



# Music Matters: The Importance of Music Education

## Music Matters: The Importance of Music Education

Being exposed to music from a young age, particularly within a school or nursery setting, has been proven to encourage team work, self confidence, empathy, improved communication skills and intellectual curiosity<sup>1</sup>, and individuals who have had the opportunity to develop these skills and behaviours in early life therefore often turn out to be happier, healthier and higher achieving adults than those who do not. For these reasons it would seem fair to say that encouraging music education programs in schools and providing young children with access to musical instruments would have far reaching benefits not just for the individual but for society as a whole.

Mary Luehrisen, executive director of the National Association of Music Merchants (NAMM) Foundation<sup>2</sup>, states that “*a music-rich experience*”.... brings “*...a very serious benefit to children as they progress into more formal learning*”<sup>3</sup> and Luehrisen’s observation is supported by numerous studies which have concluded that being exposed to music and playing musical instruments impacts positively on a child’s social, linguistic and behavioural development.

Introducing musical studies in early childhood also fosters a positive attitude towards learning and promotes craftsmanship as students learn to desire good work over mediocre work. This then translates into other aspects of their academic work and to their lives in general encouraging ambition and self improvement.

### The benefits of music for social and emotional development and improved self confidence

One of the most obvious benefits of musical training for children is the positive impact that it has on a child’s self-confidence and social development. It is evident that children who participate in musical training are more aware of others and have a greater appreciation for other people<sup>4</sup>. This is because when children play musical instruments alongside others they learn to support each other and work towards the same common goal. Playing in an orchestra, band or ensemble requires commitment and practice and so children are trained in teamworking and self-discipline in addition to musical skill. As a result, children who play musical instruments are better team players and have a heightened sense of responsibility towards others.

Performing a piece in front of an audience also teaches young people to take risks and conquer their fears which can help them to become more successful in later life. Anxiety occurs frequently in life and it can be a positive thing if an individual learns how to deal with these feelings constructively. Risk taking is essential for self development and it has been proven that learning how to take risks in a safe environment such as within a musical performance for example can help to prevent future risky behavioural choices, such as teenage drug abuse<sup>5</sup>.

The skills and qualities that music training facilitate are essential in building a child’s sense of self-accomplishment and self-assurance and that is why outdoor musical instruments such as those produced by Percussion Play are so well suited to a school or nursery setting. It is widely observed that when parents and teachers encourage a child to play musical instruments the child gains pride and confidence in themselves. Self-confidence is strongly related to the development of social and interpersonal skills and an early engagement with music can therefore help to develop positive character traits which will stay with the child for the rest of their life.

In his paper ‘*Self-Efficacy and Academic Motivation*’<sup>6</sup> (2011), the educational psychologist Dale H Schunk notes that there is a strong correlation between improved self-confidence and improved overall school performance. It is thought that a child who experiences feelings of accomplishment early in life becomes more confident in their abilities and is therefore more likely to ask and answer questions in class and to realise that hard work and regular practice reap rewards. This attitude towards learning and self-improvement leads to academic success and is the reason why individuals who have played musical instruments in childhood very often become high achieving adults<sup>7</sup>.

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<sup>1</sup> Frontiers in Neuroscience Journal (online)

<sup>2</sup> Not-for-profit association that promotes the benefits of making music

<sup>3</sup> Luehrisen in Brown ‘*The Benefits of Music Education*’ PBS Parents’ Website

<sup>4</sup> National Association for Music Education ‘*Twenty Important Benefits of Music in Our Schools*’ (2014)

<sup>5</sup> Carolyn Phillips ‘*Twelve Benefits of Music Education*’ Children’s Music Workshop website

<sup>6</sup> Dale H. Schunk (2011) *Educational Psychologist*, 26:3-4, 207-231

<sup>7</sup> Joanne Lipman ‘*Is Music the Key to Success?*’ The New York Times online (2013)

In 2001 a study by Clift and Hancox<sup>8</sup> proved beyond doubt that music is hugely beneficial for our psychological well-being and reduces stress at the same time as boosting the immune system. Other studies have found that stress free students demonstrate better attention in class and achieve better results<sup>9</sup> and so it is to be inferred that providing children with music education in schools will benefit them in the academic rigours of later life.

Playing musical instruments also accelerates the emotional development of children because children learn how to communicate with others and through playing different musical pieces they become familiar with other cultures and cultural practices. This means that children who play musical instruments develop the ability to show compassion and empathy towards others and to have respect for other cultures<sup>10</sup>.

## The benefits of music for developing intelligence

A 2004 study<sup>11</sup> which was conducted by E Glenn Schellenberg at the University of Toronto found that six year olds who were given weekly voice and piano lessons in school for a year increased their IQ by an average of 3 points more than children who were not given music lessons. Evidence suggests that this is because the brain of a musician (even a very young one) works differently to the brain of a non-musician<sup>12</sup>. In fact, A 2009 study<sup>13</sup> which investigated brain imaging in children concluded that there were 'structural brain differences<sup>14</sup>' between children who had attended weekly music lessons and those who had not.

It has been demonstrated<sup>15</sup> that some important regions of the brain such as the frontal lobes are larger in a musically trained individual than in those who have not been musically trained and Dr. Eric Rasmussen<sup>16</sup> states that;

*"There's some good neuroscience research that children involved in music have larger growth of neural activity than people not in music training. When you're a musician and you're playing an instrument, you have to be using more of your brain<sup>17</sup>"*

Studies suggest that music lessons can have "*wide ranging intellectual benefits<sup>18</sup>*" and in the journal *Behavioural Brain Research*<sup>19</sup> Leonid Perlovsky of Harvard University finds that students who studied music past the initial two years of compulsory lessons that their schools provided, achieved better grades than students who studied other arts subjects in place of music.

Perlovsky reported that;

*"Each year the mean grades of the students that had chosen a music course in their curriculum were higher than those of the students that had not chosen music as an optional course."*

In addition to better performance results in assessments, music training has also been proven to aid basic memory recall. Kyle Pruett, the clinical professor of child psychiatry at Yale School of Medicine states that;

*"People who have had formal musical training tend to be pretty good at remembering verbal information stored in memory<sup>20</sup>".*

Memory recall is developed because children studying music are constantly using their memory to perform. Learning songs and repeating musical phrases or refrains can also help young children to remember information which has a proven benefit for the development of recall and memory.

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<sup>8</sup> Clift and Hancox 'The perceived benefits of singing: findings from preliminary surveys of a university college choral society' (2001)

<sup>9</sup> Audioreputation 'Ten Important Benefits of Music in Our Schools' (2017)

<sup>10</sup> Carolyn Phillips 'Twelve Benefits of Music Education' Children's Music Workshop website

<sup>11</sup> G Schellenberg 'Music Lessons Enhance IQ' (2004) Psychological Science

<sup>12</sup> *ibid*

<sup>13</sup> Hyde et al *The Neurosciences and Music III: Disorders and Plasticity* (2009) 1169: 182-186 New York Academy of Sciences.

<sup>14</sup> *ibid*

<sup>15</sup> P Bermudez et al, 'Neuroanatomical Correlates of Musicianship as Revealed by Cortical Thickness and Voxel Based Morphometry' Cerebral Cortex (2009)

<sup>16</sup> Chair of the Early Childhood Music Department at the Peabody Preparatory of The Johns Hopkins University

<sup>17</sup> Rasmussen in Brown 'The Benefits of Music Education' PBS Parents' Website

<sup>18</sup> Tom Jacobs 'New Evidence Links Music Education, Higher Test Scores' Pacific Standard website (2013)

<sup>19</sup> [Perlovsky L](#) et al 'Mozart Effect, Cognitive Dissonance and The Pleasure of Music' (2013)

<sup>20</sup> K Pruett 'Me, Myself and I: How Children Build Their Sense of Self 18-36 Months' (1999)

## The benefits of music for language and literacy

The links between music and language development are well known and many studies have concluded that children who have early musical training will develop the areas of the brain that are related to language and reasoning<sup>21</sup>. Research conclusively proves that playing musical instruments improves both phonetic and language skills and that even short term engagement with musical training has a significant impact on the development of the neurological paths and processes associated with understanding speech and sounds.

In a research paper entitled '*Music and Dyslexia: A New Musical Training Method to Improve Reading and Related Disorders*'<sup>22</sup> Michel Habib and his team conclude that playing musical instruments can be;

*"beneficial with children with dyslexia and can lead to improvement in reading and reading comprehension"*<sup>23</sup>.

One reason why music is so beneficial for language development, even in children with dyslexia, is because brain development continues for many years after birth and so any activity which stimulates whole brain engagement can actually influence the brain's wiring. Music in particular has been proven to physically develop the language processing areas of the brain which is why children who play musical instruments demonstrate improved communication skills.

Mary Luehrisen states that music education helps children to decode sounds and words and that playing musical instruments is especially beneficial to children between the ages of two and nine<sup>24</sup>. She states that *"growing up in a musically rich environment is often advantageous for children's language development"*<sup>25</sup> and that any innate capacities for developing language should be *"reinforced, practiced and celebrated"*<sup>26</sup> through formal music training.

## The benefits of playing musical instruments for fine and gross motor skills

Playing outdoor musical instruments such as the ones produced by Percussion Play enables children to improve their gross motor skills because they are encouraged to use full body movements as they jump, dance and run from one instrument to another within the musical park. Playing outdoor musical instruments also encourages the use of fine motor skills and improves hand-eye coordination as the child has to hold a beater or mallet and hit the instrument in a specific place to make a sound.

When children play musical instruments they engage their ears and eyes as well as both groups of large and small muscles. Making music also involves more than just the voice and fingers as posture, breathing and coordination also play a part. For these reasons playing musical instruments, particularly ones in an outdoor setting can lead to very positive physical health benefits.

## The benefits of playing musical instruments for spatial-temporal awareness

Causal links have been identified between playing musical instruments and enhanced spatial awareness. This means that understanding music can *"help children visualise various elements that should go together, like they would do when solving a math problem"*<sup>27</sup>. Spatial intelligence is the ability to form an accurate mental picture of the world and is the kind of intelligence associated with the advanced problem solving evident in areas such as architecture, engineering, maths, art, gaming and in working with computers. Indeed, findings from the Center for Neurobiology of Learning and Memory at the University of California indicate that continuous exposure to music can improve a child's understanding of geometry, engineering, computer programming, and every other activity that requires good spatial reasoning<sup>28</sup>.

## The benefits of music for improved test scores

In 2007, Christopher Johnson, professor of music education and music therapy at the University of Kansas, published findings

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<sup>21</sup> Miendlarzewska and Trost '*How Music Training Affects Cognitive Development: Rhythm, Reward and Other Modulating Variables*' (2014)

<sup>22</sup> Habib et al (2016)

<sup>23</sup> Audioreputation '*Ten Important Benefits of Music in Our Schools*' (2017)

<sup>24</sup> Luherisen in Brown '*The Benefits of Music Education*' PBS Parents' Website

<sup>25</sup> *ibid*

<sup>26</sup> *ibid*

<sup>27</sup> Laura Lewis Brown '*The Benefits of Music Education*' PBS Parents' Website

<sup>28</sup> Audioreputation '*Ten Important Benefits of Music in Our Schools*' (2017)

from a study<sup>29</sup> which revealed that children in elementary schools (age 5 -10) who received very good music education scored significantly higher grades in English and maths tests (22 per cent higher in English and 20 per cent higher in maths) than children with low quality music programmes, even after he took into account any social disparity between the groups. Johnson concluded that the focus required in learning to play a musical instrument is comparable to the focus needed to perform well in standardised assessments and that therefore students who learn a musical instrument are likely to do better in academic tests.

In the UK researchers have found that children who have been educated in music performance or appreciation score 63 points higher in verbal skills and 44 points higher in maths skills in SATs tests<sup>30</sup>.

## The future of music in education

This research clearly indicates that there is a real benefit in providing school children with some form of musical education. Not only does musical training make for happier, healthier, more confident and higher achieving adults, it also provides us with the musicians of the future. Music therapy is becoming more and more integral in the treatment of social, mental and physical disorders and if we want to continue helping people in a holistic and drug free way then we will need trained musicians to do so.

Sadly, however, the place of music in formal education world-wide is under threat and the UK in particular has recently seen huge cuts to music and arts based education in schools. We know that outdoor musical instruments such as the ones produced by Percussion Play are well suited to educational settings and there have been numerous case studies<sup>31</sup> that demonstrate the benefit that these instruments can have once they are in situ. It would therefore seem sensible to provide access to these types of instruments within educational and community settings to combat the reduced access to musical education that too many children are currently experiencing.

The influence of music education has been shown to have a positive impact on more areas of life than just in the classroom and children who are lucky enough to have musical training are more likely to be successful outside of school. They will find it easier to make friends, to resolve life's difficulties, to think with more creativity and will have higher self esteem. Or, as Dr Rasmussen concludes;

*"The horizons are higher when you are involved in music"<sup>32</sup>*

## The Power of Percussion Play

The outdoor musical instruments created by Percussion Play are diverse and accessible to everyone within the community and make perfect additions to any setting. Percussion Play's musical instruments can support a child's musical education and encourages both individual and group participation. Our case studies clearly demonstrate the huge positive impact that playing these instruments has on the children who have the opportunity to engage with them, and Percussion Play instruments have been successfully installed in play areas, schools, children's hospitals and children's centres all over the world.

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<sup>29</sup> C Johnson 'Examination of Relationships between Participation in School Music Programs of Differing Quality and Standardised Test Results' Journal of Research in Music Education (2009)

<sup>30</sup> National Association for Music Education 'Twenty Important Benefits of Music in Our Schools' (2014)

<sup>31</sup> Casestudies Percussion Play website

<sup>32</sup> Rasmussen in Brown 'The Benefits of Music Education' PBS Parents' Website

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