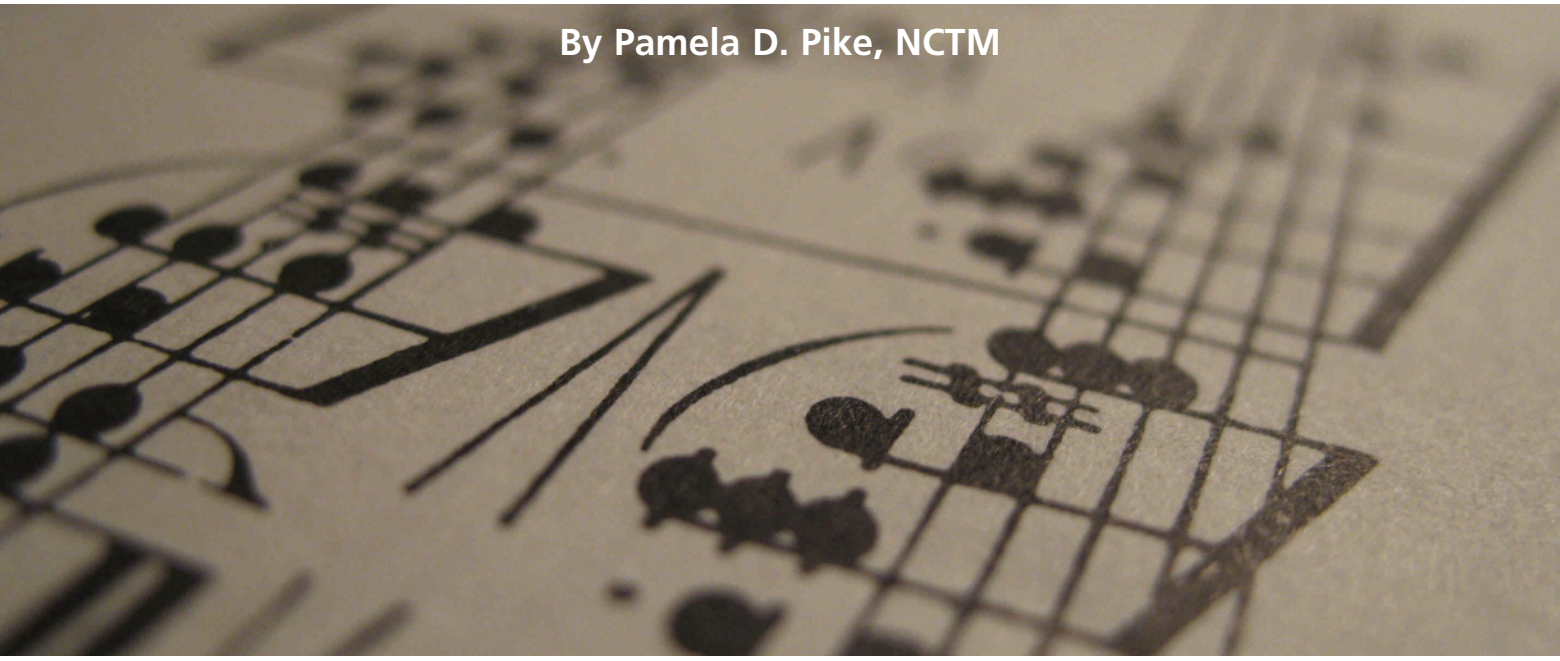
SIGHT-READING STRATEGIES

For The Beginning And Intermediate Piano Student
A Fresh Look At A Familiar Topic



By Pamela D. Pike, NCTM

Sometimes in the effort to prepare our students for recitals and contests we place a higher priority on perfecting and performing memorized music than we do on honing one of the essential skills of musicianship—sight-reading. To be fair, in our present Western music tradition, performing at sight is not as highly prized as it was 200 years ago. Yet, sight-reading is a part of many advanced auditions, and pianists who collaborate with others must sight-read well. Moreover, amateur pianists who sight-read with some degree of proficiency will be more likely to play new music for enjoyment than those who struggle to read music. Since most of us train more amateur pianists than future professional musicians, why then, do we allow our young pianists to polish performance skills while neglecting sight-reading development?

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What Is Music Sight-Reading? Findings Of Experts And Recent Research On Reading

Andreas C. Lehmann and Victoria McArthur state that "while most musicians in the Western tradition sight-read to some extent, they often forget that it is the gap between each person's ordinary level of rehearsed performance and the same person's ability to perform at first sight that is the problem. The smaller the gap is, the better the sight reader."[1] Frances Clark believed this gap should be small. After a teacher wrote to the "Questions & Answers" columnist lamenting about an advanced pianist who sight-read slowly, Clark responded with her own question. She asked, "Can [the pianist] really be advanced, and still a slow reader?"[2] Clark proceeded to probe more deeply to identify specific reading obstacles. She asked, "Does he see what's alike

and…different…? Is he at home with the keyboard [topography]…? Does he look far enough ahead to read by entire phrases or groupings, or…[does he see] single notes…? Is he technically ready for the music he is playing? [Does] he need glasses? [Does] he simply need a much longer assignment at a much easier level?"[3]

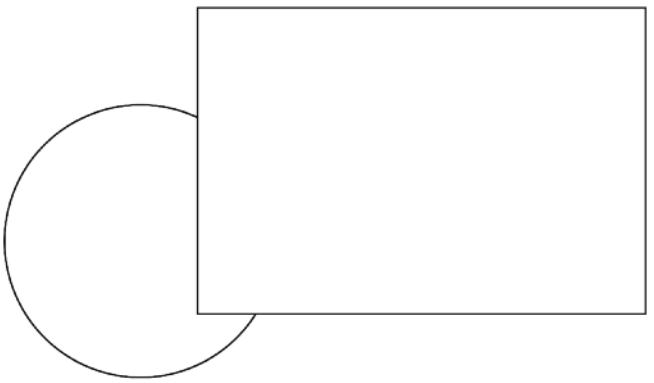
Teachers, who work with beginning and intermediate students, may be partial to Richard Chronister's definition of sight-reading. He said, "Coping with unexpected change is the goal. This is what real sight-reading is—playing the notes, rhythms, dynamics that you know, but in a context you have not played before."[4] Experts suggest the gap between performance ability and sight-playing should be as small as possible and, that pattern recognition and technical ability are critical. From a cognitive standpoint, sight-reading involves four components:

1. Perception (where we must decode patterns)
2. Kinesthetics (executing motor skills that have been programmed to the aforementioned patterns)
3. Memory (recognizing patterns when we see them in the score and being able to recall both the pattern and the associated motor skill quickly)
4. Problem-solving skills (improvising and guessing about what lies ahead based on context and previous experience)

Perception And Cognitive Chunking

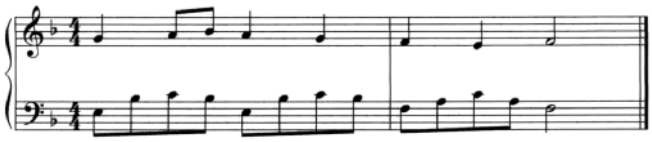
When we perceive visual cues, we have a very small area (fovea) in which objects are in focus and a much larger, but blurrier peripheral area (parafovea), which does not cover the entire field of vision. Therefore, when we look at notes on a page our eyes perform larger and smaller discrete movements (ocular saccades). We usually perform 4–6 saccades per second.[5] The point of focus moves with each saccade, and our brain assembles the image into a coherent picture. Human brains are programmed to search for patterns and to make meaning by grouping objects into familiar categories. Most people looking at Figure 1 see a circle and a rectangle. Even though the shape on the left is incomplete, we recognize the characteristics of a circle and categorize it as a circle despite its incompleteness.

Figure 1: Even though the figure on the left is incomplete, we recognize it as a circle based on its characteristics and our past experience categorizing shapes.



Musicians also fill in gaps, based on past experience, to simplify and make meaning of patterns that we see on the printed score. In the first measure of Figure 2, musicians recognize a C7 or V6/5 chord in the key of F. We know this chord is a C7 even though one note is missing. Our goal is to provide our students with enough musical experiences that they identify the V6/5 chord too. If, however, our students are reading one note at a time, they are not reading music within the context of the whole, nor are they recognizing musical patterns on the score. Expert sight-readers perceive patterns automatically, but often find it difficult to describe their perception process. While many music teachers may not have been taught explicitly how to group or chunk musical patterns, we *can* help our students develop this skill so it will eventually, with consistent practice, become automatic for them too.

Figure 2: Expert musicians will recognize the left-hand notes in measure 1 as a V6/5 chord chunk.



Better readers need fewer saccades to grasp patterns or chunks. If these chunks have special meaning to the student, sight-reading will be more successful. Thus, once the student recognizes the V6/5 chord pattern in the left hand of Figure 2, she will no longer need to fixate on those notes—that pattern now has *meaning*, allowing her to look farther ahead in the music. *Perceptual span* is the technical term for how far ahead a reader can grasp chunks of music. *Eye-hand span* refers to how long the pianist continues to play after the score has been removed. Eye-hand span is larger or smaller depending upon the structure of the music. Thus, if we have an arpeggiated chord that spans two measures, and we recognize the chord instantly, our eye-hand span might be longer than if we were playing a piece in chorale style, with an unexpected harmonic progression, where we were not certain which chord was coming next. We must incorporate drills that help our students develop both perceptual and eye-hand span when preparing our sight-reading curricula.

Developing Motor Skills, Memory And Problem Solving

We have seen that playing an instrument involves perceiving and processing visual cues. Pianists must be able to instantly execute the fine motor skills required to perform what they have recognized on the page. Teachers of adult beginners are familiar with the kinesthetic issues involved in sight-reading. Recent research with young adults suggests the perceptual recognition of chunks on the score can be developed more quickly than the motor skills associated with these patterns.[6]

Memory is the critical link that connects the visual and kinesthetic demands of sight-reading. Experts display superior recall on domain-specific material, even when they are not explicitly asked to memorize. Therefore, if you saw a phrase of music only briefly, you would likely be able to recall and play the score. Because of your musical expertise, you would have chunked material, made meaning of those chunks and had enough experience playing similar patterns that you would confidently be able to play it. This is what we must train our students to do. Additionally, there is a certain amount of *problem solving* that occurs when experts sight-read. Since pianists perceive many notes quickly, they probably don't read every note; rather, they make educated guesses. Examples of educated guessing while sight-reading include identifying chords, anticipating chord progressions and reading ledger lines.

Only exposure to many sight-reading exercises and much repertoire in many contexts can prepare students for this kind of problem solving. Developing the ability to apply knowledge of theory, chord progressions and rhythmic motives within the context of music is imperative for effective problem solving, which takes place during sight-reading activities. Exposure to lots of sight-reading and repertoire helps students learn to recognize musical patterns (both pitch and rhythm), develop associated motor skills and hone reading skills.

Consistency, Ample Rehearsal And The Modern Student

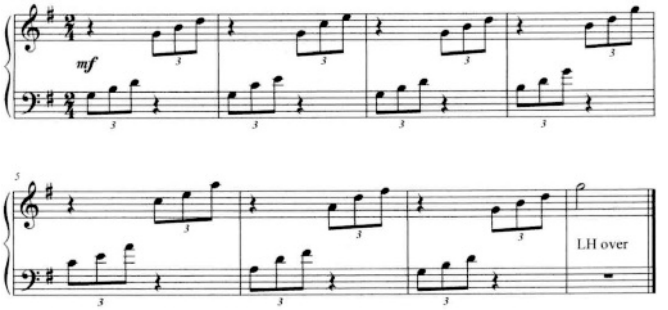
It takes 10,000 hours of directed practice to become highly skilled in many activities.[7] Sight-reading is no exception. The skill must be practiced *consistently* and *frequently*. Skills will be developed more quickly by practicing 10 minutes every day, as opposed to 30 minutes twice each week.[8] Small amounts of consistent daily practice leaves little room for learning to decay between sessions, thus more progress will be made than if students practice sight-reading for longer periods of time, but less frequently.

Ideally, our students would have strong analytical skills, problem-solving skills and ample time to discover, entirely on their own, the musical chunks they need to perceive to sight-read effectively. However, typical students need help learning what to look for on the score. The following sight-reading drills can help our students recognize musical chunks. These drills are not meant to be exhaustive; rather, they are intended to prompt teachers to think about how to frame musical chunking for beginning and intermediate students. Drills must always link the visual chunks with the actual motor-skill experienced at the keyboard.

Chunking Drills And Motor Skills

Using the chord etude (Figure 3), we can encourage students to chunk left- and right-hand notes into chords.

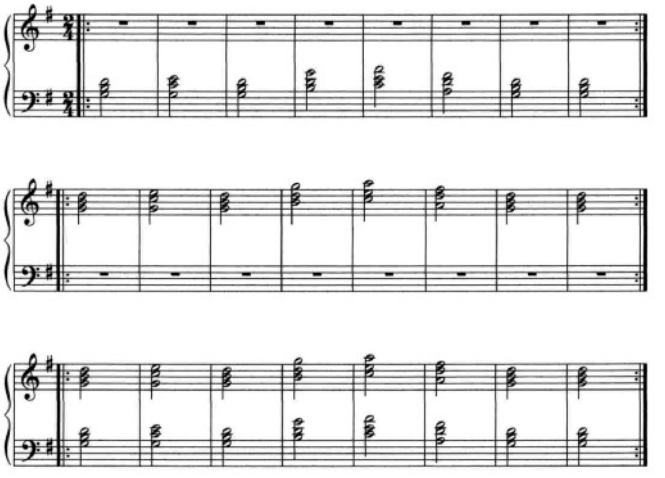
Figure 3: Chord Etude, mm. 1–8.



Adapted from E. L. Lancaster and Ken Renfrow, Alfred's Group Piano for Adults, book 1, 2nd edition (Van Nuys, CA: Alfred Publishing Co., Inc., 2004; Used by permission), 147.

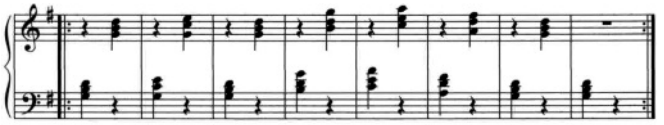
Furthermore, we might point out that both hands are playing the same chord for the entire measure (ideally the perceptual span would be at least one measure). To highlight chord chunks featured in this etude, I composed several drills that blocked chords both hands separately and together (Figure 3a). It is important that students see the chords in blocked form on the page while experiencing the sensa-

Figure 3a: Chunking drill for Chord Etude.



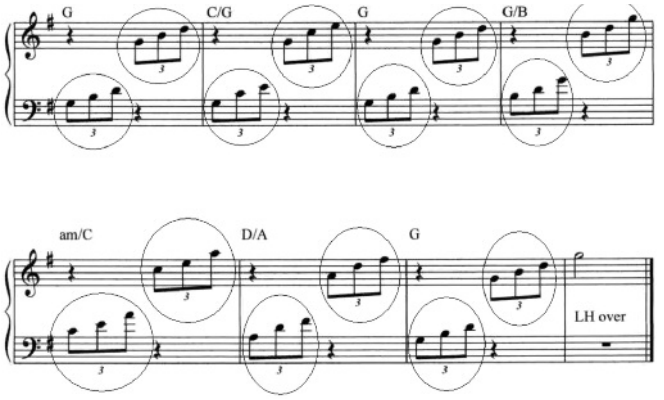
tion of playing these chords. Figure 3b blocked the chords in the harmonic rhythm of the example. Finally, circling the

Figure 3b: Chunking drill in harmonic rhythm for Chord Etude.



chord chunks on the original score helps students become accustomed to how they *should* perceive the notes (Figure

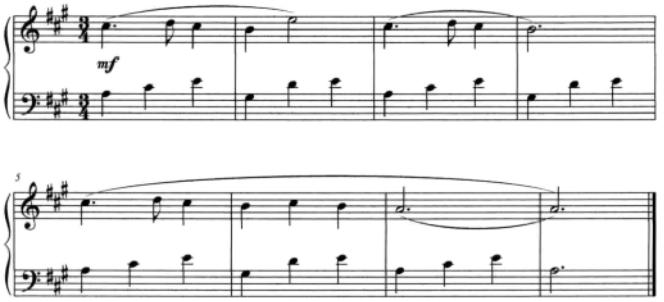
Figure 3c: Chunking drill for Chord Etude with chord symbols.



3c). Chord symbols are included with this visual to reinforce transfer of theory skills and to solidify the connection between the written chunks and the associated motor skills.

In the second sight-reading example (Figure 4), several rhythmic drills could be devised that incorporate the prominent dotted quarter-eighth pattern in various contexts, with different rhythmic patterns preceding and following this

Figure 4: Sight-reading example 2, mm. 1–8.



Adapted from E. L. Lancaster and Ken Renfrow, Alfred's Group Piano for Adults, book 1, 2nd edition (Van Nuys, CA: Alfred Publishing Co., Inc., 2004; Used by permission), 153.

chunk (Figure 4a). The first pitch drill associated with this example highlights the left-hand chords (Figure 4b, mm. 1–4). Then, students practice a right-hand pitch drill that includes the *essential* notes from the right-hand melody (Figure 4b, mm. 5–11). Once students have drilled these, they proceed to an exercise that incorporates the essential

Figure 4a: Rythm drills for sight-reading example 2.

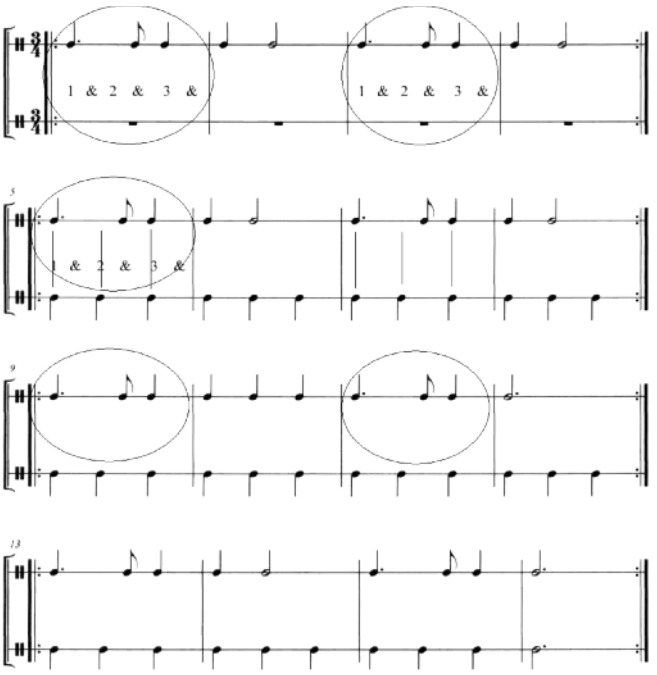
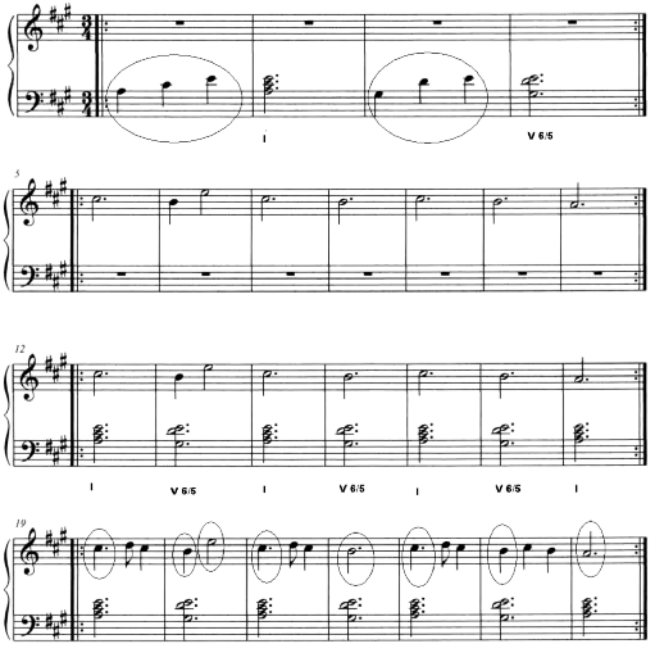


Figure 4b: Pitch drills for sight-reading example 2.



melody notes with the left-hand chords (Figure 4b, mm. 12–18). Finally, students drill all melody notes and chord chunks. Circling the essential melody notes helps students recognize notes that are merely embellishments or less important (Figure 4b, mm.19–25). *Our* eyes don't fixate on the passing tones, upper neighbors or escaped tones. We

must train our students' eyes not to fixate on the non-chord tones either.

Beginning students studied in a controlled research environment sacrificed rhythm to play the correct pitch.[9] While practicing rhythmic drills is important, more time will likely need to be spent practicing pitch chunks (preferably in several different keys). Teachers will need to create more pitch-chunking drills for typical students.

Creating Specialized Practice Drills

While it may seem like a daunting task to prepare chunking drills for all of your students, teachers might begin by focusing on one student. If teachers chose one sight-reading piece each week, and created four to six weekly drills for the student to practice, instructors would possess 120–180 practice drills and 30 sight-reading exercises at the end of two 15-week semesters. In all likelihood, other students in the studio could benefit from working on these drills too. Another suggestion is to create a sight-reading exchange with others in a local association. If each teacher prepared and shared several sets of practice drills, everyone would have access to a large chunking-drill library. These drills could be used in the studio or could be posted on a "students only" section of the studio website for access from home each week.

Teachers might also create and share music flashes. Sight-reading flashes—a measure or two of music that students see for several seconds only—encourage students to take in and make meaning of musical material quickly. Flashes allow students a few seconds to execute as many saccades with their eyes as possible, process what they are seeing quickly and demonstrate how much of the music they recall. Doing similar flashes in many keys reinforces the concept and the associated motor skills. Modern technology has simplified creating of flashes.

In addition to using music notation software to create sight-reading drills and flashes, programs such as *Smart Music* and *Home Concert Extreme* can be set up to allow students to practice sight-reading on a keyboard (interfaced with a computer) where either vertical bars or full-measure highlights keep the students' eyes moving forward as they play. Practicing with these programs can help prevent stutters or hesitations while sight-reading.[10]

Supplemental Sight-reading Materials (Old And New)

Although most average students will need chunking drills and additional reinforcement through supplementary materials, we don't need to reinvent the sight-reading wheel entirely. There are good sight-reading materials in print. Many of the older methods include specialized sight-reading books that can be used by beginning students. Even if one does not use these particular methods, the sight-reading materials can be integrated easily into a student's weekly practice routine. The four *Sight-Reading & Ear Training* books, which accompany the David Carr Glover method, incorporate aural skills and writing activities that are subsequently featured in pitch flashes and sight-reading activities. These books reinforce the connection between sound and sight. *Bastien Piano Library Sight-Reading* books provide students with brief preparatory exercises then follow up with several four-measure, sight-reading examples in limited keys. *Bastien Piano Basics Line-a-Day* sight-reading books offer students guided sight-reading activities, including questions that promote self-reflection.

Newer piano methods, such as *Alfred's Premier Piano Course,* embed sight-reading activities within both lesson and theory books. Short sight-reading flashes prior to repertoire selections alert students to upcoming patterns, while writing and playing activities in the theory books reinforce sight-reading. In newer all-in-one methods, such as *Alfred's Piano for Busy Teens,* sight-reading activities are not made explicit, though they are included in technical preparation and in suggested practice strategies outlined in weekly lessons. Students are encouraged to visually identify musical chunks and rehearse the patterns that will be featured in upcoming repertoire.

Teachers might also avail of materials that may not be marketed for sight-reading purposes to reinforce chunking and motor skill development. For example, technical exercises and etudes in Jane Magrath's *Technical Skills* books, which prepare students to perform music found in the *Masterwork Classics* series, lend themselves to musical chunking. Less traditional resources such as *Folk Songs for Sight-Reading* provide brief flashes and technical preparation prior to musical examples. Additionally, this resource exposes students to music from other cultures, which is rarely encountered in traditional beginning piano materials.

Top 3 Sight-reading Picks

There are three sight-reading resources I recommend more than any others. These books function well as the primary source of sight-reading materials or as supplements to previously-mentioned resources. Each series contains 10 graded or leveled books; each has weekly preparatory rhythm, aural skills and sight-reading exercises; each covers a variety of keys (including key signatures with many flats and sharps) and each can be incorporated into a student's weekly practice schedule without devoting enormous amounts of time to sight-reading activities.

Four Star Sight-Reading and Ear Tests consists of half-page daily activities that prepare students for upcoming sight-reading through basic pitch drills (outlining chords, embell-

ishments, flashes and so on), rhythm drills and brief, but progressively challenging, sight-reading exercises. There are five daily activities per week. At the conclusion of each week during the lesson, teachers may have students perform a "sight-reading test," which includes playing, tapping and executing music flashes.

Like the *Four Star* series, the *Complete Series of Sight-Reading and Ear Tests* by Elsie Bennett and Hilda Capp was designed to prepare students, through weekly sight-reading activities, for the Royal Conservatory of Music examinations in sight-reading and aural skills through grade 10. In addition to the types of activities found in the *Four Star* series, Bennett and Capp provide playback melodies to be used at the lesson, sight-singing exercises, chord identification drills, chord progressions that reinforce keyboard theory and challenging sight-reading exercises. Unlike the *Four Star* series however, exercises tend to be grouped by category (sight-reading, ear training and so on) so as students progress through the series they have more flexibility with how many and which materials they cover during daily practice.

Sight Reading & Rhythm Everyday, by Helen Marlais and Kevin Olson also has 10 leveled books; however, the earlier levels are subdivided into two books, thus the series only progresses through book 6. Icons alert students to the daily skills contained in each unit: rhythm, pitch flashes, sight-reading and ensemble playing with the teacher. Daily activities cover about one page, and there are five daily activities per week.

Conclusion

Through a brief overview of the cognitive processes involved in sight-reading, significant educational implications from recent experimental research on sight-reading have been highlighted. When sight-reading music, grouping individual notes into meaningful patterns and developing the associated motor skills is critical. We cannot expect that the majority of our students will learn how to chunk on their own, without explicit help from us, in the form of chunking drills that accompany sight-reading exercises.

We must insist that our students sight-read each time they sit down to practice. If we do not make sight-reading a priority in our studios during lesson time, we send a strong message that being able to read at sight is not as important as performing. Since the majority of our students will not go on to become elite performers, perhaps our emphasis should place equal importance on performing adeptly and being able to play music well after very little rehearsal (or even at sight).

Many of us want our students to develop a lifelong love for music and enjoy a lifetime of music making. Wouldn't we consider ourselves to be successful teachers if our students could sit down at the piano, open a piece of appropriately leveled music, and be able to play it reasonably well, with relatively little rehearsal? By practicing effective sight-reading strategies, our students have a greater chance of long-term success.

Notes

1. Andreas C. Lehmann and Victoria McArthur, "Sight-Reading," in *The Science and Psychology of Music Performance: Creative Strategies for Teaching and Learning,* eds. Richard Parncutt and Gary E. MacPherson (Oxford University Press, 2002, 136.
2. Frances Clark, *Questions and Answers: Practical Advice for Piano Teachers* (Northfield, IL: The Instrumentalist Company, 1992), 65.
3. Ibid., 65–66.
4. Richard Chronister, *A Piano Teacher's Legacy: Selected Writings by Richard Chronister,* ed. Edward Darling (Kingston, NJ: The Frances Clark Center for Keyboard Pedagogy Inc, 2005), 243.
5. Lehmann and McArthur, "Sight-Reading," 137.
6. Pamela Pike and Rebecca Carter, "Employing Cognitive Chunking Techniques to Enhance Sight-Reading Performance of Undergraduate Group-Piano Students" (poster presented at National Conference on Keyboard Pedagogy, Chicago, 2009).
7. K. Anders Ericsson, Theoretical Implications from the Modifiability and Complexity of Mechanisms Mediating Expert Performance," in *The Psychology of Abilities, Competencies, and Expertise*, eds. Robert J. Sternberg and Elena L. Grigorenko (Cambridge, Cambridge University Press, 2003), 93–125.
8. David A. Sousa, *How the Brain Learns*, 3rd edition (Thousand Oaks, CA: Corwin Press, 2006), 99, 125.
9. Pike and Carter, *Cognitive Chunking Techniques.*
10. Sara Hagen, Cynthia Benson, and Alejandro Cremaschi, (A Comparison of the Effectiveness of Three Different Types of Software Eye-Guides in the Development of Sight-Playing in Piano Classes at the College Level" (poster presented at National Conference on Keyboard Pedagogy, Chicago, 2007).

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