

TALKING TO LEADERS

The Talking to Leaders bundle is filled with research, tools, and information. These tools can either be shared with leaders to enhance their knowledge or used by teachers to increase their own confidence and effectiveness in communicating with leaders.

DEVELOP YOURSELF

These tools have been designed to facilitate your learning and understanding of the research on music learning and brain development.

Discover practical ways to apply the research directly to your teaching.

SHARE DIRECTLY WITH LEADERS

These tools have been exclusively tailored to be shared directly with school and/or department leaders.

Use these resources as a tool to connect with leaders, gain their support for the work that you do and help them understand the powerful benefits of music learning.



WHAT'S INCLUDED?

TALKING TO LEADERS BUNDLE

\$50AUD

**8 x Social media ready
Research bites**

**3 x Shareable Music
Learning Infographics**

- Is high school too late to benefit from music learning?
- What if every child could keep a beat?
- Music learning improves academic performance

**1 x Easy to share research
Ebook**

- Music education benefits every child

**8 x News Articles that you
can share at the click of a
button**

**6 x Actionable research
articles with Teaching
Reflections**

- Skill vs Benefit, Need vs Deserve
- Three arguments for music education
- Which music & reading model is best in schools?
- Should students do music or sport?
- Is high school too late to benefit from music learning?
- Why does music learning improve grades in Maths, English and Science?

**Click here to see the full
collection of BBB Bundles!**

[Yes please!](#)

TALKING TO LEADERS

BUNDLE

8 X SOCIAL MEDIA READY RESEARCH BITES

These bite-sized gems of information are tailored to enhance your emails, newsletters, and school presentations, making it effortless for leaders to grasp the advantages of music education.

Easy to add to newsletters, emails and social media

[See full collection](#)

An extensive study has found that students who studied music in primary school and into high school were almost one year ahead of their non-musically trained peers in their Maths, Science and English performance.

Guhn, M., Emerson, S. D., & Gouzouasis, P. (2020). A population-level analysis of associations between school music participation and academic achievement. *Journal of Educational Psychology*, 112(2), 308.



"At age 11 students receiving instrumental tuition had significantly higher scores in English, reading, writing and mathematics. This was also the case at age 16 for English, English literature and mathematics."

Baker, D., Hallam, S., & Rogers, K. (2023). Does learning to play an instrument have an impact on change in attainment from age 11 to 16? *British Journal of Music Education*.



"Engaging young children and adults in music education is viewed as vital for the enhancement of mental health, cognitive performance and thus academic excellence."

Harrell, S., & Cooper, J. (2022). Differentiated music education performance in students with mental health conditions. *Journal of Music Therapy*.



A child's ability to synchronize to a beat is mirrored in their preliteracy skills and robustness of their auditory midbrain response to speech syllables

Bonczarska, S., Huang, S., White-Schwach, T., Krizan, J., Nicol, T., & Kraus, N. (2020). Rhythm, reading, and sound processing in the brain in preschool children. *npj Science of Learning*.



Ready to print and hand out to your community

[Click for more](#)

1 X EASY TO SHARE RESEARCH EBOOK

Present complex research in a reader-friendly format, helping you grasp the profound connection between music education and brain development.

MUSIC EDUCATION BENEFITS EVERY CHILD

EVIDENCE FROM NEUROMUSICAL RESEARCH

Dr Anita Collins
Neuromusical Educator
Founder of Bigger Better Brains



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 hemisphere

LEARNING AN INSTRUMENT IN A GROUP

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

Find out more at biggerbetterbrains.com

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.

Find out more at biggerbetterbrains.com

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.

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3 X SHAREABLE MUSIC LEARNING INFOGRAPHICS

Infographics are powerful communication tools that simplify complex information, engage audiences, and are highly shareable, making them a versatile tool.

Amplify your program booklet or add into your concert invitation

[See full collection](#)



Great for A4 printing

IS HIGH SCHOOL TOO LATE TO BENEFIT FROM MUSIC LEARNING?

Research between 0-7 years is extensive as this period of development is a sensitive period for brain development

Music learning has been used to understand brain development as it has been found to change the way the brain functions and structures develop

Music learning is beneficial for brain development and health throughout our lives, but the benefits are different as we develop.

A study found that in-school music training accelerates neurodevelopment and improves literacy skills, suggesting enrichment is important during the teenage years.

LEARN MORE AT BIGGERBETTERBRAINS.COM

Sala, G., & Gobet, F. (2017). When the music's over. Does music skill transfer to children's and young adolescents' cognitive and academic skills? A meta-analysis. Educational Research Review. Tierney, A. T., Krizman, J., & Kraus, N. (2015). Music training alters the course of adolescent auditory development. Proceedings of the National Academy of Sciences.

What if every child could keep a beat?

HOW FOCUSING ON RHYTHM SKILLS CAN IMPROVE READING SKILLS

REPEAT A RHYTHM BACK, REPLICATE A GIVEN TEMPO, MAINTAIN BEAT AFTER 1 REPEAT, INITIATE A BEAT, IDENTIFY RHYTHM CHANGES

Beat synchronisation is an external representation of a level of internal cognitive connectivity.

Put another way, we can now assess the level of cognitive connectivity in a young child through their ability to complete beat synchronisation tasks.

LEARN MORE AT BIGGERBETTERBRAINS.COM

Sala, G., & Gobet, F. (2017). When the music's over. Does music skill transfer to children's and young adolescents' cognitive and academic skills? A meta-analysis. Educational Research Review.

TALKING TO LEADERS

6 X PROFESSIONAL READINGS WITH TEACHING REFLECTIONS

Authored by Dr. Anita Collins, these professional readings provide a comprehensive analysis of research findings and offer practical strategies for incorporating them into your teaching practices.

Discover how you can apply the research to your teaching

[Click for more](#)

Three arguments for music education

A short article by Professor Nina Kraus and Dr Travis White-Schwoch, from the Brainvolts Lab at Northwestern University USA, was released in the July/Aug edition of American Scientist. The title said it all – The Argument for Music Education. They did, in fact, present three arguments for music education, but favoured one as providing the most vital points about the importance of music education.

It is a great read, and I appreciated their expert handling of the issue that, by its very nature, research wants to control as many variable or intangible elements as possible, but "every layer of control added to experiments with music education can obscure the intangible that make music music." They also illuminated the real-world experience of research into music education by nesting their ideas in the story of The Harmony of America. Here is a project that, on their first data gathering experience, found learning had little to no impact on brain development. Yet what they needed was and when they returned a year later, they found evidence to support the idea that training sets up children's brains to make them better learners by enhancing both processing in the brain and cognition."

While I enjoyed the storytelling and the deft way Kraus and White-Schwoch outline issues of researching music education, I was intrigued when I got to the final page they started outlining the three arguments, as they see them, for music education a summary of the three arguments.

The indirect, incentive and intangible arguments for music education

The first argument described by Kraus & White-Schwoch is the **indirect argument** is that "music boosts brain and cognitive function that is important for learning add to this definition a few details, music [learning] boosts brain and cognitive that is important for [non-musical] learning.

The second argument described by Kraus & White-Schwoch, the **incentive argument** is similar in many ways to the indirect argument but goes straight to measurable metrics related to the non-musical learning outcomes. These are metrics such as graduation rates, college admission rates and standardised test results.

The third argument described by Kraus & White-Schwoch is the **intangible argument** which "proposes that the deepest benefits of music education [which] are characterized by a set of data points and parameters. Such benefits include the focus and discipline that come from years of regular practice, the social engagement and satisfaction that come from making music in an ensemble, the friendship that results from staying together after school for a rehearsal, and the confidence that develops from performing on stage."

Which argument is better?

Whether it be an implicit or explicit judgement, the intangible argument often comes up as the better and/or pure argument for music education. And it may well be that we often get quietly reminded that music is good for music's sake, and all the benefits of skills or benefits are cheapening or lessening the true value of music education. It doesn't ring true to have only one argument for anything. Indeed, enrichment of any kind will have more than one reason to do them. What matters to

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Should students do music or sport?

Should students do music or sport? I wish I was asked this question more often. Why? Because it is a straightforward question. Which activity has more merit, benefit or impact on every student – music or sport?

As a music teacher, you may have already shaken your head and said, "sport". This might not be what you personally believe, but it may be the most likely answer. With limited time in the school day to give to an activity, the benefits of sport may well outweigh the benefits of music learning.

The reasons could be social, cultural, resource-based or historical, but in most schools, sport and music are perceived, timetabled and esteemed very differently.

The either/or approach

The first question for me is why does it need to be an either/or proposition. Why should we make students choose, or choose for them, between music learning and sports learning? The answer is, a lot of the time, we don't make them decide at the start of their schooling experience. They get to do both music and sports learning as a regular part of their everyday education.

Learning music involves all the aspects that account for an effective training of executive functions.

At what age does it become an either/or proposition? Or is it at what level of either sport or music? Is the choice between music and sport influenced more by resources, cost or availability of experienced and qualified staff or more by underlying values and school or personal status? Or is it all about choice – students who like music should do music and students who like sport should do sport? And what happens to students that like music and sport?

I often find the more questions I can pose about a given situation, the more complex that situation is. This is because I have to first acknowledge my own natural bias. I am a music teacher, and I think all students should learn music, and if they get to learn think all students should learn a sport, and if they get music on the side, then that is just a bonus.

Did you nod your head at the sports coach statement but feel a bit uncomfortable about the music teachers statement? Should music learning be prized above sport, or is it that we, as music teachers, think and feel that the scales are heavily weighted against music learning favouring sport?

Whenever I feel like something is very one-sided, I try to flip it around and see it from the opposite perspective. From an educational perspective, do I really think that my students

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