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Solfy: An AI Tool for Promoting Singing and Music Literacy

Morel Koren
Former member of the Music Department, Bar Ilan University, Israel
Commusicator LTD, Israel, co-founder

Adoram Erell
DSPG Hertzlya, Israel,
Commusicator LTD, Israel, co-founder

Abstract

Singing is part of music curricula in all countries and can lead to excellent benefits for emotional, cognitive, physical, and social health, bringing joy to singers and audience. Practicing Solfege can open the door to music literacy for the majority of students who do not play a music instrument. Learning solfege is (almost) equivalent to learning a new language: in our case, the (*intimate*) language of (*Western*) music. For learners from cultures that are not using this music system notation, learning it gives access to the existing *Western music literature*. It can inspire them to try transcribing their local music, preserve, analyse, acknowledge consciously and transmit it visually – in addition to audible recordings.

Solfy is an interactive learning software that makes Solfege easy and fun to learn without needing a private tutor. It walks the student through a series of exercises, where in each exercise, Solfy presents to the student a digital score, sings a reference Solfege from the score, prompts the student to record himself performing, and gives him colourful and easy to understand feedback on his performance.

The software includes levels of difficulty, each level containing 26-28 progressive lessons. Game-like elements and fun musical accompaniments are integrated in the drilling procedure. It supports class-based learning by keeping records of all the exercises. A teacher assigns drills for home-practice and can then monitor his students' progress by listening to their drills and viewing the feedback they had received. In addition, Solfy is a self-learning tool, suitable also for the very collaborative parents.

Solfy incorporates high quality singing synthesis for playing the *reference* Solfege, and innovative *artificial intelligence* for analysing the student recording and providing him with visual (and aural) *feedback*.

A pilot with 30 teachers and 800 students has been running this year in several public schools. We plan to extend the pilot and to evaluate Solfy's contribution to music education by comparing the success of students who have been using Solfy to those who have not.