

Enhancing School Music Education through Technology: The Case of Solfy

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ABSTRACT: This article examines the educational potential of Solfy, an interactive digital platform designed to support singing development and the early acquisition of music literacy in school settings. The discussion is grounded in the view that digital tools should not replace the music teacher or traditional pedagogical practice, but should instead extend and reinforce them. Drawing on scholarship on blended learning, feedback, digital tools in elementary music education, and technology-supported music pedagogy, the article argues that Solfy may provide a meaningful bridge between teacher-guided classroom instruction and structured home practice. Particular attention is given to the pedagogical value of repetition, self-recording, formative feedback, differentiated learning, and continuity between classroom and home. The article also proposes a mixed-methods pilot framework for investigating the effects of Solfy on singing accuracy, music literacy, motivation, confidence, and readiness for collective singing. It is suggested that, when integrated thoughtfully into teacher-led instruction, Solfy may support students' independent practice while also helping teachers monitor progress and address learner diversity more effectively.

KEYWORDS: music education, singing pedagogy, music literacy, blended learning, digital learning, formative feedback, Solfy

Introduction

Singing has long occupied a central place in school music education. It supports musical participation, aural development, memory, expressive communication, and the gradual internalization of pitch and rhythm relationships. In many school systems, however, music

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teachers work under conditions of limited instructional time, varied student readiness, and unequal opportunities for guided practice outside the classroom. These constraints often make it difficult to provide the repetition, individual support, and feedback that many learners need in order to gain confidence and musical fluency.

In response to such challenges, educational technology has increasingly been explored as a means of extending music learning beyond the classroom. Recent scholarship suggests that digital tools in elementary music education can support musical skills, engagement, and motivation when they are integrated into sound pedagogical design rather than treated as ends in themselves (Liu et al., 2025). Research on teacher preparation and blended music learning similarly emphasizes that technology is most effective when it remains connected to musical, social, and pedagogical goals (Beirnes & Randles, 2023; Cuervo et al., 2023; Karkina et al., 2023).

The present article focuses on Solfy, an interactive educational platform developed to promote singing and initiate music literacy. The central claim advanced here is that Solfy can be understood not as a substitute for traditional school music teaching, but as a complementary pedagogical resource. Used in class by the teacher and at home by students for individual practice, Solfy may help create continuity between shared musical activity and personal reinforcement. This article therefore aims to articulate a pedagogical rationale for the use of Solfy in school music education and to propose a research framework through which its educational contribution may be examined systematically.

Literature Review

Contemporary literature on music education increasingly highlights the expanding role of digital environments in teaching and learning. This shift is not simply about the addition of devices or platforms; it also concerns changing conceptions of access, participation, practice, and learner agency. Research on blended and online music learning has shown that digital environments can support repetition, flexible pacing, multimodal representation, and new forms of interaction, but it has also warned that these benefits depend on careful educational framing and the continued presence of meaningful teacher guidance (Beirnes & Randles, 2023).

A particularly relevant strand of literature concerns feedback. Cardenas (2024) argues that feedback remains one of the most important instructional tools in music teaching and that its form, timing, and responsiveness to learner needs significantly influence its educational value. In the context of singing, feedback is especially important because vocal learning depends not only on knowledge of correct pitches or rhythms but also on self-awareness, confidence, and repeated opportunities for adjustment.

Recent work on AI-assisted and e-learning-supported vocal training further suggests that personalized feedback technologies can foster reflection and deep engagement, even when measurable performance gains are not always immediate or

uniform. The significance of such findings lies partly in the fact that digital feedback may help structure practice and make learners more active in observing and evaluating their own performance (Li, 2025).

In addition, Liu et al. (2025), in a systematic review of digital tools in elementary music education, found that many studies reported positive effects on musical performance, music theory skills, motivation, and engagement. At the same time, the review stressed the need for careful methodological design and critical appraisal of interventions. This point is highly relevant for any study of Solfy, because enthusiasm for innovation should not replace rigorous educational evaluation.

Teacher preparation is another essential dimension. Cuervo et al. (2023) show that effective use of technology in music learning depends not only on software availability but also on teachers' confidence, pedagogical intention, and digital competence. For this reason, any school-based implementation of Solfy must be understood as involving not only student learning, but also teacher mediation and teacher development.

Theoretical and Pedagogical Framework

The pedagogical logic behind Solfy can be situated within four closely related ideas: blended learning, differentiated instruction, formative assessment, and student-centered musical practice.

First, blended learning in music education involves the thoughtful combination of face-to-face teaching and digital learning opportunities. In a musically meaningful blended model, the classroom remains the place where the teacher introduces repertoire, models expression, guides joint singing, and creates social-musical coherence. The digital environment then extends this work by allowing students to revisit material, repeat tasks, and practice at an individual pace.

Second, Solfy is compatible with differentiated instruction because it allows students to repeat songs and exercises as needed, work at their own pace, and receive individualized responses to their performance. Differentiation is especially important in school music classes, where learners often vary considerably in confidence, previous exposure, vocal control, and reading ability.

Third, the platform aligns with the principles of formative assessment. Formative approaches focus on helping learners understand where they are, what they are aiming for, and how they can improve. In music, this is not limited to formal grading; it includes timely information, guided reflection, and opportunities for revision. The feedback literature strongly supports the value of such approaches in music classrooms (Cardenas, 2024).

Finally, a student-centered perspective is relevant because musical growth depends on active participation. Solfy may support agency by enabling students to listen, repeat, record, compare, and improve. In this respect, the platform can be seen as

strengthening rather than weakening the educational role of the teacher: the teacher frames the task, selects the repertoire, interprets progress, and reconnects individual practice to collective classroom music-making.

Solfy as an Educational Tool

Solfy is designed as an interactive learning environment for the development of singing and music literacy. Its educational value lies in the integration of several musical functions within one structured setting: listening, score visualization, vocal imitation, self-recording, repetition, feedback, and progress monitoring. In classroom use, Solfy can help the teacher present songs and solfège exercises through coordinated visual and auditory support. In home use, it can provide students with a guided space for repetition and self-evaluation.

From a pedagogical perspective, three features are especially relevant. The first is continuity: the same material introduced in class can be revisited at home. The second is individualization: students who need more repetition can work longer, while more advanced students can consolidate more independently. The third is visibility of learning: student recordings and usage data may provide teachers with useful information about patterns of participation and progress.

Importantly, this article does not position Solfy as a fully autonomous learning system. Rather, it is viewed as a tool whose educational effectiveness depends on teacher-led integration. This position is consistent with recent scholarship arguing that meaningful technology in music education should serve pedagogical and human goals, including accessibility, engagement, reflective practice, and the strengthening of existing musical relationships (Karkina et al., 2023).

Aim of the Study

The aim of this article is to propose and justify the educational use of Solfy in school music education and to outline a research design for examining its pedagogical value. More specifically, the article explores how Solfy may support singing development, early music literacy, student confidence, and continuity between classroom activity and home practice.

Research Questions

The following research questions are proposed:

1. How does the integration of Solfy into teacher-led classroom instruction influence students' singing development?
2. In what ways can Solfy support the early development of music literacy?
3. How does home practice with Solfy affect student confidence, motivation, and readiness for collective singing?
4. How do teachers perceive Solfy as a complement to traditional music education?

Method

Research Design

A suitable next step would be a mixed-methods pilot study. Such a design is appropriate because the educational use of Solfy concerns both measurable outcomes and lived pedagogical experience. Quantitative data might include pre- and post-assessments of selected musical skills, while qualitative data could include teacher observations, student questionnaires, and short interviews.

Participants

Participants could be drawn from one or more primary school classes, for example Grades 3–6. Ideally, a pilot study would compare an experimental group using Solfy alongside normal instruction with a comparison group receiving the same repertoire and classroom teaching without structured Solfy-supported home practice.

Procedure

The intervention could run for six to ten weeks. At the beginning of the study, students could complete an initial assessment focused on singing accuracy, rhythmic response, or basic notation recognition. During the intervention, the teacher would introduce songs and related musical material during regular classroom lessons using traditional pedagogical methods supported by Solfy as a presentation and practice aid. Students in the experimental group would then continue practicing at home through Solfy.

At the end of the intervention, students would complete a post-assessment. Teachers could also record observations about rehearsal efficiency, student confidence, and participation. Usage statistics from Solfy could help document the frequency and duration of home practice.

Data Collection and Analysis

Qualitative data could include teacher observations, open-ended student responses, and brief interviews. Quantitative data could include pre- and post-test scores, number of recorded attempts, and platform usage indicators. Qualitative data could be analyzed thematically, while quantitative results could be compared descriptively and, if sample size permits, statistically.

Ethical Considerations

Because the study would involve school-aged children, informed consent from school authorities and, where necessary, parents or guardians would be required. Participant anonymity should be protected, and audio or usage data should be handled in accordance with institutional ethical standards.

Discussion

The case for Solfy rests on a simple but pedagogically important observation: many children need more guided musical repetition than classroom time alone can provide. If

the teacher's classroom work can be extended into a structured home environment, then singing and early music reading may become more stable, more individualized, and more continuous.

Solfy appears especially promising in three areas. The first is practice quality. Rather than leaving home practice vague and unsupported, the platform can offer specific musical tasks and immediate responses. The second is confidence-building. Students who can practice privately, repeat tasks, and hear themselves again may arrive in class more willing to participate. This aligns with scholarship showing the importance of autonomy, challenge, and positive self-perceptions in school singing experiences (Freer, 2025). The third area is teacher insight. When teachers can see how often students practiced and can listen to recordings or review progress indicators, they may be better able to differentiate instruction and plan subsequent lessons.

At the same time, caution is necessary. Not all reported benefits of digital music tools are equally strong, and positive engagement does not automatically translate into major performance gains. For this reason, Solfy should be evaluated through careful classroom-based research rather than only through anecdotal enthusiasm. A rigorous pilot study would be an important step toward identifying the conditions under which the platform most effectively supports student learning.

Conclusions

Solfy offers a promising model of technology-enhanced music education in which digital innovation remains subordinate to musical and pedagogical aims. Its potential lies in connecting teacher-led classroom instruction with structured home practice, thereby supporting repetition, self-evaluation, differentiated learning, and continuity of musical development.

For school music education, this matters because singing and music literacy are cumulative processes that benefit from frequent, guided engagement. A platform such as Solfy may help sustain that engagement beyond the classroom while preserving the teacher's central role in framing, interpreting, and humanizing the learning process. The next step is not simply wider adoption, but rigorous school-based research that can determine under what conditions Solfy most effectively supports students, teachers, and collective musical participation.

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