



Closing the Literacy Gap with Early Years Music





Auditory skills are crucial to the development of literacy in young children. **Sue Newman** shows how a new training programme is showing parents and teachers how to bring music to every day activities for vulnerable young people.



The latest neuroscience research is revealing the power of early years music making to strengthen children's auditory processing system which in turn strengthens foundations for literacy. Could training for practitioners and parents of children in early years contribute to closing the school-ready literacy gap? Let's consider the evidence.

A 'whole-brain' workout

Studies show us that early years music-making activities draw on various areas of the brain simultaneously, facilitating many different aspects of development and providing one of the most effective influences on brain development at this key stage. Music is a multisensory experience that involves three ways of learning: auditory, visual and kinaesthetic. Similarly, the brain is a multisensory organ, and this could partially explain the remarkable benefits: music activates all three cortices (motor, visual and auditory) of the brain.

Anita Collins, researcher in neuroscience and music education at the University of Canberra described the effect of music as "like fireworks going off in the brain [...] Music is a whole-brain workout." Following many years of research evaluating the findings of neuroscience studies into the 'musicians advantage', she concluded that: "Music education is the key to raising literacy and numeracy standards. The evidence suggests that children who undertake music education have higher levels of cognitive capacity (especially regarding language acquisition and numerical problem-solving), tend to remain in education for longer, and earn more across their lifetime. Even better news is that it can also reverse the cognitive issues relating to disadvantage." (For more information visit www.anitacollinsmusic.com).



The school-ready literacy attainment gap

Research shows many children in poverty are less school-ready than their peers, creating an 'attainment gap'. The biggest gap is in literacy skills. ICAN communication charity research found that 1 in 4 children start school without the literacy skills they need at this stage. Without these crucial foundations they never catch up.

A 2015 study By Nina Kraus, PhD, & Samira Anderson, AuD, PhD found that low socioeconomic status can be linked to impaired auditory processing. Children raised in homes with lower income and less-educated parents are at an auditory disadvantage compared with children who come from more privileged circumstances. This gap begins early—children from low socioeconomic status (SES) backgrounds add 30 percent fewer words to their vocabulary between the ages of 18 and 24 months compared with children from high SES backgrounds. Even at 18 months, high SES children have faster processing speeds on receptive language processing tasks than low SES children. The reduced language input and decreased exposure to socially and intellectually stimulating experiences that are associated with low socioeconomic status underlie the relationships of SES with reading and language.

Narrowing the gap by strengthening the auditory processing system through music practice

A significant neuroscience project that continues to provide evidence of music's impact on the development of the neural pathways that support strong literacy skills, a priority school-ready skill, is Brainvolts, the work of researchers at the Auditory Neuroscience Laboratory based at Canada's Northwestern University.

Through a series of innovative studies involving thousands of research participants from birth to age 90, the researchers have found that our lives in sound shape the biological infrastructure of the auditory system, and the strength of the auditory system impacts on cognitive function generally, communication and literacy skills specifically.

A publication issued by Brainvolts in 2016 (bit.ly/2wrOodM) offers a review of studies of music training that employ a biological approach to reveal the integrity of sound processing in the brain. Together, these experiments show that music works in synergistic partnerships with language and literacy skills, and demonstrate that regular music practise refines the auditory processing system like no other activity, with literacy skills (language, reading, sound-to-meaning connections) contingent on the strength of the auditory processing system.

When we first learn to read, it is not our visual, but our auditory abilities that determine how easily we transform the letters on the page into words. It is the skill of the ear, not the eye, that determines how easily a child learns to write and spell. Specifically, it is the skill of fine-tuned discrimination of individual sounds. There are two proven ways to boost this skill: training in phonics and training in music. Phonics is most commonly used in schools. The UK National Literacy Strategy – Letters and Sounds Phase 1 (3–5 years) recognised the important part music plays in developing strong foundations for phonics and recommended that music should be part of everyday activities in the preschool year. The latest research has established that regular music practice is just as effective, if not more effective, than training in phonics when it comes to reading success ('Reading skills can be predicted based on auditory abilities').¹



Early years music training for practitioners and parents to boost school-ready literacy

With all this evidence, it is surely time to include early years music intervention programmes as part of any strategy that aims to narrow the school-ready literacy gap. The great news is that you don't need to be a musician to lead effective music-making activities to boost auditory processing skills in early years. You just need the training and resources – and the confidence will come with practice. Even better news is that music workshops provide a great way to engage parents and encourage home practice. At the recent AFA Conference, early parental involvement was seen as key to solving the school-ready attainment gap problem. So evidence would suggest that combining music practice and parental engagement would indeed contribute to narrowing the gap.

Boogie Mites write songs and compile music programmes with the aim of enabling practitioners and parents to access engaging, creative music resources to support learning in the EYFS. Boogie Mites Tutor team deliver 6-week parent education courses under Local Authority Contracts in Surrey and Hampshire for working with disadvantaged families. We work with approximately 1000 parents under these contracts each year. The objective is to empower parents to use music to boost delayed development. In 2013 Chichester University Early Years Researcher, Nikki Fairchild, conducted a study of these courses to evaluate the impact. The findings showed impact on parental engagement, home practice and confidence, with benefits on children's development perceived as most significant for children with SEN or EAL.

Download the Full and Executive Reports from the Boogie Mites website (boogiemites.co.uk/about/#rbase).

Findings showed differences in four main areas:

- 1. Parental Knowledge and Involvement** – Boogie Mites sessions encouraged parents to make the links between the EYFS (DfE2012) prime areas of learning and the use of music, both at the session and in the home. The fact that parents were practising and using their skills at home indicated music becoming embedded into home practice, with the attendant benefits for increased parental involvement in their child's development across the three prime areas.
- 2. Parent and Child Confidence** – Parents reported that they felt more confident to use music with their children at home and as part of everyday life. Whereas previously they said they used music for recreational purposes or in the background, they commented on how much of a primary role it now played in their lives. The parents' increased confidence had a knock-on-effect on their child's confidence.
- 3. Creating a Safe Space for Participation** – The facilitation of the Boogie Mites programmes by early years music leaders trained to work with both target and inclusive groups was viewed very positively by all parents, as they encouraged participation and allowed experimentation in a safe environment. They were the mediators between the settings/schools and home and supported the development of home practice. The positive attitudes of the facilitators encouraged and supported the parents. This provided an opportunity which promoted the group to work together, supporting the transition of parents from working alone to working as a group. This transition allowed parents the chance to gain a wider support network over and above the music activities on offer (perfect for transition from pre-school to school).
- 4. Practitioner Confidence and Sharing Best Practice** – A significant number of practitioners said the Boogie Mites training gave them confidence to implement the music programmes in their settings. After completing their training, there was almost an explosion of enthusiasm, eagerness and willingness to implement what they had learned back into their setting. Not only that, but they were inspired enough to share what they learned with the rest of their colleagues.





Boogie Mites have trained thousands of early years parents and practitioners all over the UK and work with many schools to support the transition process throughout the pre-school year each year. We receive excellent feedback regarding the impact on practitioner and parent knowledge, confidence and regularity of practice. More research needs to be undertaken to evaluate the impact on pre-school children's development. The factors that determine what makes the music training effective also need to be evaluated.

US studies that provide evidence of the link between auditory processing skills, socio-economic status (SES) and academic achievement:

Auditory processing skills, known to be important for language development, may contribute to the link between SES and academic achievement.² Musical training is an avenue of enrichment that may counteract some of the auditory deprivation endemic to low SES environments. A number of studies have revealed that children undergoing music training have stronger cognitive abilities, vocabulary, rhythm perception and production (linked to reading skill), perception of vocal pitch, and perception of speech in noisy backgrounds than non-musician children.³ Additionally, musical practice can strengthen children's auditory encoding of speech,⁴ auditory discrimination and attention,⁵ and lead to structural changes in auditory cortical areas.⁶ The auditory benefits of music training have direct implications for language skills and academic achievement;⁷ accordingly, music may serve as an effective training tool for children with learning and attention impairments.⁸

Brainvolts laboratory has shown that participation in music training through Harmony Project can reinforce literacy skills for children in primary/secondary education, enhance the perception of speech in background noise, and strengthen the neural encoding of speech sounds in children from low SES backgrounds.⁹

To find out more about Boogie Mites, email sue@boogiemites.co.uk or visit boogiemites.co.uk. You can download a taster song and ideas for effective early years musical activities from the website home page.

Sue Newman is a Director of Boogie Mites Music Programmes. Boogie Mites write songs and compile music programmes to support learning in the EYFS. Our mission is to support early years practitioners and families to access creative, engaging resources, to give them the knowledge, confidence and the motivation to harness the power of active music-making in early years.

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