kong (China) and Chile, respectively, students engaged in these contexts tend to develop an eclectic mix of musical repertoires, including folk and popular music. Such repertoires are deeply interwoven with cultural traditions and carry meanings that reflect the historical and social fabric of the communities they emerge from (Poblete et al., 2019, p. 282).

Examining perspectives from learners, teachers and musicians of the 28 studies, their findings encompass endorsing informal music practices, advocating for their integration with formal methodologies and engaging in nuanced discussions while highlighting the limitations of informal music practices. It was observed in many of these studies (e.g. Davis, 2013; Derges, 2022; Evans et al., 2015, Gubbins, 2023; Hallam et al., 2017, Hallam et al, 2018; Mariguddi, 2021; Papazachariou-Christoforou, 2023) that implementing informal music learning led to increased positive perceptions, confidence and motivation. These studies (Abramo, 2011; Abramo and Austin, 2014; de Bruin, 2019; Kastner, 2020; Derges, 2022) further shed light on how informal

music learning influences the construction and expression of musical identities among students, examining how students affirm their musical tastes and preferences through learning, the role of music spaces in shaping identity and educators' transition from formal to informal teaching methods. Kastner (2020) called for supporting students' identity formation in broader music styles through informal music learning processes. However, doubts have been raised regarding whether popular music pedagogies in formal settings effectively further traditional music education aims by potentially confining students to hetero-hegemonic identities based on media portrayals of popular singers (Abramo, 2011). Jenkins (2011) posits,

> Perhaps even more than formal practices, informal practices, when intelligently applied, foster the capacity of a student to develop a self-identity with a distinct perspective on the world. But approaches that have fallen under the banner of 'informal' have often been subject to bandwagon over-enthusiasm, with proponents inflating their virtues beyond what the concept appears to warrant. (p. 180)

It is important to note that while all 28 studies addressed several challenges during implementation, none essentially revealed absolute negative experiences. This led the authors to wonder whether the popularity of informal practices may have led to overstatements about their effectiveness. Thus, a more measured and critical approach to evaluating the actual impact of informal music on education is suggested.

Another observation the authors noted, which might easily be overlooked, is the perception of MF portrayed in the studies. McPhail (2013) and Mariguddi (2021) touch on the common misconception of MF, the informal learning approaches popularised by the MF programme, which could be seen as an all-in-one solution to make school music more relevant. Additionally, another concern raised is the potential commercialisation of the MF organisation. Green shared apprehensions about this, fearing that the innovative approach of MF might be absorbed into the curriculum and become a commodified package, as critiqued by Finney and Philpott in 2010 (Mariguddi, 2021, p. 40).

The review also reveals the friction between traditional and informal learning pedagogies, with much of the reviewed literature advocating for a pedagogy that embraces a richer, more inclusive understanding of music education. While informal music teachings have generally been successful and well-received, Green (2008) argues that they are not meant to replace formal teaching methods entirely. Instead, they should complement traditional education, with the ultimate goal of educating students beyond simply granting them autonomy in learning. Furthermore, the studies (e.g. Davis, 2013; Hallam et al., 2017; Hallam et al., 2018; Papazachariou-Christoforou; 2023) collectively point to the shift from structured to self-guided learning can pose initial challenges for students or even teachers accustomed to rote techniques. Similarly, the findings reveal a significant disconnect between current teacher training programmes and the pedagogical skills required to effectively implement informal music learning in the classroom (e.g. Kastner, 2014). This gap reveals the need for an educational infrastructure that supports pedagogical diversity and addresses the evolving landscape of music learning.

Recommendations

Since Green's (2002, 2006, 2017) efforts in promoting informal music learning, a considerable amount of empirical research has been conducted in this field. However, there are still gaps that need to be addressed for further research. We recommend the following for future research. First, a substantial amount of research has been conducted in the United Kingdom and North America. To ensure a more global perspective, it is important to expand research beyond these regions. Exploring informal learning practices in different regions and cultures, such as South America, the

Middle East and Asian countries, can provide insights into the challenges and opportunities associated with implementing informal learning approaches in various educational contexts. This can help identify cultural factors and teacher-centred approaches that may influence the adoption of informal learning strategies.

Second, none of the peer-reviewed articles have focused on ensemble learning or exploring how informal learning can be effectively implemented by ensemble conductors. As Allsup (2003) mentions, educators who teach large ensembles have been slow to incorporate informal learning. This area remains relatively unexplored and presents an opportunity to investigate the potential benefits and challenges of incorporating informal learning approaches within ensemble settings.

Third, the method of case studies has been researched extensively. Future research should consider utilising quantitative or mixed methods approaches to further investigate the effectiveness of informal learning programmes from the perspective of pupil learning outcomes. This will help provide a more comprehensive understanding of the impact of informal learning in music education.

Fourth, another area for future research is to expand the implementation of informal learning in elementary education. We are seeing more studies being published in elementary education in recent years. Continued effort and research need to be conducted to examine the specific strategies, approaches and outcomes of informal learning in elementary education, as we found some critical issues for elementary pupils, such as the lack of critical feedback (Derges, 2022).

Fifth, we purposefully left out articles that dealt with virtual and online music communities. Given the increasing prevalence of the digital pedagogy, especially post-pandemic, we hope future research can be focused on a scoping review of informal learning within these virtual spaces. Investigating the unique characteristics, challenges and benefits of informal music learning in virtual environments can contribute to the understanding of how technology impacts informal learning experiences.

Several universities have been adapting informal music learning into the coursework; this would provide a valuable bridge for future music educators as they develop their social and musical identities. By integrating formal training on informal music learning, pre-service teachers can acquire the necessary knowledge, skills and pedagogical strategies to effectively implement informal approaches in their future classrooms. Administrators overseeing the programmes can consider providing professional development opportunities in informal music learning for in-service educators to further promote engagement in the classroom through informal music learning, where teachers can share experiences, best practices and resources related to incorporating informal music learning. These initiatives can help break the cycle of teacher-centred pedagogy and encourage the integration of informal approaches within formal educational settings. Furthermore, it is important not only to embrace the concept of 'informal' within the formal setting but also to emphasise the value of aural traditions, which are common in non-Western cultures, as well as improvisation techniques, which are often specialised skills developed in conservatories for jazz musicians.

In addition, based on the discourse, it is essential to re-conceptualise or redefine informal music learning among researchers and educators. Perhaps it could be done by renaming the approach or by focusing on the aims of the approach beyond 'formal' versus 'informal'. As the term often sparks scholarly debates, researchers should recast the discussion beyond the surface meaning and dig deeper into the implementation and strategies to enhance pupils' experiences. Another suggestion could be the development of an informal music learning systematic framework and adaptable curricula. This framework can span from the elementary level to the university level, ensuring a coherent and progressive integration of informal music learning approaches throughout a pupil's educational journey. By establishing a clear and well-defined structure, educators can effectively implement informal music learning principles while addressing the specific needs and developmental stages of pupils at different educational levels.

Conclusion

In conclusion, to create impactful and effective learning experiences for pupils, it is crucial to recognise and integrate both formal and informal pedagogies. The 28 empirical studies analysed in this review suggest an increasing recognition of the value that both formal and informal pedagogies bring to music education. However, to further enhance the implementation of informal music learning in music education, particularly within ensemble settings, additional support from in-service teachers, principals and parents is necessary. Ongoing professional development for in-service teachers is recommended to equip them with the knowledge and skills to effectively utilise informal music learning approaches in their classrooms. Additionally, addressing the general misconceptions surrounding informal music learning is imperative to ensure its broader adoption. Without these important steps, informal music learning may remain accessible to only a limited number of schools, preventing many pupils from benefiting from its advantages. It is suggested to advocate for increased support and awareness among educational stakeholders to fully embrace and implement informal music learning approaches in the current music education field.

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