



## SIGHT READING & SOFTWARE

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‘T is the season for sight reading - at festivals and competitions. Whether you’re coming off the NJAJE season with your jazz ensemble, heading into NJACDA with your choir, or traveling out of state with your band or orchestra, sight reading might well be part of your adjudication. Festivals and competitions aside, don’t we all want our students to be better readers?

### *What Research Indicates*

Research shows that regular, methodical instruction and practice in sight reading improves performance (Mishra, 2014). Additionally, there seems to be an optimal window of neuroplasticity for gaining fluency in sight reading that peaks at about age 15 (Kopiez & Lee, 2008). So what are some of the best strategies, and how can software help?

Contrary to what happens at the festival or competition, musicians read better with auditory modeling first. As part of preliminary training and practice, let students hear how it sounds. Once students become more comfortable and accomplished, remove the auditory model. Musco proposed a five-step model that was published in MEJ, 2011: *prepare, present, practice, persist, proceed*. The first step, *prepare*, specifies auditory modeling (sound) before visual perception (sight). *Present* includes examining the music to identify common patterns and “chunks,” as proven effective in Pike and Carter’s research from 2010. *Practice* in a sight reading situation entails mental rehearsal before actually making any sound. *Persist* and *proceed* indicate the kinds of tenacity we instill in young musicians.

We’ve all been told to “read ahead.” For many students, this presents a tremendous perceptual and processing challenge. Penttinen, Huovinen, and Ylitalo’s recent studies replicated earlier work documenting eye movements of experienced sight readers. Typically, at 60 bpm, experienced readers are looking two beats ahead. As the music becomes more complex, that distance shortens to one beat. How can we use this information? By scheduling routine sight reading practice with student pairs—one plays while the other cues by holding a pencil (or the mouse cursor) two beats ahead of where the partner should be playing. This simple strategy has been effective in my classroom. Practicing with a partner has even helped reduce sight reading anxiety among my students.

### *Software*

So where does software come in? Certainly, teachers with access to practice software such as MakeMusic’s SmartMusic, MusicFirst’s *PracticeFirst*, and eMedia’s *Piano and Keyboard Method* can use these interactive tools with individual students to practice and assess their reading of pre-loaded repertoire and excerpts. These platforms provide evaluation features as well, scoring for correctness of notes and rhythms.

“Sight Reading Factory” (SRF) automatically generates exercises based on parameters the user sets. It accommodates all voices and instruments, including transposing instruments. SRF can even generate multi-part ensemble and choral examples. SRF allows users to select from 5 or 6 levels, depending on the

instrument, and to create custom levels. The higher levels rival advanced collegiate sight reading examples. Tempo is customizable, as are the features like a visible cursor and disappearing measures.

The brilliance of SRF is that the algorithm generates endless examples. Students can use “practice mode” or the teacher can create assignments for students to complete. Each student will receive a different example following the same parameters (i.e. A Major,  $\frac{3}{4}$  time, 8 measures, rhythms including eighths and triplets). If a student elects to “try again,” SRF generates another example. The teacher can specify how many attempts will be permitted. Once a student clicks “submit,” SRF saves an image of the example and audio file of the recording for the teacher to review. Currently, SRF does not offer an automatic scoring feature like SmartMusic or PracticeFirst. Stay tuned.

### *Combining Platforms*

In my classroom, students have been using Sight Reading Factory with a buddy about twice a week for 5-7 minutes (two turns each). The buddy moves the on-screen cursor to stay one to two beats ahead of the performance cursor. On some occasions, students complete sight reading activities from a standard lesson book, using a pencil to cue their buddy.

Early in the school year, I pre-loaded an exercise from SRF into *PracticeFirst* to use the automatic assessment feature. Students were permitted to listen to the excerpt once, encouraged to look through and mentally practice using chunking and other strategies, then recorded their performance. We kept the best score of three

successive attempts, which was often the second try. This process was repeated later in the semester after routine, ungraded practice with SRF. All students displayed gains in their sight reading ability, and reported greater confidence in sight reading as well as music reading in general.

#### *Future Trends*

Due to the rise in popularity of cloud-based music reading and practice software including *SmartMusic*, *Sight Reading Factory*, and *PracticeFirst*, it is likely that studies documenting their effectiveness will be forthcoming (Thibeault, 2014). Tsangari proposed computer software that would provide a “look ahead” mode, in which students would be visually prompted to “read ahead” (Tsangari, 2010). Such a feature has not yet appeared in mass market CAI software. I hope that developers will combine all of the best features: algorithm-based sight reading generation, automatic scoring, and a highlighted region ahead of the performance cursor to encourage reading ahead.

My experience shows that practice really does improve sight reading. Key to this experience was an environment in which sight reading scores were not counted toward official grades. Students knew from the beginning that we were looking only for improvement. This was just the first step in creating a culture of strong, risk-taking music readers.

#### *Software And General Pricing:*

### Sight Reading Factory



www.sightreadingfactory.com or through musicfirst.com  
 \$34.99 for a single teacher subscription; \$2 per student for subscriptions of 99+;  
 Standalone school subscriptions available:  
 \$234.99/100 students; \$334.99/200 students  
 Add SRF to a MusicFirst classroom for \$2 per student.

### PracticeFirst



Available through www.musicfirst.com as an add-on to a MusicFirst classroom.  
 Approximately \$3.00 per student per year.

### SmartMusic



Available through www.makemusic.com.  
 Educator subscription: \$140/year. Practice room subscription: \$44/year.  
 Individual student subscriptions: \$40/year.

#### *References and further reading:*

- Kopiez, R., & Lee, J. I. (2008). Towards a general model of skills involved in sight reading music. *Music Education Research*, 10(1), 41-62.
- Mishra, J. (2014). Improving sightreading accuracy: A meta-analysis. *Psychology of Music*, 42(2), 131-156.
- Musco, A. (2011). Beyond “line by line”: Strategies for performance and learning transfer. *Music Educators Journal*, 98(1), 59-67.
- Penttinen, M., Huovinen, E., & Ylitalo, A. (2015). Reading ahead: Adult music students’ eye movements in temporally controlled performances of a children’s song. *International Journal of Music Education*, 33(1), 36-50.
- Pike, P., & Carter, R. (2010). Employing Cognitive Chunking Techniques to Enhance Sight-Reading Performance of Undergraduate Group-Piano Students. *International Journal of Music Education*, 28(3), 231-246.
- Saxon, K. (2009). The science of sight reading. *American Music Teacher*, 58(6), 22-25.
- Smith, K. (2009). The effect of computer-assisted instruction and field independence on the development of rhythm sight-reading skills of middle school instrumental students. *International Journal of Music Education*, 27(1), 59-68.
- Thibeault, M. (2014). Algorithms and the future of music education. *Arts Education Policy Review*, 115(1), 19-25.
- Tsangari, V. (2010). An interactive software program to develop pianists’ sight-reading ability (Doctor of Musical Arts Thesis).

