

MUSIC EDUCATION BENEFITS EVERY CHILD

EVIDENCE FROM
NEUROMUSICAL RESEARCH

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MUSIC LEARNING IS FOR EVERY CHILD NOT JUST THOSE WHO ARE INTERESTED

There is a commonly held belief that learning music should only be for those students who are identified as **talented or interested**. Neuromusical research has shown that music learning **can benefit all students** in terms of cognitive development.

Our auditory (sound) processing network has been found to be our **largest information-gathering sense**. Our auditory processing network is our first active sensory network at birth, it never turns off even when we sleep, and it is often overlooked in educational settings.

The **only learning area** that develops our auditory processing network to a high level is music. This is why so many skills that children learn through music are transferable to all other learning areas.

There is also a commonly held belief that **music should only be learned by those who will excel at it**. Talent as we know it may not be an on-and-off switch, rather music learning looks and feels easier to some students because of their genetic predispositions.

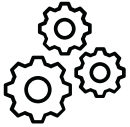
**MUSIC LEARNING, ESPECIALLY BETWEEN
3-12 YEARS OF AGE, SUPPORTS THE NEURAL
FOUNDATIONS FOR ALL LEARNING.**



MUSIC LEARNING HELPS LITERACY & NUMERACY

Music learning has been found to improve language learning and literacy as well as numeracy processing.

Literacy



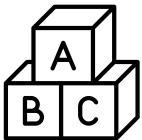
DECODING

Music learning assists with word decoding



LANGUAGE SYNTAX

Music learning improves young readers understanding of language syntax



LEARN NEW WORDS

Music learning increases the speed at which children learn new words



DISADVANTAGED

Music learning counteracts the negative effects of low SES on children's literacy development



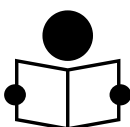
PHONOLOGICAL AWARENESS

Music learning improves phonological awareness for specific language sounds more than direct phonological training



COMPREHENSION

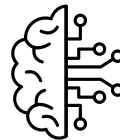
Music learning improves comprehension in beginner readers



READING DIFFICULTIES

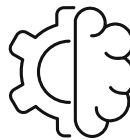
Music learning improves comprehension in those students experiencing reading difficulties

Numeracy



COGNITIVE CONTROL

Music learning improves cognitive control



NUMERICAL COGNITION

Music learning improves numerical cognition



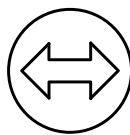
DIVERGENT THINKING

Music learning enhances divergent thinking



ANXIETY

Music learning reduces mathematical anxiety symptoms



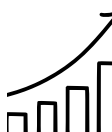
TASK SWITCHING

Music learning enhances tasks switching efficiently



COGNITIVE PROCESSING

Music learning increases cognitive processing speeds



IQ SCORES

Music learning increases IQ scores by an average of 7pts

MUSIC LEARNING HELPS EXECUTIVE FUNCTION & SOCIAL SKILLS

Music learning has been found to improve learning habits as well as social skills and wellbeing.

Executive Function



WORKING MEMORY

Music learning improves our memory for procedure



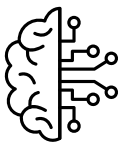
FOCUSED ATTENTION

Music learning improves young readers attention for language learning



DIVERGENT THINKING

Music learning develops creative and innovative thinking patterns



INHIBITORY CONTROL

Music learning enhances the ability to stay on task and not get distracted



COGNITIVE SPEEDS

Music learning increases cognitive speeds and brain synchronicity



VERBAL MEMORY

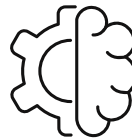
Music learning improves memory for spoken instructions and directions



ATTENTION STAMINA

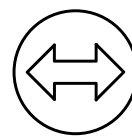
Music learning increases students ability to maintain attention

Social Skills & Wellbeing



PROSOCIAL BEHAVIOURS

Music learning improves empathy and kindness



SOCIAL ENGAGEMENT

Music learning promotes greater levels of social engagement through life



MANAGE DEPRESSION

Music learning give greater capacity to manage depressive periods



TRUST & RESPECT

Music learning assists the development of trust and respect in social groups



WELLBEING

Music learning improves psychological wellbeing and self-regulation



DECISION MAKING SKILLS

Music learning improves personal decision making skills



BRAIN HEALTH

Music learning improves immune and brain health

MUSICALLY TRAINED STUDENTS PERFORM BETTER ACADEMICALLY

There are two reasons why musically trained students seem to perform better academically



Every baby inherits genetic predispositions from their parents and is also shaped by various prenatal factors.



Children develop skills all throughout life. Music learning can enhance both high and low-level auditory processing.

Music learning promotes the development of improved neural functioning, and this transfers across to all learning, and is evident in higher academic performance.

Music learning is a highly cognitively challenging learning experience, it teaches persistence and resilience for many years.

It promotes higher levels of neural connectivity, synchronicity and consistency and requires exceptional brain and body coordination.

MUSICALLY TRAINED CHILDREN USE LESS COGNITIVE ENERGY AND UTILISE MORE DIVERSE THINKING TO COMPLETE A TASK.



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IS ONE INSTRUMENT BETTER FOR MUSICAL AND COGNITIVE DEVELOPMENT?

Yes and no!

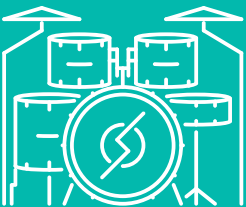
Some research has been done to compare the impacts of learning different instruments on cognitive development. However, there is not yet definitive research that points to an instrument that is better for cognitive development.

However we do know that...



LEARNING PIANO IS A BRAIN WORKOUT

Research found that those students who learned harmony instruments performed better on cognitive tests



LEARNING DRUMKIT IS A BRAIN WORKOUT

Drummers have been found to thicken fibers connecting the front half of their brain's hemispheric



LEARNING AN INSTRUMENT IN A GROUP

Group based music lesson have a positive impact on language development and possibly executive functions in childhood

FURTHER NEUROMUSICAL RESEARCH TO EXPLORE

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