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The Early Reading and Music Partnership

Połączenie muzyki i nauki czytania

KEYWORDS ABSTRACT

early reading and music, literacy, teaching, partnership, teaching early reading There is broad agreement, in relation to the high gravitas of 'the big six' in teaching early reading, the pillars of effective reading instruction (Moats, 1999; NRP, 2000; Konza, 2014). Notwithstanding, there exists a body of evidence that indicates the arts, in particular music, enhance and motivate other learning, helping young children to become readers. This suggests 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. This research investigates whether participation in music instruction has beneficial effects on young children's learning and acquisition of early reading skills; specifically, if a link exists between early reading and music acquisition. There are three parts to this research: a) literature review; b) email surveys/ semi structured interviews; c) classroom observations.

Results suggest that music serves as a natural bridge to literacy, strengthening auditory processing, and scaffolding learning phonemes and graphemes. Music aids memory because the beat, melody and harmony carry semantic content, clarifying meaning. Children learn with less effort and remember information more easily when rhyme and rhythm are present. Nursery rhymes, poems and action songs engage children through playing with language, suggesting that a transdisciplinary pedagogical approach is a potential solution to challenges currently faced in education in relation to disengagement from traditional schooling and declining reading levels. An early reading and music partnership is an approach to learning that may benefit young learners along the road to becoming readers.

SŁOWA KLUCZE ABSTRAKT

nauka czytania
i muzyki,
umiejętność
czytania i pisania,
nauczanie,
połączona nauka,
początkowe etapy
nauki czytania

Panuje powszechna zgoda co do znaczenia tzw. wielkiej szóstki na pierwszych etapach nauki czytania, gdyż to właśnie jej komponenty stanowią filar skutecznej nauki tej umiejętności (Moats, 1999; NRP, 2000; Konza, 2014). Niemniej jednak istnieje też szereg dowodów na to, że sztuka, a zwłaszcza muzyka, wspomaga i motywuje ucznia w nabywaniu innych umiejętności, w tym czytania. Fakt ten sugeruje, że nauka czytania połączona z nauką muzyki może umożliwić dziecku osiągnięcie doskonałych wyników zarówno w zakresie umiejętności czytania, jak i opanowania zasad muzyki. W niniejszym artykule badamy, czy uczestnictwo w lekcjach muzyki wywiera korzystny wpływ na naukę u dzieci i na ich wyniki w początkowych etapach nauki czytania, a konkretnie – czy istnieje związek pomiędzy wczesną nauką czytania a nabywaniem umiejętności muzycznych. Badania te podzielne są na trzy części: a) analiza literatury przedmiotu; b) analiza mailowych ankiet/wywiadów częściowo ustrukturyzowanych; c) obserwacja dzieci w klasie.

Wyniki naszych badań sugerują, że muzyka w sposób naturalny wspomaga naukę czytania, przetwarzania słuchowego oraz fonemów i grafemów. Muzyka ma także dobry wpływ na pamięć, gdyż rytm, melodia i harmonia niosą treści semantyczne, a zarazem pomagają wyjaśnić znaczenie. Dzieci uczą się łatwiej i szybciej zapamiętują informacje, gdy nauce towarzyszy rym i rytm. Rymowanki, wierszyki i śpiewanie piosenek z wykorzystaniem ruchu angażują dzieci i zachęcają je do zabawy językiem, co sugeruje, że interdyscyplinarne podejście pedagogiczne to potencjalna odpowiedź na obecne wyzwania edukacji, takie jak nieskuteczność tradycyjnych metod nauczania i spadający poziom umiejętności czytania u dzieci. Powiązanie nauki czytania z nauką muzyki to podejście, które może przynieść dzieciom znaczne korzyści w nabywaniu umiejętności czytelniczych.

Introduction

Music is a core anthropological experience, reflecting cognitive abilities, and fundamental to human evolution (Schulkin & Raglan, 2014; Bridges, 1994). However, it is progressively undervalued in education. Music and the arts are being relegated an increasingly lower rung of importance at school, due to a current focus on literacy and numeracy in a widespread "back to basics" education climate (Hill-Clark & Robinson, 2004; Rich et al., 2013).

In Australia, teachers concentrate on preparing students for national assessment testing, the National Assessment Program literacy and numeracy (NAPLAN), undertaken by all Australian children in Years 3, 5, 7 and 9. NAPLAN provides comparable

data in literacy and numeracy over time, and nationally (ACARA, n.d.). Whether intended or not, schools (and teachers) are held accountable for their NAPLAN results (Frawley & McLean-Davis, 2005; Luke, 2010; McGaw et al., 2020). An emphasis on literacy, numeracy and national test rankings and results has resulted in other subjects being relegated a lower priority in schools.

Notwithstanding, sources indicate that a "back to basics" focus in education has made a negligible difference to students' overall reading scores, as evidenced by NA-PLAN and other standardised tests (Thompson, 2013; McGaw et al., 2020; Dwyer & Collins, 2022). This leaves educators questioning how teaching literacy can be nuanced to improve results, at the same time fully utilising what the research outlines as best practice in teaching reading (Hunter et al., 2024).

This research investigates whether a link exists between music and early reading acquisition, and what this link may look like in classrooms for schools, teachers, and students to best benefit from music and early reading partnership.

Overview of Literature

Reading is widely regarded as the most fundamental academic skill, the bedrock of academic success. A highly regarded meta-analysis of reading research, report of the National Reading Panel (NRP) (2000) reviewed the reading research literature and its implications for effective reading instruction. It identifies the essential components of teaching reading, colloquially referred to as the *fab five*. Konza (2014) added oral language to the *fab five*, making it the *big six*. These six evidence-based pillars of effective reading instruction comprise phonemic awareness, phonics, oral reading fluency, vocabulary, comprehension, and oral language. The NRP report outlines the most effective ways to teach reading (NRP, 2000, p. 34), as do significant follow-up studies, including an Australian study: *Teaching Reading: Report and Recommendations* (Australian Government, 2005) and a British study: *The Independent Review of The Teaching of Early Reading* (Rose, 2006). Collectively, these studies underpin widespread contemporary literacy policy and practice.

The *big six* pillars of early reading instruction are seen as the essential skills of learning to read (NRP, 2000; Konza, 2014; Cox et al., 2019). However, other subjects at school also contribute to young learners becoming successful readers. When reading, readers seek to make meaning from text. The knowledge base we need to activate background knowledge, make connections, and make sense of reading, is accrued through life experiences (Wexler, 2020). Music naturally connects to the acquisition of the 'big six'. The explicit teaching of early reading and music together yields powerful learning for students, which accelerates both reading and music mastery

(Hill-Clarke & Robinson, 2004; D'Agrosa, 2008; Bonacini et al., 2019). Teaching early reading and music together draws on principles and conditions that encourage *convergent cognition* (Rich et al., 2013), a term used to describe one subject increasing the other's effectiveness, when taught consecutively.

Teaching reading is a big part of the subject of English, including literacy, particularly in the early years. Literacy is not a subject in its own right but is fundamental to all learning areas (NSW Government, 2023). English and literacy interconnect, but English is much more than literacy. Literacy is a set of skills required for all subjects, while English is a broad subject in its own right. Other subjects at school also lay strong foundations for young learners to become successful readers. A wide body of evidence suggests that the arts, in particular music, enhance and motivate other learning, providing, and activating valuable background knowledge that naturally connects to the acquisition of formal reading skills, such as phonemic awareness, phonics, fluency and comprehension. 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 (Hill-Clarke & Robinson, 2004; D'Agrosa, 2008; Bonacini et al., 2019).

Music precedes language development in the brain. From music, students move to song, then speech, then to alphabetic knowledge and reading. Students need to be able to keep a beat to learn to read (Kolb, 1996; Bonacini et al., 2019; Collins, 2020). Rhythm helps them to organise events into conventional and logical patterns, a main element that create the sequence of sound and silences in music, and in speech. When learning to read, rhythm helps students 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, communication and oral reading fluency (Fisher et al., 2001; Holmberg, 2010; Kraus & Chandrasekaran, 2010).

When students can identify sounds aurally, the next sequential step is identifying the sound symbolically, which could either be as a musical note or a letter of the alphabet. Kraus and Chandrasekaran (2010) describe a phonological loop, a sound to symbol system in which the brain hears a sound and instructs the child how to make the particular sound. The child makes the sound, listens to the sound, reflects, makes changes and repeats the process in a cycle, connecting a sound to a symbol. In reading, a child hears a sound, speaks it, identifies the sounds and symbols in a word, then reads it (Kraus & Chandrasekaran, 2010; Collins, 2020). Being able to aurally distinguish sounds is a foundational building block both in learning to read and learning music. Collins (2020) describes how children need to be able to aurally identify the beginning, medial and end sounds in words; like high/low, loud/soft, fast/slow, and long/short sounds in music. Phonics instruction reinforces connections between spoken sounds

and written letters. Both language and music use parallel reading instructional strategies such as phonemic awareness, sight identification, orthographic awareness, and fluency.

The inclusion of music in early teaching of reading 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 et al., 2022). Executive functions and other *soft skills*, such as interpersonal and behavioural skills, are acknowledged as increasingly important in today's workforce (Hansen et al., 2014) for effective communication and collaboration, teamwork, creativity and problem solving.

Identified educational benefits of integrating music in early reading teaching include improved rhythmic abilities, sound to symbol correspondence, phonemic awareness and reading prosody (Wennerstrom, 2001; Collins, 2020; Godde et al., 2020). Socially, music has the propensity to calm and engage reluctant learners, facilitate cooperative group learning, and ensure that students feel comfortable and confident in the classroom (Curtis, 2007; Saefudin, 2019; Debreceny, 2021).

Being able to aurally distinguish between sounds is a foundational building block both in learning to read and learning music. Collins (2020) describes 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 use parallel reading instructional strategies such as phonemic awareness, sight identification, orthographic awareness, and fluency. In summary, music has a role to play in developing students' language skills. Teaching early reading and music consecutively is a wise partnership as teaching the two together can create powerful learning experiences for students (Debreceny, 2021; Pascoe et al., 2005).

Research Project

This research project encompasses three main areas:

- 1) an overview of literature outlining the link between early reading and music;
- 2) a survey of interested teachers, seeking their views of how music is used to support literacy and English acquisition in the early reading classroom. The teacher survey seeks to garner teachers' background knowledge, experience and views on whether a link exists between literacy learning and music in the early reading classroom;
- classroom observations in three case study schools to determine how these schools incorporate music into the curriculum and whether links are visible between music and early reading instruction.

The research investigates whether the integration of music in early reading classrooms contributes to improvements in students' reading abilities, as suggested by findings in the available literature and in teacher surveys.

Research Significance

The current back-to-basics emphasis focusing on literacy and numeracy in education, has resulted in less time being allocated to teaching other subjects. Along with higher accountability attributable to high stakes testing like NAPLAN, the amount of time dedicated to teaching art and music in schools was reduced. Perhaps the transdisciplinary pedagogical approach – like an early reading and music partnership – will be a possible solution to contemporary educational challenges related to declining reading standards and student disengagement. Evidence suggests that learning music strengthens brain connectivity, benefitting every part of the school curriculum, particularly the *big six* pillars of effective reading instruction (Frischen et al., 2019; da Silva et al., 2022; Debreceny, 2021). This study builds on prior research investigating the music and early reading partnership, with the aim of moving knowledge forward in relation to how teaching music and early reading together can strengthen both areas of learning.

Survey Research Questions

The main research question relates to whether the inclusion of music improves early reading and literacy acquisition:

In what ways, if any, does the integration of music in the early reading classroom contribute to improvements in students' reading abilities?

Semi-structured interview questions were emailed to 30 teachers interested in teaching music and early reading, with an invitation to participate in the research, The teachers were selected through a purposive sampling technique. The technique (snowball sampling) involved volunteer teachers recommending their colleagues who use music in their early reading classes. In this way, information tendered by interviewees provided deep, relevant information that addresses the research question being studied (Tashakkori and Teddlie, 2003, p. 279). From the 30 teachers contacted, 12 responses were received, culminating in a 40% overall response rate.

The interview questions, inspired by Curtis (2007), comprised:

• How do you engage students in literacy in the Kinder/Foundation to Year 2 (K/F-2) classroom?

- What instructional methods/ strategies/ techniques do you find most effective in teaching literacy?
- How do you know this (evidence)?
- How do you integrate music into the early reading classroom?
- Do you have any system support in connecting music and early reading in the classroom? If so, please elaborate.
- How do you think K-2 children perceive a music and literacy connection in the classroom?
- How do you view the connection between learning music and learning to read?
- What are your favourite musical activities in the K/F-2 reading classroom?
- Can you see links to literacy learning in the activities that you identified? Please elaborate.

Email responses were transcribed and entered in NVivo 12 plus, which as data analysis software. Texts and other materials were coded, synthesised, and analysed to identify main themes and make links between data sources. When coding the responses to the semi structured interview questions, categorisation and thematic analysis with reflective and inductive processes was undertaken. Parent codes were developed for each question and child nodes were formed according to responses of the participants. Similar child nodes were synthesised into themes. For example, an excerpt of responses to the question: *How do you view the connection between learning music and learning to read?* can be seen below. Participants' responses were initially placed in a parent node, then synthesised into several child nodes, then theme [in brackets following]. See below:

Table 1. Excerpt/Example NVivo Codebook: The Early Reading and Music Partnership

<Files\\interviews\\Interview Infants> - § 2 references coded [4.34% Coverage]

Reference 1 – 1.52% Coverage

Phonemic awareness, make it fun, cultural link [range of activities for engagement, music and early reading links].

Reference 2 – 2.82% Coverage

We don't think children think much about the link. They see it as mutually supportive [integration].

1. I always engaged students through a short discussion in K and 1 [integration, range of activities for engagement]

Reference 2 – 2.86% Coverage

2. if there was a song which went with the theme or sound effects the children could make to enhance the experience they would be introduced first [music and early reading links, emotions and music]

Reference 3 – 5.37% Coverage

3. As a natural enjoyable connection and one which adds more interest and overlay of skills such as listening, memory, concentration, rhyme, and expression that are common to both literacy and music [range of enjoyable reading activities, music and early reading links]

The results were reviewed in collaboration with a colleague, discussed and modified according to guidelines contained in Richards and Morse (2013, p. 223), ensuring coding reliability.

The key themes, derived from the analysis of email responses, can be seen in figure 1 below:

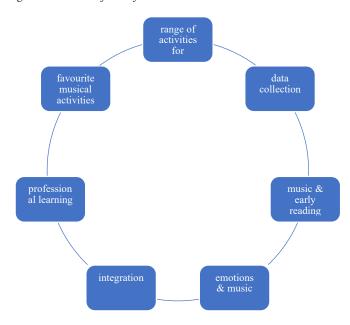


Figure 1. The Identified Key Themes

Identified Key Themes

The Importance of Engaging Musical Activities in Early Reading

Respondents highlighted the importance of fun, joyful musical activities to support the acquisition of literacy and early reading skills in the early years at school.

I engage students by breaking learning into manageable chunks, making things fun, looking for ways to introduce new content joyfully, and build on what students already know. We are in the learning and entertainment business. Rhythm and rhyme makes it fun. (Marion)

Music is a powerful motivator to engage students in learning to read (Curtis, 2007; Debreceny, 2015; Del Rey, 2017). Variety and fun are key when using music to engage students in the early reading classroom.

Listening, singing, and responding in musical conversations using call and response, focus on the early reading skills of phonemic awareness, auditory discrimination, and oral language development. At the same time, students are learning basic musical concepts of rhythm (the patterns of sounds and silences that make the beat);

tempo (the speed at which the music is played); and melody (the tune of a piece of music), encouraging good listening and musical appreciation. See below:

Figure 2. Example Musical Greeting



Non-verbal cues are useful attention grabbers to introduce familiar musical lesson breaks and revise initial phonemes in words. For example, for teaching *Koala Brown*, an action song, the teacher holds up a koala toy, cueing students to form into pairs and face their partners, preparing them for a particular pending musical lesson break. Puppets, dress-ups, musical instruments, masks and toys are all useful props for scaffolding children in both acting out and internalising stories and songs, improving recall and comprehension (Oczkus, 2009).

Participation in a wide range of musical activities encourages students to practise early reading skills through active participation in enjoyable music and language arts activities.

Assessment and Data Collection

Musical activities can be useful tools to collect information about student learning, to inform teaching, and to move students' skills and knowledge forward on the road to reading.

Class phonics checklists, used as a monitoring tool during morning circle, when alphabet songs are often used to reinforce student GPCs, are a time-efficient means of checking and monitoring students' growing GPC knowledge.

I always use a musical circle game, to greet each other in the morning. This allows me to observe and monitor many aspects of a child's continued reading development. Through observation, I collect a range of data and work out how to best engage each child. I identify ... vocabulary usage, clarity of oral language, listening skills and the ability to follow instructions, all necessary early reading skills. (Maria)

With follow up tasks, I can identify the children who need more personal one-on-one instruction and more intense focus on different strategies to help them with their oral language and early reading skills. (Maureen)

Breaking words into smaller units, as well as identifying and creating oral rhymes demonstrate students' growing phonological awareness, all measurable during class musical activities. For example, *The Rhyme Song*, a piggyback song, sung to the tune of *The William Tell Overture* (Rossini, 1829), invites individual students to provide words that rhyme with song lyrics in an enjoyable game format. For example:

What words rhyme what words rhyme with *bed, red, ted*? What words rhyme what words rhyme with *bed, red, ted*? What words rhyme what words rhyme with *bed, red, ted*? Fed rhymes with *bed, red, ted*.

Through selecting individual students to respond to the questions in the song above, the activity provides assessment data on their phonological awareness, particularly knowledge of rhyme identification and production. Participating in songs that focus on rhyme and word play increases students' understanding of how phonemes can be manipulated to make new words, as students' ability to accurately decode words is a reliable predictor of future reading achievement (Hunter et al., 2024; Debreceny, 2021; Moats, 1999).

Music and Early Reading Links

Activities connecting early reading and music enhance both reading and music learning. Music complements reading instruction because, as in music, reading has rhythm and melody (D'Agrosa, 2008; Fisher, 2001).

Musical games and songs are a natural enjoyable connection to early reading. They add interest when introducing skills and content, such as listening, memory, concentration, rhyme, and expression that are common to both literacy and music. (Maria)

Singing phonemes to simple rhythm patterns as they are writing, helps students to blend phonemes to make words, reinforcing the talking, singing, reading and writing link.



Figure 3. Blending Phonemes to Make Words

In Figure 3 above, students use a range of manipulative objects (letter tiles, bottle tops, magnetic letters) to make new words, recording them on mini whiteboards; oftentimes using a musical scaffold to help them to orally blend, read, then write new words. For example:

Figure 4. Musical Scaffold for Phoneme Blending

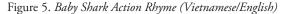


Teachers use musical games and rhymes to introduce new content, building on what students already know. Props (like simple toys) help students to recall and recite initial phonemes and digraphs, with accompanying musical rhymes.

Teachers reported that students with backgrounds where English is an additional language or dialect (EAL/D); feel valued when their home language in the form of songs, chants, and rhymes, is utilised in the classroom. In doing so, teachers are drawing on the potential of *translanguaging*, using students' entire repertoire of language resources to maximise learning (Beveridge et al., 2021, p. 23).

Students feel valued when their home language is taught at school, through songs and chants, building cultural knowledge, understanding and respect in all students. (Sonia)

The video (*Baby Shark Vid.*, n.d.) draws on Vietnamese and English language to reinforce *s, sh*, in a simple musical action rhyme, provided by a Vietnamese community member, building important links between home and school knowledge.





Source: Baby Shark Vid., n.d. (https://www.youtube.com/shorts/EyFqd_3-vU4)

Multicultural texts, songs and chants play an important role in music and literacy learning as they acknowledge what students already know, help students to understand their own and others' culture, and build intercultural understanding, knowledge, and cultural pride.

Emotions and Music

Music surrounds students with the language of emotions and opens communicative spaces for students to talk about their feelings. Music can facilitate oral language acquisition, a pillar of effective reading instruction (Konza, 2014), through talking about how music makes them feel. Similar to discussions about quality literature in class, music facilitates oral language development through students sharing what makes them happy (or sad; or the myriad of emotions in between...), including their own likes and dislikes.

Music plays a role in conveying emotion – exposure to music at a young age can help children to identify and connect with ideas on an emotional level – this impacts communication and interpersonal skills. (Tamara)

In the survey, teachers shared musical games and songs that contribute to a positive class climate in which students are engaged and feel safe and valued. Cumulative songs like: We're going on a bear hunt (Rosen & Oxenbury, 1984), That's what I like, and How do you feel today? (Beveridge, 2023, pp. 13, 18) scaffold students in discussing their feelings in a safe, caring space. Students may sing or speak their responses, reinforcing the difference between singing and speaking voices, all the while focusing on oral language development.

The well-known children's song: *If you're happy and you know it*, attributed to Joe Raposo (1971), encourages students to explore and articulate their feelings, drawing on actions and vocabulary to express how they feel. They can embroider their contributions with Orff instruments and perform joyfully together, contributing to wellbeing through the creation of a rich classroom musical tapestry.

Integration

Teachers reported that they plan musical activities that support existing literacy programs. In this way, music is integrated into early reading instruction, "but it is never forced" (Marion).

High frequency words are taught alongside phonics, alongside quality texts. We introduce parallel music and literacy, focusing on rhythm, rhyme, and semantics. When integrated, it is part of the literacy program and supports existing learning. (Marion)

During writing [joint construction], we compose stories and put them to song. Reading begins with oral language; a 'sea of talk' (Dwyer, 1989). (Shirley)

Singing is talking and chanting. It underlies reading. All those little rhymes and tunes that are used to teach spelling, handwriting and grammar; or even just the alphabet, make literacy learning fun and easy to remember. (Helen)

Skills common to both music and early reading include phonological awareness, phonemic awareness, visual word identification, orthographic awareness, and fluency (Del Rey, 2017; Butzlaff, 2000; Darrow et al., 2008). The integration of musical activities in early reading lessons provide seamless opportunities for students to practise emerging early reading and literacy skills.

Professional Learning

Three teachers recounted they had received professional instruction in music, although none specifically in relation to how music can be used to support early reading acquisition. The first mention was new curriculum implementation, and in the second, a group of teachers from the same school reported that they attended

professional learning in their own time, provided by a national professional teaching association. Gavin shared that his school uses the expertise of musical staff members to provide professional learning across the school.

When the Creative Arts syllabus was released (2006) we did some professional learning on the new syllabus. Teaching music and reading together was not mentioned. (Maria) We attended in services in our own time, like Primary English Teachers (PETAA) courses, when offered. We had visits from literacy consultants. There was lots of professional learning on teaching reading. I cannot recall any on early reading and music. (Maureen)

I can only remember one in-service where the focus was on music, and that was a long time ago. Specific staff members with musical expertise were chosen due to their talents e.g. piano playing and band, and they wrote songs for us that we often used in the early reading classroom, with good results. (Gavin)

No primary teachers surveyed participated in professional learning in relation to teaching music in early reading, and only one teacher reported that they attended professional learning in music.

An Australian review of music education in schools (Pascoe et al., 2005) identified that many Australian students miss out on effective music education because of a lack of equity of access; lack of teacher expertise and professional confidence, lack of quality of provision, and the poor status of music in many schools.

Teachers need more professional learning in the form of curriculum support materials, advisory services, networks, mentoring and professional development; as the quality of teaching is related to teacher skills and pedagogic content knowledge (Gore et al., 2021). "Professional learning can improve the quality of teaching and... high quality teaching improves student learning" (Hunter et al., 2024, p. 62)

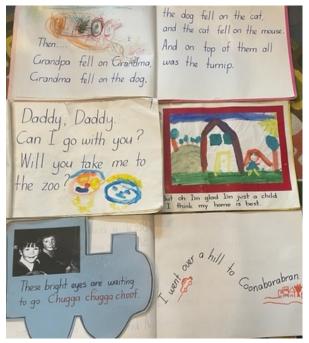
Favourite Musical Activities

Favourite musical activities identified by survey respondents include chants, action songs and games that reinforce existing classroom learning.

Singing at school... I always love the *Ants on the Apple* song for kids, and it is a great way to teach and drill grapheme-phoneme correspondences (GPCs). I also love songs that reinforce current phonics learning and actions are a big part of that too! Beginning the day with a *good morning song* is a joyful way of settling students and getting the class ready to focus on literacy learning. (Melissa)

We all love creating class big books. They are firm favourites. I see them [students] singing along to the rhyme and rhythm of the text, adding actions as they excitedly read the texts that we composed and illustrated together. (Helen)





Writing simple percussion scores and creating (and performing) soundscapes helps students make sense of challenging vocabulary in literary and informative texts, building fluency.

Figure 7. Text Cover, B. Bancroft, Coming Home to Country (2020)



For example, in the text: *Coming Home to Country* (Bancroft, 2020), challenging vocabulary is explained by adding related sound effects. "A rolling storm drops a majestic downpour" (p. 15) comes alive by adding rain sticks and thunder tubes, vibraslaps and cabasas, aiding meaning-making, linked to the comprehension pillar of effective reading instruction. See below:

Figure 8. Thunder Tube, Rain Sticks, Vibraslap, Cabasa



Students enjoy sharing poetry together, as it helps them to listen, interact with texts and speak clearly and prosodically. Poetry accompanied by music provides students with opportunities to use their voices to communicate ideas and feelings.

Singing and active learning stimulates cognitive capacities, attention, concentration, memory and learning (Iwasaku et al., 2013; Debreceny, 2021; Keating, 2020). Timeless nursery rhymes like *Twinkle Twinkle Little Star*, *Old McDonald Had a Farm*, and *Baa Baa Black Sheep* enrich literacy learning through developing language, musical concepts and prosocial behaviours. Students add instruments, make choices and judgements about rhyme and rhythm, and reorganise sounds through "conscious creativity" (Bridges, 1994, p. 102). In addition to addressing the *big six* of early reading, learning to sing, read, write, play and perform rhymes like these teaches various aspects of musicality. These basic musical concepts include dynamics (loud and soft), tempo (fast and slow), pitch (high or low) and timbre (the tonal quality [or tone colour] of sounds).

Music and young children are a natural combination, as they love to move and their attention is easily grabbed through music, whether it's games, songs, dance, movement, or making the music themselves through body percussion or using percussion instruments. (Tamara)

Favourite musical activities in the early reading classroom specified in survey responses ranged from "developing sound and letter correspondences through music"; "learning new GPCs and repeated practice of favourite class texts set to music"; to "performance of musical activities based on favourite books at school concerts".

Overall, favourite musical activities provided in survey responses focused on "building rhyme, rhythm, facilitating engagement and creating positive classroom climates conducive to learning".

Classroom Observations

The methodology underpinning the classroom observations was multiple case study. A qualitative multiple case study was chosen to investigate music teaching in the early reading classroom from multiple perspectives, to provide information-rich cases that contributed to in-depth study of the phenomenon. Selection criteria for schools' participation in classroom observations include:

- Willingness of schools to participate in the research;
- Music is a focus in early years classrooms;
- Selected schools demonstrate a variety of models of music implementation.

Three case study schools were chosen for classroom observations. I sought variability in the schools by selecting a large rural school, a medium-sized school in a city, and a primary school in a small town. No specialist music teachers are provided in primary schools in the education system in which the research was undertaken, and any related expense connected with teaching music in early years classrooms is covered from general school funds.

The school leaders in all three schools shared the opinion that art and music help young learners achieve success. All the case-study schools are government primary schools and although they all implement music in the early years, they do so in various ways. The school names I am using in this article are pseudonyms to comply with ethics requirements and to protect the privacy of participating schools.

Schools

The first case study is Kinsley Public School, situated in a village, 77 km from a big city. 431 students attend this school. 87% of those students are in the bottom two quarters for socio educational advantage (Australia-wide). 26% of the students identify as Indigenous¹ and 6% have a language background other than English (LBOTE). NAPLAN reading results indicate the school results fall in the band below all Australian students (Year 3) (ACARA, n.d.).

¹ Indigenous students are those who identify as being of Australian Aboriginal descent or First Nations Australians. The Australian government invests in strategies to close the gap of educational disadvantage between Indigenous and non-Indigenous students through targeted measures to improve the education of First Nations students (Australian Government, n.d.).

Next, Finkley Public School is an inner-city school in a capital city. 280 students attend Finkley Public School. 77% are situated in the top two quarters for socioeconomical advantage Australia-wide. No students (0%) identify as Indigenous and 83% have a LBOTE. At Finkley, NAPLAN reading results indicate the school results fall in the band above all Australian students (Year 3) (ACARA, n.d.).

The third case study, Carnley Public School, is a small school in a regional city. 134 students attend Carnley Public School. 56% of the students are situated in the middle two quarters for socio-economical advantage (Australia-wide). 24% of students identify as Indigenous and 6% have a language background other than English. At Carnley, NAPLAN reading results indicate the school's average percentage result is similar to all Australian students (Year 3) (ACARA, n.d.).

The comparison table of the three schools below summarises the differences in student enrolments, socioeconomic advantage, compilation of student populations and national reading results, which is the evidence of variability of case selection.

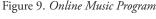
Table 2. Comparison Table of Case Study Schools

School name	Students	Socioeconomic advantage %	Indigenous students %	LBOTE %	NAPLAN reading result Year 3 %
Kinsley Public School	431	87% students bottom 2 quarters	26%	6%	Band below all Australian students
Finkley Public School	280	77% students top 2 quarters	0%	83%	Band above all Australian students
Carnley Public School	134	56% students middle 2 quarters	24%	6%	Band close to all Australian students

Source: ACARA, n.d.

Kingsley Public School

Kingsley Public School purchased an on-line music program for early years classrooms, delivered weekly by a teacher with an interest in music, who delivers the webbased program. The online program provides sequential music lessons for teachers and students which are supplemented by the music teacher who addresses emerging student needs.





The weekly music lesson was a team-teaching time in which the dedicated music teacher and class teachers worked together to implement the program. Class teachers reported this worked well as they were able to integrate what they learned during the music lessons into their everyday classroom practice. However, a system change resulted in class teachers being provided with an additional hour release from face-to-face teaching each week, and the team-teaching music timeslot disappeared. Although their students still access the online music program, class teachers are no longer able to easily integrate the new learning into existing programs.

The school may consider how to reorganise and reinstate the team-teaching music timeslot in some way, so that class teachers can again share the music learning, putting them in a better position improve the skill and embed the music learning into their daily English teaching. Integrating music into existing English and literacy activities deepens learning of those pillars of effective reading that we know make a difference to students learning to read. In integrating the two, we are providing students with the best, evidence-based early reading teaching we can deliver.

Finkley Public School

Finkley Public School is fortunate to have a specialist music teacher who works across a secondary and a primary school, based on an agreement between the principals. The specialist teacher visits Foundation and Year 1 classrooms weekly and models the implementation of sequential musical activities in-class, for class teachers, building on what the students already know. Activities focus on developing students' listening skills, rhyme, rhythm, movement and singing. At the same time, students are practising their oral language and supporting their literacy development.



Figure 10. Specialist Teacher Modelling Musical Action Rhyme In-Class

Through a professional learning lens, the specialist teacher shares their expertise with staff, supporting class teachers in growing their musical knowledge and skills. In this teacher professional learning model, the specialist music teacher is potentially a champion of change, passing on their specialist expertise to classroom teachers with whom she works, building their skills, knowledge, and professional confidence. The next challenge from a sustainability standpoint is for the specialist teacher to actively mentor the class teacher whilst the class teacher takes the lead, through modelling, rehearsal, enactment, and reflection. Rather than simply observing, the class teacher could work alongside the specialist teacher to maximise impact. Both teachers would gain new knowledge and skills through teasing out common ideas and "weaving authentic teaching tapestries, where content knowledge and understanding are drawn from one subject discipline and used to enrich and apply to others – connecting the curriculum dots" (Gould Lundy, 2015, p. 8).

Collaborative practice provides the best chance of learning being sustained when the specialist teacher moves on to another class (Beveridge, 2014). D'Agrosa (2008) outlines the unlimited possibilities for specialist music and class teachers working together through collaborative practice. Finkley Public School is well-situated to create important meaning-making and multiple literacy experiences through the authentic integration of the music and English curricula.

Carnley Public School

Carnley Public school has no specialist music expertise or access to online music programs. However, there is a teacher in staff who has been teaching Foundation students for a long time and music is present in their pedagogical practice.

The teacher uses music as a vehicle to drill GPCs, build alphabetical knowledge, settle students to work and facilitate writing – in fact, for every facet of literacy learning, as well as in classroom activities more broadly. The teacher's metaphorical teaching toolbox is brimming with musical activities which support classroom learning. They seamlessly infuse music into their literacy instruction. Selected activities support curriculum content currently being taught, and music complements and deepens the instruction rather than detracts from it (Fisher, 2001).

A challenge for the school may be succession planning and sharing the teacher's expertise across the school, to ensure their legacy of considerable musical knowledge and skills remains in the school, should the teacher decide to move somewhere else in the future. In this way, the teacher could "showcase best practice", "sharing school-based specialist expertise" (Hunter et al., 2024, p. 65) on how they integrate music in teaching reading.



Figure 11. Good Morning Greeting Focusing on Oral Language Development

Conclusion

The survey responses and classroom observations both indicate there are natural connections and considerable overlaps between teaching reading and teaching music. Music has a role to play in developing students' language skills and phonemic awareness. This research supports the reciprocity of learning music and learning to read.

The impact of music training on reading skills seems clear. Phonological awareness is an important early reading precursor, word decoding is associated with auditory skills and comprehension is a mix of basic decoding and higher-level cognitive processes like memory and attention. All of these skills are important in both music learning and early reading.

Through music, students' auditory, kinaesthetic, and emotional systems work together. Music aids memory because the beat, melody and harmony carry semantic content, supporting meaning-making and building comprehension. Children learn with less effort and remember information more easily when rhyme and rhythm are present. "Noticing" rhyme and rhythm across a range of texts provides phonological information that increases vocabulary and fluency in enjoyable ways.

All students deserve the many advantages that the early reading and music partnership affords, as music engages young learners and builds enthusiasm and eagerness to read. Students are mesmerised by the rhyme, rhythm and melody of music, song, rhymes and chants, supporting them in their reading journey.

Students benefit when they learn music and reading together. Notwithstanding, there is an identified need for more research to further clarify how music education enhances early reading acquisition and under what circumstances these benefits may be fully used in the early reading classroom.

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