# MUSIC LEARNING HELPS LITERACY



# What connects music learning and language, reading and literacy skills?

A large body of rigorous and validated research points to a strong connection between music education and language development. This line of inquiry emerged from the observation that musically trained children tended to perform better in standardised tests on language,<sup>1 2</sup> acquire language<sup>3</sup> including words, syntax and prosody more effectively and earlier, and utilise language more effectively.<sup>4</sup>

Research studies have now found that this is possibly due to the overlapping of brain regions recruited during music and language processing.<sup>5 6</sup> Further research has found that music education trains the auditory processing network to make meaning from sound with greater accuracy and reliability.<sup>7</sup>

Music education has been found to have significant measurable impact on reading readiness<sup>8</sup> and reading skills.<sup>9</sup> Research in the field of neuroscience and music has indicated that dyslexia is primarily a disorder within the auditory processing network and that music education is an effective learning activity to correct this language processing disorder.<sup>10</sup>

One specific area of research into music education and language learning has been with children living in disadvantaged circumstances. Music education interventions lasting 2 or more years have been found to have a far greater impact on these students, as their literacy development delays have been found to be caused in large part by the underdevelopment of their auditory processing systems. <sup>11</sup> Across US, UK and Australian based studies, music education interventions have raised disadvantaged students' literacy levels from well below benchmark standards to achieving at standard within 2 years.

The connections between music learning and language acquisition through to highly developed literacy was one of the first breakthroughs in the neuromusical research field. This is because the overlapping neural network was identified very early in the exploration of the field, during the late 1990s and early 2000s. There are now enough randomised, longitudinal and replicated studies to confidently point to a causal relationship between music learning and language and literacy enhancement.

## Australian-based research<sup>1</sup> has found that music learning improves:



Language Acquisition At least 1 year gain



Language Syntax At least 1 year gain



**Reading Skills** Up to 3 year gain in auditory processing



**Listening Skills** Up to 2 year gain

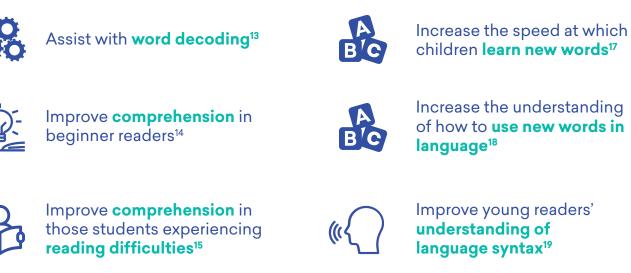


Attention Skills Up to 2 year gain for pre teens

### Summary of research findings **Music Learning and Literacy**



The cognitive processes involved in learning to read and play music and learning to say and read words use overlapping neural mechanisms in a child's brain.<sup>12</sup> Music learning improves cognitive and auditory skills that:





Improve **phonological** awareness for specific language sounds more than direct phonological training<sup>16</sup> Improve young readers'



Counteract the negative effects of low SES on children's literacy development.<sup>20</sup>

The length of music training has a significant impact on these findings: the longer children learn, the better. The positive effects of improved auditory processing on reading skills are most significant when formal music learning is commenced between the ages of 4 and 9 years of age.

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