

Early reading and music: that magical partnership

Abstract

In this paper, I focus on English K-2, particularly on teaching reading in the early years and how it can be enhanced through the inclusion of music to encourage, engage and enrich young students in learning, setting them up for success on their beginning literacy journey. I ask school leaders to consider the established link between early reading and music when planning for and implementing new curriculum in their schools.

I would teach the children music, physics and philosophy. But most important is music, for the patterns of the arts are the keys to all learning.
Plato

Introduction/ rationale/ significance

School leaders need no reminders that implementing new curriculum is mandatory and executive in schools have a key role in ensuring its smooth transition. Australia is currently undergoing unprecedented curriculum reform, as governments and education systems strive to incorporate the agreed knowledge, skills and understandings that best prepare students for an uncertain future.

Reading is widely regarded as the most fundamental academic skill, the linchpin for all academic success. School leaders share an important responsibility, both for curriculum implementation locally and ensuring early reading programs and pedagogical practices are based on trustworthy, seminal educational research. A

highly regarded meta-analysis of reading research, *The National Reading Panel Report* (NRP 2000), identifies the essential components of teaching reading, colloquially referred to as, “The Big 5”. Although contested, with Konza adding oral language to the Big 5, making it the “Big 6” (Konza, 2013); those essential components of effective reading instruction comprise phonemic awareness, phonics, oral reading fluency, vocabulary, comprehension and oral language. This research ubiquitously underpins literacy policy.

Learning to read and learning music are highly correlated, complimentary cognitive processes (Rubinson 2009, Telesco 2010, Collins 2020). The inclusion of music in early reading programs has many cognitive, educational and social benefits that can scaffold students along the path to becoming successful readers. Cognitive benefits include improved inhibitory control and executive brain function, which assist students to concentrate, stay focused and manage their emotions (Levitin 2006, Jones 2010, da Silva, Luvizutto et al. 2021). Educational benefits of integrating music in early reading include improved rhythmic abilities, sound to symbol correspondence, phonemic awareness and reading prosody (Wennerstrom 2001, Collins 2020, Godde, Bosse et al. 2020). Socially, music has the propensity to calm and engage reluctant learners, facilitate cooperative group learning, ensuring students feel comfortable and confident in the classroom (Snow, Griffin et al. 2005, Curtis 2007, Saefudin, Saleh et al. 2019).

In this paper, I discuss curriculum reform and how widespread high stakes testing (Curtis 2007, Wexler 2020, Debreceeny 2021) has culminated in a back-to-basics approach to education, narrowing the curriculum, with a lesser emphasis on the arts, a negative outcome of “back-to-basics” (D'Agrosa 2008, Collins 2020, Dwyer and Ross 2021). Next, I briefly outline the explosion of research linking learning to read

and learning music. A field of neuroscience, *neuromusicology* (Holmberg 2010, Jones 2010, Telesco 2010), the study of the effect of music on the brain, supports the view that music and early reading, taught consecutively, provide proven benefits for young children because they draw on the same neural networks in the brain (Gregory and Parry 2006, Levitin 2006, Jones 2010). Finally, I summarise how school leaders can ensure that the well-established link between learning music and learning to read is fully utilised in early reading classrooms, maximising young learners reading progress.



Figure 1: Making music to facilitate vocabulary development and comprehension

[Back to basics](#)

High stakes testing has resulted in a narrowing of the curriculum with a focus on basic skills (Frawley and McLean-Davis 2005, Luke 2010, McGaw et al., 2020). The *back-to-basics* approach, where the majority of class time is spent teaching literacy and numeracy, has resulted in a winnowing of the curriculum exacerbated by a basic

skill testing regime which has infiltrated education systems worldwide (Kantaylieniere, Hill-Clarke et al. 2004, Rich, Leatham et al. 2013, Muthivhi and Kriger 2019). Schools are held accountable for their students' data, with implications both for leaders and teachers in schools. Whether intended or not, the back-to-basics movement has resulted in teachers spending considerable class time preparing students for testing at the expense of other curriculum areas. Other subjects deemed non-essential or not as important as literacy and numeracy, are given a lesser priority in schools. Longer term reading improvement as a result of focusing on the basics has made a varied, yet negligible difference to students' overall reading scores, as evidenced by NAPLAN, Australia's National Assessment Program-Literacy and Numeracy, which began in 2008 (Thompson 2013, McGaw, Loudon et al. 2020, Dwyer and Collins 2022).

The jury is in, in relation to the high gravitas of synthetic phonics instruction, including phonemic awareness and alphabetic knowledge, being taught explicitly in the early reading classroom (Moats 1999, NRP 2000, Konza 2014). Notwithstanding, other subjects at school also lay strong foundations for young learners becoming successful readers. The undisputed purpose of reading is to construct meaning from text. The knowledge base required to activate background knowledge, make connections and make sense of reading is accrued through students' life experiences and interaction with the arts (Wexler, 2020). There exists a wide body of evidence that suggests the arts, in particular music, enhance other learning, providing and activating valuable background knowledge that naturally connects to the acquisition of formal reading skills. The explicit teaching of early reading and music together can yield powerful learning for students, the conflation of which

improves and accelerates both reading and music mastery (Kantaylieniére, Hill-Clarke et al. 2004, D'Agrosa 2008, Bonacini, Krizman et al. 2019).

Australian Curriculum

2022 is a significant year in relation to curriculum reform. The Australian Curriculum (V8.4) has been reviewed through a widespread consultative process, and V9, the latest version, is due for release, with its reported delay being due to a lack of agreement in relation to the content of the history curriculum and the arts (Visentin 2022) p8. The new curriculum aims to “build a more socially inclusive and productive nation through education” (Gillard 2008) p3, ensuring excellence and equity for all students. The Australian Curriculum Assessment and Reporting Authority (ACARA) Chief Executive Officer, David de Carvalho, reported that the curriculum review aimed at decluttering the curriculum, so students can shape their own future and that of their community more broadly (de Carvalho, 2021).

Not all states draw on the Australian Curriculum *ibidem*. NSW and Victoria have their own curriculums, and “adopt and adapt” (Visentin 2022) the national curriculum. Other states draw on the national curriculum exclusively (Dwyer and Ross 2021, Visentin 2022). The upcoming Australian Curriculum English (ACE) emphasises phonics in teaching early reading, reflecting the approach adopted by NSW, whereas Victoria advocates a balanced literacy approach. In November 2021, the NSW Education Standards Authority (NESA) released the K-2 English syllabus, for trial in schools in 2022 and mandatory implementation in 2023. The ACE is due out sometime in 2022. With the impending changes to the Australian Curriculum the time is ripe to widely disseminate the research in relation to the advantages of integrating music into K-2 English classrooms (Fisher and McDonald 2001, Iwasaku, Rasinski et al. 2013, Muthivhi and Kriger 2019).

Links between music and early reading

Music precedes language development in our brains. From music, students move to song, then speech, then to alphabetic knowledge and reading. Children need to be able to keep a beat to learn to read. Rhythm helps organize events into conventional and logical patterns. Rhythm is the main element that creates the sequence of sound and silences in music. In learning to read, rhythm helps us to select and identify phonemes, syllables, words, and phrases from an ongoing speech stream. Having good rhythmic skills is important for music learning and for language development and communication (Fisher, McDonald and Strickland 2001, Holmberg 2010, Kraus and Chandrasekaran 2010). When sounds can be identified aurally, the next sequential step is identifying the sound symbolically which could either be a musical note or a letter of the alphabet. Kraus and Chandrasekaran (2010) describe a *phonological loop*, a symbol to sound system in which the brain hears a sound and instructs the child how to make a particular sound. A child hears a sound, speaks it, identifies the sounds and symbols in the word, then reads it (Kraus and Chandrasekaran 2010, Collins 2020). Being able to aurally distinguish sounds is a foundational building block in learning to read. Collins (2020) uses an envelope analogy to describe how children need to be able to aurally identify the beginning medial and end sounds in words. Phonics instruction reinforces connections between spoken sounds and written letters. Both language and music utilise parallel reading instructional strategies such as phonemic awareness, sight identification, orthographic awareness, and fluency.

Neuromusicology

The neuromusical research identifies how our brains process sound (Holmberg 2010, Jones 2010, Telesco 2010). The auditory processing system in our brains hears the music in sounds. When we play music, various parts of the brain light up

like fireworks. “Music is organised sound” (Levitin 2006) p111. Through exposure to music, the human brain is preparing for learning to read as speech, language and music draw on common neural resources in the brain’s frontal and temporal lobes, the higher cognitive, most advanced regions in the brain. See figure 5.

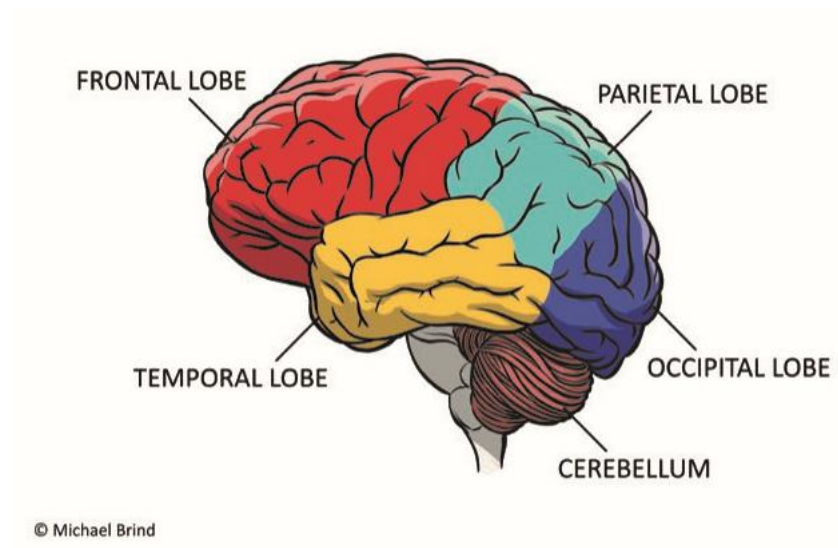


Figure 2: The reading brain

The human brain is divided into two hemispheres, the right and left hemispheres. Several brain regions in the left hemisphere are involved in reading and comprehension. The temporal lobe is responsible for phonemic awareness, identifying sounds and decoding. The frontal lobe is responsible mainly for speech and language. Different parts of the brain link together to identify letter shapes and encode them to form words. Magnetic Resonance Imaging (MRI) shows beginning readers have more “fireworks” in the parietal-temporal regions of their brain whereas more experienced readers’ brains have more “fireworks” exploding in the occipital and temporal lobes. As we learn to read our brain changes through a process called *neuroplasticity*, a term which describes the brain’s ability to change and adapt based on life experiences and environment.

When students create, play or listen to music, both hemispheres of the brain light up, in a spectacular “neural symphony” (Jensen, 2000 p246). Previously it was accepted that the right hemisphere was where music originates in the brain however through MRI imaging, we now know that music engages the whole brain. When the two halves of the brain work together harmoniously, in a state of “hemispheric synchronisation” (Bennett and Bennett 2010 p284), students are in an optimal state for learning to take place. By learning music from an early age, students are well - situated to benefit from brain coherence, typified by improved concentration, learning and memory, setting them up for the best chance of reading success and learning at school.

Practical implications for schools

Musical training improves students listening skills and phonemic awareness - a prerequisite of learning to read. Both music and speech connect sound to meaning through sound – symbol associations. The cognitive–sensory aspects of music training promote neural plasticity, and this improves the auditory processing of music as well as of other sounds, such as speech. Children who begin music training before or around the age of 7 display superior sensory - motor integration, compared to those who begin music training later in life, or not at all (Kraus and Chandrasekaran 2010, Fisher and McDonald 2001, Collins 2020). These findings suggest that teaching music should occur in the early grades, alongside learning to read. Engaging language activities such as nursery rhymes, stories, songs, rhythmic clapping, and chanting in unison make the brains of young learners more receptive to learning to read. Music builds a child’s love of literature whilst engaging them joyfully in the learning process.

increases the feel - good brain chemicals such as dopamine and cortisol. Singing reduces stress hormones, helping children to concentrate, building a sense of community in the classroom, learning together through action songs and play.



Figure 4: Learning language through action songs

Students who can maintain their attention have a much better chance of being successful at school. The simple act of reading lyrics and following along to a favourite song whilst singing together improves reading prosody, defined as fluent, accurate and expressive oral reading (Godde, Bosse et al. 2020). From a musical stance, Wennerstrom reinforces the high gravitas of the music and reading link when she describes prosody as “the music of everyday speech... the foundation of communication” (Wennerstrom 2001, p14).



Figure 5 : Singing builds reading prosody / sense of community

Reading prosody increases when students practise reading texts accurately and fluently, achieved through repeated reading of song lyrics, focusing on meaning. Teaching vocabulary in the context of a song, helps children to understand the meaning of the words they encounter, as making meaning is the reason why we read. Comprehension is a key ingredient, one of “the Big 5” in learning to read as outlined in the NRP report (2000).

[Future directions/ conclusion](#)

Active engagement with music adds value in the early reading classroom. It provides an enjoyable social experience that improves listening skills and phonemic awareness, situating students for reading success (Newland 2013, Del Rey 2017, Muthivhi and Kriger 2019). As Australia is currently undergoing unprecedented curriculum reform, school leaders’ current foci are on delivering new curriculum seamlessly in their schools, and ensuring teachers are supported, well prepared and confident in their implementation of new curriculum, situating young learners for the best chance of reading success. Teaching reading, that most fundamental academic

skill, is enhanced through integrating music in the early reading classroom, a move well supported in the broad academic literature cited in this paper. Teaching music and early reading together is a magical partnership, because the skills necessary for learning music cohere with beginning reading skills. Participation in music in the early reading classroom encourages students to succeed in their literacy journey, consecutively building a love of both reading and music.

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