

LINKING MUSIC LEARNING TO READING INSTRUCTION

Tracking the relationship between reading skills and the skills used in music-text and score reading reveals that music education enhances reading abilities.

Music educators struggle with the sometimes contradictory philosophies of the study of music for its own sake versus the study of music in support of other non-musical skills. While reports such as James Catterall's analysis of the Department of Education's National Education Longitudinal Study of 1988 (NELS:88) imply that musical learning has positive effects on mathematics and reading skills, caution is advisable before overeagerly embracing this good news. I The "music-helps-you-do-English-and-math-better" philosophy may miss the essential point of studying music. The study of music for its own sake is an ideal that music educators work to preserve through rich and comprehensive music education programs, but some issues of school reform are

making the realization of that ideal a greater challenge than ever.

The U.S. Department of Education's "America Reads Challenge" in 1997 set goals that all children would start school ready to learn and every adult would be literate. Since then, millions of dollars to fund reading programs have been made available through federal and state funds—particularly for low-income populations. Often, schools use these funds to acquire a model reading program. Research that supports some of these models finds that test scores have improved when students are provided more reading time and a lower teacher-pupil ratio.² No one denies that these efforts are well-intentioned; however, music educators (as well as arts and physical education teachers)

sometimes find that their instructional time is squeezed or even eliminated. Some arts educators have even been asked to teach reading or to have their students read texts that do not support the arts curriculum.

As a result, the intensity of reading instruction sometimes supersedes learning in other curriculum areas. The National Research Council's publication "Starting Out Right" warns that "after several days of too many hours of reading every day, the reading experience might well start to become distasteful for a child."³ If music programs are discontinued, students will be deprived of kinesthetic, aural, oral, visual, and emotional experiences that can ultimately bring written texts to life. Art professor Elliot Eisner eloquently writes, "Children who have not

learned how to see and mentally explore the various forms of arts and science will not be able to write, not because they cannot spell, but because they have nothing to say, nothing to reconstruct from sensory exploration of the environment."⁴ Certainly, learning in music and the arts opens doors to a vast array of enlightening influences and life-changing experiences that can contribute to reading skills.

The National Association for the Education of Young Children advises that "learning to read and write is a complex and multifaceted process that requires a wide variety of instructional practices."⁵ In a practical sense, then, instruction in music can be a particularly rich source of support for achieving reading literacy. Most basic skills used in text reading or decoding (i.e., the breaking of the visual code of symbols into sounds) find parallels in music reading. Most instrumentalists and vocalists read music symbols. In choral music, one must

additionally read text or lyrics as they correspond to the musical symbols. For the purposes of this article, these activities will be called "music-text reading." Strong decoding skills have been found to be essential for reading text with comprehension (constructing or assigning meaning to a text by using the clues in the text and prior knowledge).⁸ This article will focus on decoding skills that appear to be parallel in reading both text and music.

Table 1 provides definitions for comparative skills used in text reading, music-symbol reading, and music-text reading: phonological awareness, phonemic awareness, sight identification, orthographic awareness, cueing systems awareness, and fluency. The instructional examples that follow further delineate actual activities in a reading or music classroom in which these skills are being addressed. Furthermore, these examples are described on a continuum of developmental stages

from "emerging" to "decoding" to "fluent." In most cases, emerging and decoding skills are developed in the pre-kindergarten to primary grades. Fluency skills develop from the primary to high school years in both text and music reading. The source for most of the music-symbol and music text sections is the Kansas State Department of Education Curriculum Framework for Music.

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Phonological Awareness

Phonological awareness relates to the ability to aurally discriminate between sounds or to be sensitive to all units of sound. In the reading classroom, children with emerging skills

learn to recite nursery rhymes and other chants or verses with appealing rhythms and sound patterns. At the decoding stage, the teacher reads rhyming books such as *One Fish, Two Fish, Red Fish, Blue Fish* or *Fox in Socks* by Dr Seuss. Children are asked to identify rhyming word pairs from the text and then brainstorm additional rhyming words. With fluency, students study the sounds of Latin roots in relation to common English words. In the music classroom, children learning music-symbol reading clap and sing their own names by syllabic division ("Jon-a-than"). At the decoding stage, students learn to echo-clap rhythmic patterns and then generate their own patterns for others to echo. Students recognize dynamic contrast in the music and identify the elements of phrase and form. At the fluent level, students aurally describe compositional techniques found in the works of several composers.

Music-text reading is taught at the emerging level by asking children to aurally identify the words that rhyme in a

song and then to replace those words with new words that rhyme. At the decoding level, students can recognize dynamic contrast as it applies to text and subsequently how it relates to the elements of phrase and form. Choral students demonstrating fluency perform precise attack-and-release of beginning and ending consonants to emphasize key words in lyrics (singing "on the vowel" is a commonly used technique to achieve accurate intonation and blend). Phonemic Awareness Phonemic awareness relates to the understanding of phonemes-the smallest units of oral language. In the reading classroom, children with emerging skills can name familiar signs and symbols. At the decoding level, students look at a word like "dog" and sound out the three phonemes (the sounds of the word) with their mouth: /d/-/o/-/g/. Students with fluent skills can sound out complex words found in science, math, and foreign languages via phonemes. In the music classroom, children who perform

symbol reading at the emerging stage can respond to symbols paired with or representing musical elements or sounds. Students at the decoding stage can sing or play pitches or rhythms from a simple song or musical example by sight-reading or systematic decoding (e.g., using rhythm reading sounds such as "tah" or "ti" for sight-reading rhythms involving quarter and eighth notes or using solfege syllables, alphabetic note names, or scale numbers for sight-reading pitches). Fluency is indicated when students can analyze notated music as to selected musical elements and their effects on the whole (e.g., identifying pitches within a phrase or rhythmic subdivisions within a metered measure).

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Children learning music-text reading skills in the music classroom at the emerging level choose movements, pictures, or graphic representations to represent sounds. Students at the decoding stage sight-read text and music simultaneously, attending to the syllabic or melismatic relation of the text to pitch or rhythm changes; use articulation of individual consonants and vowels as they relate to specific musical pitches and rhythms in the musical context; and make appropriate adjustments to the text of additional verses of a song to "fit the music." At the fluent level, students avoid pronouncing the "er" in words like "ever" and learn the proper pronunciation for foreign texts by manipulating teeth, tongue, and lips to form the correct sounds. Singers annotate song lyrics with International Phonetic Alphabet (IPA) symbols as prompts for correct pronunciation.

Sight Identification

Sight identification relates to the instant recognition of words, notes, et c., by glancing at them. Students in the reading classroom with emerging skills can name some high-frequency letters, numbers, or words. During a reading lesson, students at the decoding stage can write a sentence using a high utility word. Students progress to "take the word to fluency" through writing and manipulating the letters in the word to the point of memorization. When encountering unknown words, students demonstrating fluency can use word-identification strategies automatically.

In the music classroom, children with emerging skills who are learning music-symbol reading use standard music vocabulary to describe music qualities that they hear (fast, slow, loud, soft). When decoding-level skills are present, students can name the pitch of specific xylophone bars while playing simple tunes, or can select the correct rhythm and melodic patterns on a corresponding

worksheet while listening to a musical example. Using high-utility vocabulary, fluent students can identify and explain compositional devices and techniques used to create tension and relaxation in a musical work.

With music-text reading in the music classroom, children who move, play instruments, or verbalize their understanding of music-text elements in a song demonstrate emerging skills. Students at the decoding stage learn to combine the reading of simple high utility music symbols with high-utility words. Examples include using syllabic sounds such as "tah" or "ti" with rhythms involving quarter notes and eighth notes (rhythm reading) and using musical alphabets, solfege, or scale numbers (melodic reading). Eventually students develop the ability to add a simple text to rhythmic and melodic lines. Fluency is attained when students learn to make subtle changes automatically in tone and vowel placement in high-utility words, so that

the listener can comprehend the lyrics. These techniques include adjusting the physical vocal placement for vowels in words such as "the" or "love" (pronounced "lahv" when sung).

Orthographic Awareness

Orthographic awareness relates to the ability to understand the use of letters and other symbols in a writing system. For the reading classroom, the ability to use letters or approximations of letters to represent written language signifies emerging skills. In teaching decoding skills, the teacher selects one *rime* (a specific rhyme involving a vowel and any following consonant of a syllable, i.e., "TV in "strike") to study for a day, such as "at." The children write as many words as possible using the rime "at." Students identify misspellings in a sentence provided by the teacher, who reviews the rules for correct spelling. At the fluent level, students, who know that words

spelled similarly are often related in meaning, sort high-frequency words in English and Spanish by their Latin or Greek origins.

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Music-symbol reading in the music classroom challenges children with emerging skills to recognize that music symbols represent musical sounds. At decoding levels, students compose short melodies based on a pentatonic scale, clap "rhythm trains" (noting meter changes), and receive several rhythm patterns with which to compose as many rhythmic combinations possible. When students have mastered fluent skills, they can compose I-IV-V harmonizations to a simple melody.

For reading music texts, children with emerging skills can create non-standard musical symbols to represent musical sounds and corresponding text. Students with decoding skills can compose and notate simple rhythmic

Phonetic Awareness	A special kind of phonological awareness involving letter-sound correspondences in the smallest units of oral language-phonemes (e.g., "stop" would be expressed in phonemes as s/t/o/p/). Phonemic awareness involves identifying and manipulating the smallest sound units within the written symbol..b	Instruction that emphasizes how notation is related to the smallest units of musical sounds in systematic ways; music symbol-sound correspondences (e.g., pitches within a phrase, rhythmic subdivisions within a metered measure). Articulation, phrasing, tonguing, performance practice.	In a choral setting, identifying and manipulating sounds as they relate to music symbols, including articulation of pure vowel sounds, diphthongs, elisions, consonants (explosive and affricates). Vocally forming the smallest sound units so that the listener can comprehend the lyrics.
Sight Identification	The ability to identify high-utility words that appear most often in print (sight words such as "the," "of," "dog," etc.)	The ability to identify and play high- utility notes, rests, lines, spaces, rhythm symbols, dynamic markings, fingerings, etc.	Learning the proper vocal enunciation of high-utility words in music lyrics and performing them consistently from song to song.
Orthographic Awareness	Knowing that letters and diacritics represent the spoken language. Understanding that the writing system of a language involves a specific connection between the sequence of letters, characters, or symbols,d including spelling patterns that are used to recognize familiar chunks in words.e Spelling includes variable and sometimes complex but mostly predictable rules.f	Knowing that music symbols represent musical language. Understanding that scales are a series of patterns that are the basis for melody. In Western culture, learning a notation system that has rules about the sequences of pitches and organization of rhythms that occur in predictable ways. Knowing that pitched and nonpitched instruments are scored differently.	Combining the elements of alphabetic knowledge (as described in the text skills column) and music-symbol-reading knowledge. Knowing rules for the use and placement of music and text symbols in written music.
Cueing Systems	Gathering meaning from words, phrases, or sentences surrounding a word (context). Determining that material sounds "right" based on multiple clues (syntax). Noting that material looks "right" (graphophonic). Noting that material makes sense (semantics).g	Gathering meaning from musical phrases and melodic phrases, including placement of accidentals, rhythmic devices, etc. Noting that music sounds and looks "right" based on the rules of a given culture. Noting that music makes sense given the style, period, and composer.	Given a particular style, period, culture and composer, noting that music and music text sound and look "right" and make sense.
Fluency	Clear, easy written or spoken expression of ideas; freedom from word identification problems that might hinder comprehension in silent reading or the expression of ideas in oral reading; automaticity.h	Effortless music performance; freedom from technical problems that might hinder the musical correctness of a performance; automaticity. The ability to execute the musical aspects of a performance smoothly, easily, and readily.	Effortless, independent execution of text and music symbols. The ability to perform in a technically flawless manner.

Notes: Hallie Kay and Ruth Helen Yopp, "Supporting Phonemic Awareness in the Classroom," *The Reading Teacher* 54, no. 2 (2000): 1303. b Kimberly Young, ed., *Literacy Instruction Now-Knowledge for Teachers Implementing State Standards (LINKS)* (Topeka, KS: Kansas State Department of Education, 2000), 169. ~Eldon Ekwall, *Teacher's Handbook on Diagnosis and Remediation in Reading*, 2nd ed. (Boston: Allyn & Bacon, 1986), 25. d Donald R. Bear, Marcia Invernizzi, Shane Templeton, and Francine Johnston, *Words Their Way: Word Study for Phonics, Vocabulary, and Word Instruction*, 2nd ed. (Old Tappan, NJ: Merrill, 2000), 402. e American Speech-Language-Hearing Association, *Roles and Responsibilities of Speech-Language Pathologists with Respect to Reading and Writing in Children and Adolescents* (Rockville, MD: Author, 2001), 9. f Louisa C. Moats, *Teaching Reading IS Rocket Science: What Expert Teachers of Reading Should Know and Be Able to Do* (Washington, DC: American Federation of Teachers, 1999), 19. g Ruth A. Short, Mary Kane, and Tammy Peeling, "Retooling the Reading Lesson: Matching the Right Tools to the Job," *The Reading Teacher* 54, no. 3 (2000): 284-95. h Young, *LINKS*, 169.

accompaniments to a poem or story; write symbols for dynamics, tempo, articulation, and interpretation to a dictated musical phrase; and create "drawings" of melodic contours or rhythm patterns. Students who can write lyrics and short musical compositions using standard and nonstandard notation demonstrate fluency in reading music texts.

Cueing Systems Awareness

Cueing systems awareness relates to the ability to gather meaning from information surrounding a word, a musical phrase, an image, and so forth. Children in the reading classroom show an emerging grasp of cueing systems by identifying subjects in a picture, photograph, or painting, and relating what they see to the context of the text

being read to them. When students have achieved decoding-level mastery, they are able to determine the meaning of a word by previewing the word in context, redefining it, and using the word in post-reading activities. Advanced readers demonstrate fluency in these skills by using a wide variety of context and syntax clues to determine the meaning of words encountered in multiple curriculum settings.

Children learning to read music symbols in the music classroom display emerging skills in cueing when they choose appropriate sound sources to illustrate songs, stories, ideas, and feelings. When using decoding-level cueing skills, students decide whether a measure of beats is correct based on the meter given and decide if a melodic pattern is appropriate based on the modality of a musical example or

if expressive markings match the music being performed. Fluent students analyze whether the use of accidentals, harmonic changes, and rhythmic devices is appropriate for music of a given style period.

Emerging music-text reading skills are exemplified by children who can choose appropriate articulation and accompaniment for a song based on textual or musical clues. Students with decoding-level capabilities can learn about the construction of modes and can discuss whether a familiar song such as "Happy Birthday" sounds correct in a minor key. Students with fluent skills in this area can compare the use of text painting among several composers, noting those who sometimes express conflict by composing melodic contours or rhythmic

patterns contrary to the text meaning.

Fluency

Fluent readers are those students who are capable of reading text with speed and accuracy. Theodore Harris and Richard Hodges define fluency as expressing oneself "smoothly, easily, and readily," having "freedom from word identification problems."¹ The development of fluency is apparent in each of the skills needed for decoding. Truly fluent readers will demonstrate high-level skills in phonological awareness, phonemic awareness, sight identification, orthographic awareness, and the ability to use effective cueing systems.

A fluent musical performance similarly demonstrates an automatic and skillful execution of the musical symbols and text within each of the decoding skills. Emergent fluency may find a student who can correctly look at and then tap a simple rhythm. At the decoding stage, simple melodic patterns are sung flawlessly using solfege

or the musical text. Students who demonstrate the highest levels of fluency are able to perform a composition with virtually no errors.

As in reading, however, flawless performance does not necessarily demonstrate one's comprehension of the music or musical text. It is entirely possible for a group to execute all of the correct notes, rhythms, and musical nuances without possessing any understanding of the compositional style, historical and cultural background, or ways in which the piece being performed compares to others in or out of that genre. The line is drawn between decoding and comprehension as meaning is extracted from the text or music. While fluency is generally acknowledged as a critical component of skilled reading or musical performance, it in itself does not guarantee that the student understands the text or music through higher-order thinking levels such as comparing and contrasting, synthesizing, evaluating, or creating. Perhaps the need to

find meaning in music beyond flawless performance augments the reason to aim for the National Standards for Music Education.

Summary

Limited research has been conducted to establish firm correlations or causal effects between music reading and text reading. Susannah Lamb and Andrew Gregory found a high correlation between children's ability to read and ability to discriminate pitches accurately.¹¹ Ron Butzlaff conducted meta-analysis studies investigating reading achievement and music, also finding a relationship between the two.¹² Mary Renck Jalongo and Deborah Ribblett advocate the inclusion of storybooks based on songs in pre-reading and early childhood learning.¹³

Brain researchers have just begun to discover music as a whole-brain function (music teachers read their reports with little wonder, given the complexities of the process). In his book *The Right Mind.' Making Sense of the*

***Hemispheres*, brain research pioneer and author Robert Ornstein states:**

Clearly we don't have two brains, but one with a myriad of specializations inside, and two major ways of organizing the world. It isn't an either-or situation, or a left-right one. ... Rather, doing almost everything we do every day, we draw on the special contributions of the right side of the brain. But both sides are alive and well and are involved in all our activities.¹⁴

Additional research is warranted in order to define the specific relationships between learning to read literary texts, music notation, and music texts, as well as the developmental sequences of each. Perhaps we should compare the reading abilities of students who have been given music instruction emphasizing specific reading skills (musical notation, as in instrumental music instruction, and music-text reading, as in choral music)-as described in the charts above-against students who have received literary-text-only

instruction. That information might provide us with another arsenal of powerful reasons for providing music as part of our core curriculum. In addition, we should examine the effectiveness of music instruction emphasizing specific reading skills for music notation and music text in comparison to music programs that are rote-based with regard to literary-text-reading ability. There is no doubt that we should teach music for music's sake, but, when push comes to shove, we may be wise to also defend our programs by communicating in terms that help link them to the national goals for reading.¹⁵

Notes

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