

Why Music Education Actually Matters – National Asso

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Posted on August 1, 2014 in [NAfME News](#)

“We favor the inclusion of music in the curriculum on an equality with other basic subjects. We believe that with the growing complexity of civilization, more attention must be given to the arts, and that music offers possibilities as yet but partially realized for developing an appreciation of the finer things of life.”

—First Resolution of the Dallas Meeting of The Department of Superintendence, 1927



Public music education has seen better days.

In 2001, the No Child Left Behind Act identified music as a ‘core subject’—just not one worthy of testing. This meant that schools struggling to improve math and reading scores in order to retain funding found that their arts programs were the easiest ones to divert resources from, or to cut altogether.

A 2012 report from the U.S Department of Education optimistically declared that “In the 2009-10 school year, music education was almost universally available in the nation’s public elementary schools”. But buried in that DOE report were huge differences in the availability of music education between large and small schools, as well as significant percentages of teachers who rated their time and resources as either “not at all adequate” or “minimally adequate”.

Lara Pellegrinelli of [NPR](#) writes of the report: “*Even if one simply uses the DOE’s enrollment numbers to calculate the number of students in schools without music instruction at all, that’s over 2.1 million children across the country — likely a conservative estimate.*”

This alone is enough to make most music lovers shake their heads, but there remains a central question that is often ignored in these stories and studies: “*Why?*” As in: “*Why do we need music education anyway?*”

There are some organizations that try to answer this. One video produced by [VH1’s Save the Music Foundation](#) features adults speaking about music education in grand and sentimental terms. But blink and you’ll miss the children providing concrete reasons why music improves their lives:

"Music is challenging."

"With an instrument, you have to be very focused, and that's the same with schoolwork."

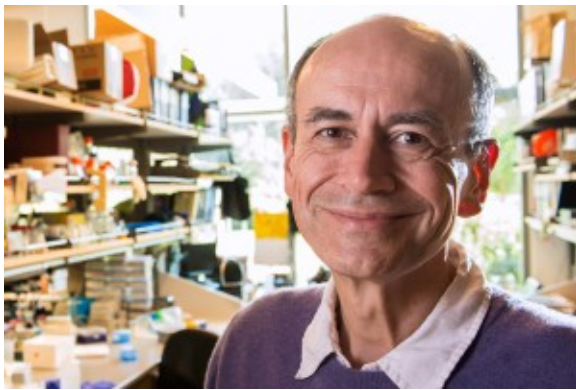
"Drums just make me concentrate."

There is science to support what these kids are saying, but that's not usually the story we lead with in our crusades to save public music education.

Words like "passion" and "soul" may make for more fun and satisfying copy, but if lawmakers and educators are looking for facts and figures, perhaps we should just tell them the truth:

That in order to improve the reading, science, and math skills of American children, and to improve their overall chances in life, we should be providing them with *more* music education, not less of it.

Trust Him, He's a (actual) Scientist



To earn the Nobel Prize for Medicine and Physiology, you have got to have some great teachers along the way. In [an interview with The Lancet](#), 2010 co-recipient of the award, Thomas Südhof, named his most influential teacher:

"My bassoon teacher, Herbert Tauscher, who taught me that the only way to do something right is to practice and listen and practice and listen, hours, and hours, and hours."

Südhof later elaborated in an interview for The International Double Reed Society's own quarterly magazine:

"[I learned] the value of disciplined study, or repetitive learning, for creativity. You cannot be creative on a bassoon if you don't know it inside out, and you cannot be creative in science if you don't have a deep knowledge of the details... I learned to value traditions as a musician, but at the same time the importance of trying to transcend tradition. The tradition is the basis that allows you to progress, the starting point, but it cannot become a limitation, because then both in music and in science creativity and progress end."

So what's the science behind the scientist's claims?

"A number of studies support the contention that students who participate in formal music education have higher academic achievement scores than students who do not participate in formal music education."

This quote comes from a paper titled [The Impact of Music Education on Academic Achievement](#) by Donald A. Hodges and Debra S. O'Connell of the University of North Carolina at Greensboro. In it, Hodges and O'Connell reference no fewer than 14 supporting studies before they delve more deeply into some individual examples. Such as:

"A two-year study by Gardiner et al. (1996) investigated the effects of a music and visual-arts curriculum on the academic achievement of first-graders. Students who participated in the arts curriculum had test scores

below those of the non-arts curriculum students at the beginning of the school year; however, after seven months the arts curriculum students had higher scores on mathematics achievement. After a second year of treatment, the arts-curriculum students continued to have higher mathematics achievement scores.”

And:

“Whitehead (2001) examined the effect of music instruction...on math scores of middle and high school students. Subjects were randomly placed into three groups: full treatment (which received music instruction for 50 minutes five times per week), limited treatment (which received 50 minutes of instruction once a week), and no treatment (which received no music instruction). After twenty weeks, the full treatment group showed a higher level of significant gain in mathematics than the other two groups. The limited treatment group showed limited mathematics improvement and the no treatment group had the lowest gain in mathematics improvement.”



In a [1999 bulletin for the National Association of Secondary School Principals](#), James R. Ponter makes the same connection.

Citing a 1988 study of 17 countries for the International Association for the Evaluation of Educational Achievement, Ponter singles out the 3 best-performing nations—Japan, The Netherlands, and Hungary—for their emphasis on musical education. He notes that in each country, music education is not only offered at an early age, it is mandated by the state.

With this in mind, it's ironic that so many American school administrators see music programs as dead weight that divert from their focus on raising test scores, when *increasing* their emphasis on music education might have led to the desired result instead.

We could debate the value of narrow, standards-based education until the fat lady sings, but what if it turned out that learning music actually makes students better at passing math and reading tests?

Music Study Improves General Cognition

Research suggests that music training exercises so many different functions within the brain, that it's kind of hard to engage with it fully and stay dumb for very long.

When a musician first learns to read music, she develops a process of recognizing and decoding a complex system of symbols. The musician then translates those symbols into appropriate motor actions that use both hands, and confirms the accuracy of her actions through multisensory feedback (both sight and sound). In addition, musicians practice motor skills in the pursuit of metric precision, they exercise memory functions in the absence of written music, and create new combinations on the fly through improvisation.

To its credit, The VH1 Save the Music Foundation website does contain [several pages](#) of citations of academic papers, articles on current research, and quotes from medical professionals that suggest music improves brain function and cognition (Don't bury the lead, people!)

A sample quote from John J. Ratey, MD's *A User's Guide to the Brain*:

"The musician is constantly adjusting decisions on tempo, tone, style, rhythm, phrasing, and feeling – training the brain to become incredibly good at organizing and conducting numerous activities at once. Dedicated practice of this orchestration can have a great payoff for lifelong attention skills, intelligence, and an ability for self-knowledge and expression."

Music education seems to benefit children across the board. And it turns out that the least privileged among them may be the ones who benefit from it the most.

Arts Education in General Significantly Benefits Disadvantaged Youth

In 2012, the National Endowment for the Arts released a report titled [The Arts and Achievement in At-Risk Youth: Findings From Four Longitudinal Studies](#). It made the case for arts and music education, using more than twenty years' worth of academic results.

Focusing specifically on children from lower socioeconomic status or "low-SES" backgrounds, the researchers found that the more arts education these children received, the better their life prospects seemed to get:

"According to the data, 71 percent of low-SES students with arts-rich experiences attended some sort of college after high school. Only 48 percent of the low-arts, low-SES group attended any sort of college. And more than twice as many high-arts students from the low-SES group, compared with low-arts students in that group, attended a four-year college (39 percent versus 17 percent).

Percent of Young Adults Who Attended College and Achieved College-Related Outcomes (2000)

Low-SES Students

	Low arts	High arts
Ever attended college after high school	48%	71%
Ever attended a four-year college	17%	39%
If they attended college:		
Earned as highest degree:		
Associate's degree	10%	24%
Bachelor's degree	6%	18%
Graduate or professional degree	0%	1%
Earned mostly A's in college	9%	15%

Note: Differences shown in bold are statistically significant.

Source: NELS-88. From 1988, when participants were in the 8th grade, to 2000, when most had turned 26.

This also translated to degree attainment: 24% of children from a high-arts, low-SES background were able to attain associate's degrees, versus 10% of low-arts low-SES children. 18% of high-arts low-SES children attained bachelor's degrees versus 6% of low-arts low-SES children. The NEA report also cites higher rates of volunteerism and general civic engagement in both high- and low-SES children.

Unfortunately, these studies mostly stop following the students' progress by the time they reach their early to mid-20s, providing little information on long-term career prospects. Given the links between [college education and employment](#)/earnings however, it seems reasonable to ask if arts education in general should now be a part of the larger conversation about income equality.

If You Practice Regularly and Often, You WILL Get Really Good At It

A recent nationwide survey of 5,000 musicians by [Peter C. Dicola of Northwestern University School of Law](#) offered a glimpse into the different revenue streams of musicians in the United States. The top four reported earning categories in his survey were: Touring/shows/live performances/fees (28%), teaching (22%), salary as an employee of a symphony, band or ensemble (19%) and session musician earnings (10%). No other category eclipsed 7%.

It seems that if you are ever really going to try and make a go of it in the music business, it helps to be very good much more than it helps to have a distinctive style or cool-looking t-shirts. When it comes to playing in a symphony, doing session work, or teaching others the language of music, there simply aren't many places to hide a deficiency in musical knowledge or ability.

Being incredibly good at something is a pretty valuable trait, almost regardless of the context. And [if you want to be very good at something, the earlier you start, the better](#).

Words of Caution (and all that touchy-feely stuff, too)

To be fair, both the UNC Greensboro paper and the National Endowment for the Arts report stop *just* shy of claiming a direct causal relationship between music education and smarter, more successful students; each claims that more research is still needed.

This sort of scientific hedging is appropriate when we're dealing with such broad, varied, and incomplete sets of data. We can prove that musically educated students generally do better in school, but we can't prove that a semester of bassoon classes will turn your B in calculus into an A.

It's at this point that we can finally feel free to fall back on all our choir-preaching and arguments for the intangible benefits of music, and its ability to enrich our lives beyond the confines of a test.

As a musician myself, I'm certainly not immune to this language. At its best, music *is* a sort of alchemy—a translation of abstract thought and emotion into something concrete that people outside your own head can consume, understand, and enjoy.

But by that same token, musicians, educators, and concerned parents must learn to translate their abstract feelings and emotions about music into something more than just glib bumper sticker sales pitches. Instead of trying to appeal to risk-averse lawmakers, bean counters, and even wealthy benefactors with Chicken-Soup-for-the-Soul-style stories of personal fulfillment through music, we could give them hard facts and good evidence to digest:

You want higher test scores in math and science? *Music education will help*. You want children with higher mental faculty? *Music education will help*. You want to keep kids out of trouble and on-track towards college and future employment? *Music education will help*.

There isn't nearly as much scientific evidence showing that assigning *The Great Gatsby* or *Beowulf* will help with any of these goals, yet a debate over the general merits of teaching those books or the funding of those classes isn't likely to happen anytime soon.

Public music education is ready to earn back its place at the table. Even if you don't end up a musician, an

early and intense study of music could lead to you becoming an award-winning scientist, an educator with a sustainable career, or even [Chairman of the Federal Reserve](#). At worst, you could end up a pretty decent bassoonist.

by [Blake Madden](#)

[Original Article on Trust Me I'm a Scientist](#)

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