



Category	Age Group	Content	Fact or Quote	Source
<b>Educational</b>	Toddler	Research reveals strong connections between rhythm skills and pre-reading abilities in toddlers.	Fact	Woodruff Carr K, W.-S.T., Tierney A, Strait D, Kraus N. , Beat synchronization and speech encoding in preschoolers: A neural synchrony framework for language development. , in Association for Research in Otolaryngology Symposium. 2014: San Diego, CA.
<b>Cognitive</b>	Toddler	Music enhances fine motor skills, or the ability to use small, acute muscle movements to write, use a computer, and perform other physical tasks.	Fact	Forgeard, 2008; Hyde, 2009; Schlaug et al. 2005, "The Effects of Musical Training on Structural Brain Development A Longitudinal Study," The Neurosciences and Music III: Disorders and Plasticity: Ann. N.Y. Acad. Sci. 1169: 182–186 (2009).

<b>Educational</b>	Toddler	Music education enhances fine motor skills.	Fact	Arts Education Partnership, 2011
<b>Cognitive</b>	Toddler	Research reveals strong connections between rhythm skills and pre-reading abilities in toddlers.	Fact	Woodruff Carr K, W.-S.T., Tierney A, Strait D, Kraus N. , Beat synchronization and speech encoding in preschoolers: A neural synchrony framework for language development. , in Association for Research in Otolaryngology Symposium. 2014: San Diego, CA.
<b>Cognitive</b>	Toddler	Infants recognize the melody of a song long before they understand the words. They often try to mimic sounds and start moving to the music as soon as they are physically able.	Fact	© 2015 Program for Early Parent Support (PEPS), a 501(C)(3) nonprofit organization

<b>Cognitive</b>	Toddler	Toddlers love to dance and move to music. The key to toddler music is the repetition of songs which encourages the use of words and memorization. Silly songs make them laugh. Try singing a familiar song and inserting a silly word in the place of the correct word, like "Mary had a little spider" instead of lamb. Let them reproduce rhythms by clapping or tapping objects.	Fact	© 2015 Program for Early Parent Support (PEPS), a 501(C)(3) nonprofit organization
<b>Cognitive</b>	Teen	Students who take music in middle school score significantly higher on algebra assignments in 9th grade than their non-music counterparts.	Fact	Helmrich. B. H. (2010). Window of opportunity? Adolescence, music, and algebra. Journal of Adolescent Research. 25 (4). - See more at: <a href="http://www.artsedsearch.org/summaries/window-of-opportunity-adolescence-music-and-algebra#sthash.BvS0RoHP.dpuf">http://www.artsedsearch.org/summaries/window-of-opportunity-adolescence-music-and-algebra#sthash.BvS0RoHP.dpuf</a>

<b>Social</b>	Teen	"Our school has created a culture that considers the music education part of our programming, as a real partner in the full development and academic achievement for our students."	Quote	Dinorah Marquez, Program Director, Latino Arts Strings Program
<b>Educational</b>	Teen	"[In the Latino Arts Strings Program] I had a wide range of ages to talk to, to play music with, to laugh with. Even though we were in a strict musical setting, they helped me find parts of myself that are not musical."	Quote	Fatima Gomez, BGCS/Latino Arts Strings Program Alumnus
<b>Social</b>	Teen	"Music is my life. It's a safe haven."	Quote	Student @ Skaneateles High School
<b>Social</b>	Teen	In the past, secondary students who participated in a music group at school reported the lowest lifetime and current use of all substances (tobacco, alcohol, and illicit drugs).	Fact	5 VH1: Save the Music. "The Benefits of Music Education." VH1: Save the Music. Accessed February 24, 2015. .

<b>Educational</b>	Teen	Schools with music programs have an estimated 90.2% graduation rate and 93.9% attendance rate compared to schools without music education, which average 72.9% graduation and 84.9% attendance.	Fact	The National Association for Music Education. "Music Makes the Grade." The National Association for Music Education. Accessed February 24, 2015.
<b>Educational</b>	Teen	U.S. Department of Education data on more than 25,000 secondary school students found that students who report consistent high levels of involvement in instrumental music over the middle and high school years show "significantly higher levels of mathematics proficiency by grade 12."	Fact	U.S. Department of Education NELL88 Database

<b>Educational</b>	Teen	Nearly 100% of past winners in the prestigious Siemens Westinghouse Competition in Math, Science and Technology (for high school students) play one or more musical instruments. This led the Siemens Foundation to host a recital at Carnegie Hall in 2004, featuring some of these young people, after which a panel of experts debated the nature of the apparent science/music link.	Fact	The Midland Chemist (American Chemical Society) Vol. 42, No.1, Feb. 2005
<b>Educational</b>	Teen	Music education improves average SAT scores.	Fact	Arts Education Partnership, 2011
<b>Educational</b>	Teen	Majorities of parents and teachers believe music education should be required in both middle and high schools.	Fact	NAMM Foundation and Grunwald Associates LLC (2015). Striking a Chord: The Public's Hopes and Beliefs for K-12 Music Education in the United States: 2015.

<b>Cognitive</b>	Teen	It's also notable that both teachers (89 percent) and parents (82 percent) rate music education highly as a source for greater student creativity, a 21st century skill that's highly likely to help young people stand out in an increasing competitive global economy.	Fact	NAMM Foundation and Grunwald Associates LLC (2015). <i>Striking a Chord: The Public's Hopes and Beliefs for K–12 Music Education in the United States</i> : 2015.
<b>Cognitive</b>	Teen	Adolescent-centered studies show that even very basic rhythm abilities, such as tapping to a beat, relate with reading skills, and we have provided initial evidence for how both abilities may rely on common underlying neural mechanisms of sound processing.	Fact	Tierney, A.T. and N. Kraus, The ability to tap to a beat relates to cognitive, linguistic, and perceptual skills. <i>Brain and Language</i> , 2013. 124(3): p. 225-231.

<b>Social</b>	Teen	Secondary students who participated in band or orchestra reported the lowest lifetime and current use of all substances (alcohol, tobacco, drug abuse).	Fact	Texas Commission on Drug and Alcohol Abuse Report. Reported in Houston Chronicle, January 1998
<b>Educational</b>	Teen	According to The Harmony Project's website, since 2008, 93 percent of Harmony Project seniors have gone on to college, despite a dropout rate of 50 percent or more in their neighborhoods.	Fact	© 2015 The Harmony Project
<b>Cognitive</b>	Teen	43 high-school students from impoverished neighborhoods in Chicago randomly assigned to band or choir lessons showed significant increases in their ability to process sounds, while those in a control group, who were enrolled in a junior ROTC program, didn't.	Fact	2013 study published in Frontiers in Educational Psychology reported in <a href="http://www.wsj.com/articles/a-musical-fix-for-american-schools-1412954652">http://www.wsj.com/articles/a-musical-fix-for-american-schools-1412954652</a>



<b>Social</b>	Teen	Teenagers may use musical experiences to form friendships, and to set themselves apart from parents and younger kids.	Fact	© 2015 Program for Early Parent Support (PEPS), a 501(C)(3) nonprofit organization
<b>Social</b>	Teen	Teens music as their “social glue” and as a bridge for building acceptance and tolerance for people of different ages and cultural backgrounds.	Fact	Presentation to U.S. Congress, 2007, Washington D.C. (Invited and arranged by the National Association of Music Merchants/NAMM, on “The Impact of Music on the Lives of Children and Adolescents”).
<b>Social</b>	Teen	Teens look at music as an opportunity in school for engagement as performers, composers and intelligent listeners—activities and qualities that appear to be deeply meaningful to them.	Fact	Presentation to U.S. Congress, 2007, Washington D.C. (Invited and arranged by the National Association of Music Merchants/NAMM, on “The Impact of Music on the Lives of Children and Adolescents”).
<b>Cognitive</b>	Teen	Teens associate playing music with music literacy, listening skills, motor ability, eye-hand coordination and heightened intellectual capabilities.	Fact	Presentation to U.S. Congress, 2007, Washington D.C. (Invited and arranged by the National Association of Music Merchants/NAMM, on “The Impact of Music on the Lives of Children and Adolescents”).

<b>Cognitive</b>	Teen	Teens believe music helps adolescents release or control emotions and helps coping with difficult situations such as peer pressure, substance abuse, pressures of study and family, the dynamics of friendships and social life, and the pain of loss or abuse.	Fact	Presentation to U.S. Congress, 2007, Washington D.C. (Invited and arranged by the National Association of Music Merchants/NAMM, on “The Impact of Music on the Lives of Children and Adolescents”).
<b>Social</b>	Teen	Teens feel that playing music teaches self-discipline.	Fact	Presentation to U.S. Congress, 2007, Washington D.C. (Invited and arranged by the National Association of Music Merchants/NAMM, on “The Impact of Music on the Lives of Children and Adolescents”).
<b>Social</b>	Teen	Teens believe that playing music diminishes boundaries between people of different ethnic backgrounds, age groups and social interests.	Fact	Presentation to U.S. Congress, 2007, Washington D.C. (Invited and arranged by the National Association of Music Merchants/NAMM, on “The Impact of Music on the Lives of Children and Adolescents”).

<b>Social</b>	Teen	Teens indicate making music provides the freedom for teens to just be themselves; to be different; to be something they thought they could never be; to be comfortable and relaxed in school and elsewhere in their lives.	Fact	Presentation to U.S. Congress, 2007, Washington D.C. (Invited and arranged by the National Association of Music Merchants/NAMM, on “The Impact of Music on the Lives of Children and Adolescents”).
<b>Educational</b>	Teen	Teens long for more variety and options for making music in school, including the expansion to instruments and technology used in popular music.	Fact	Presentation to U.S. Congress, 2007, Washington D.C. (Invited and arranged by the National Association of Music Merchants/NAMM, on “The Impact of Music on the Lives of Children and Adolescents”).

<b>Social</b>	Teen	Teens are committed to their instruments and their school ensembles because they love to be involved in these musical and social groups; 20% of the respondents specified instruments as part of their musical identities, whether or not they were engaged in school music education.	Fact	Presentation to U.S. Congress, 2007, Washington D.C. (Invited and arranged by the National Association of Music Merchants/NAMM, on “The Impact of Music on the Lives of Children and Adolescents”).
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<b>Social</b>	Teen	<p>Teens believe that music is an integral part of American life, and that music reflects American culture and society; there were 333 mentions of the skills that music education can provide access to, including the historical and cultural significance of music in civilizations and societies.</p>	Fact	<p>Patricia Shehan Campbell, Ph.D., of the University of Washington, "Adolescents' Expressed meanings of Music In and Out of School," reveals the meaning and importance of music participation in the lives of middle and high school adolescents, including those enrolled and not enrolled in school music programs. The research was based on responses by 1,155 teens who submitted student essays to Teen People magazine as part of an online contest inviting teens to speak out to help prevent the further elimination of music programs in schools across the country.</p>
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<b>Educational</b>	Teen	Teens described their music teachers as encouraging, motivating and acting as both role models and friends that can be trusted for listening and giving advice.	Fact	Presentation to U.S. Congress, 2007, Washington D.C. (Invited and arranged by the National Association of Music Merchants/NAMM, on "The Impact of Music on the Lives of Children and Adolescents").
<b>Cognitive</b>	Senior	Playing an instrument as a kid leads to a sharper mind in old age, according to a new study conducted by Brenda Hanna-Pladdy, a clinical neuropsychologist in Emory's Department of neurology, and her colleagues. The researchers gave 70 people between the ages of 60 and 83 a battery of tests to measure memory and other cognitive abilities. The researchers found that those who had played an instrument for a decade or longer scored significantly higher on the tests than those with no musical background.	Fact	Quoted in Diane Cole, "Your Aging Brain Will Be in Better Shape If You've Taken Music Lessons," National Geographic, January 3, 2014.

<b>Cognitive</b>	Senior	Cognitive and neural benefits of musical experience continue throughout the lifespan, and counteract some of the negative effects of aging, such as memory and hearing difficulties in older adults.	Fact	Parbery-Clark A, A.S., Kraus N. , Musical Experience and Hearing Loss: Perceptual, Cognitive and Neural Benefits. , in Association for Research in Otolaryngology Symposium. 2014: San Diego, CA.
<b>Social</b>	Senior	“We feel strongly that abundant health benefits can be achieved by older adults who learn to make music in a supportive, socially enjoyable setting. We are just beginning to understand the positive effects of making music on our bodies and our physical health.”	Quote	Dr. Frederick Tims, principal investigator for the Music Making And Wellness Research Project and professor and chair of Music Therapy at Michigan State University

<b>Cognitive</b>	Senior	Involvement in participatory arts programs has been shown to have a positive effect on mental health, physical health, and social functioning in older adults, regardless of their ability. The arts also contribute to communicating, building sense of identity, preserving or restoring social capital, and strengthening social networks in communities.	Fact	Arts in Aging report from the National Endowment for the Arts. Accessed on 8/21/2015 <a href="http://www.cms.msu.edu/docs/BenefitsMusic-Adult.pdf">http://www.cms.msu.edu/docs/BenefitsMusic-Adult.pdf</a>
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<b>Cognitive</b>	Senior	<p>Research shows that music activities (both music listening and music making) can influence older adults' perceptions about the quality of their lives. Some research has examined the effects of music listening on biological markers of health and subjective perceptions of wellbeing. Other studies on the psychological and social benefits associated with music making activities have demonstrated that participants often place considerable value on these "nonmusical" benefits of music activity.</p>	Fact	<p>Coffman, D. D. (2002). Music and quality of life in older adults. <i>Psychomusicology</i>, 18(1-2), 76-88</p>
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<b>Cognitive</b>	Senior	Music keeps your ears young. Older musicians don't experience typical aging in the part of the brain (the auditory cortex) that often leads to hearing troubles. It's never too late to start taking piano lessons and prevent these age-related changes.	Fact	(The Record.com – Michael Roizen, MD and Mehmet Oz, MD)
<b>Health</b>	Senior	Music has been found to stimulate parts of the brain, and studies have demonstrated that music enhances the memory of Alzheimer's and dementia patients, including a study conducted at UC Irvine, which showed that scores on memory tests of Alzheimer's patients improved when they listened to classical music.	Fact	Cheri Lucas, Education.com, "Boost Memory and Learning with Music," pbs.org.

<b>Health</b>	Senior	Adults age 60 to 85 without previous musical experience exhibited improved processing speed and memory after just three months of weekly 30-minute piano lessons and three hours a week of practice, whereas the control group showed no changes in these abilities.	Fact	Nina Kraus, Samira Anderson, "Music Training: An Antidote for Aging?" Hearing Journal, Vol. 66, No. 3, March 2013.
<b>Cognitive</b>	Child	Everyday listening skills are stronger in musically-trained children than in those without music training. Significantly, listening skills are closely tied to the ability to: perceive speech in a noisy background, pay attention, and keep sounds in memory.	Fact	Strait, D.L. and N. Kraus, Biological impact of auditory expertise across the life span: musicians as a model of auditory learning. Hearing Research, 2013.
<b>Social</b>	Child	One of the biggest kicks is to see a child come into the music program as an introvert and leave as a student leader. That's a tremendous process.	Quote	Dick Zentner, 2013 Patrick John Hughes Parent/Booster Award Recipient

<b>Cognitive</b>	Child	Music training in childhood "fundamentally alters the nervous system such that neural changes persist in adulthood after auditory training has ceased."	Fact	Skoe, E. & N. Kraus. (2012). A little goes a long way: How the Adult Brain Is Shaped by Musical Training in Childhood. <i>The Journal of Neuroscience</i> , 32(34):11507–11510.
<b>Cognitive</b>	Child	Studies have shown that young children who take keyboard lessons have greater abstract reasoning abilities than their peers, and that these abilities improve over time with sustained training in music.	Fact	Rauscher, F.H. , & Zupan, M., "Classroom keyboard instruction improves kindergarten children's spatial-temporal performance: A field experiment" <i>Early Childhood Research Quarterly</i> , 15 , 215-228.2000.
<b>Social</b>	Child	"We have this holistic opportunity to teach children the benefits of direct participatory music education."	Quote	Linda Edelstein, Milwaukee youth symphony orchestra
<b>Educational</b>	Child	Children who study music tend to have larger vocabularies and more advanced reading skills than their peers who do not participate in music lessons.	Fact	Arete Music Academy. "Statistical benefits of music in education." Arete Music Academy. Accessed July 17, 2014. .

<b>Cognitive</b>	Child	Children with learning disabilities or dyslexia who tend to lose focus with more noise could benefit greatly from music lessons.	Fact	Arete Music Academy. "Statistical benefits of music in education." Arete Music Academy. Accessed July 17, 2014.
<b>Social</b>	Child	Children who study a musical instrument are more likely to excel in all of their studies, work better in teams, have enhanced critical thinking skills, stay in school, and pursue further education.	Fact	Arte Music Academy. "Statistical benefits of music in education." Statistical-Benefits-Of-Music-In-Education. Accessed July 17, 2014.
<b>Educational</b>	Child	Regardless of socioeconomic status or school district, students (3rd graders) who participate in high-quality music programs score higher on reading and spelling tests.	Fact	Hille, Katrin, et al. "Associations between music education, intelligence, and spelling ability in elementary school." <i>Adv Cogn Psychol</i> 7 (2011): 1–6. Web. Accessed February 24, 2015.
<b>Cognitive</b>	Child	Young children who take music lessons show different brain development and improved memory over the course of a year, compared to children who do not receive musical training.	Fact	National Association for Music Education. "The Benefits of the Study of Music." National Association for Music Education. Accessed July 17, 2014. .

<b>Educational</b>	Child	Schools that have music programs have an attendance rate of 93.3% compared to 84.9% in schools without music programs.	Fact	The National Association for Music Education. "Music Makes the Grade." The National Association for Music Education. Accessed February 24, 2015.
<b>Social</b>	Child	"At this time when you are making critical and far-reaching budget and program decisions...I write to bring to your attention the importance of the arts as a core academic subject and part of a complete education for all students. The Elementary and Secondary Education Act defines the arts as a core subject, and the arts play a significant role in children's development and learning process. The arts can help students become tenacious, team-oriented problem solvers who are confident and able to think creatively."	Quote	Arne Duncan, Secretary of Education, Letter to Schools and Community Leaders, 2009.

<b>Educational</b>	Child	Students in high-quality school music education programs score higher on standardized tests compared to students in schools with deficient music education programs, regardless of the socioeconomic level of community.	Fact	Nature Neuroscience, April 2007
<b>Educational</b>	Child	Students in all regions with lower-quality instrumental programs scored higher in English and mathematics than students who had no music at all.	Fact	Journal for Research in Music Education, June 2007; Dr. Christopher Johnson, Jenny Memmott
<b>Educational</b>	Child	Students at schools with excellent music programs had higher English test scores across the country than students in schools with low-quality music programs; this was also true when considering mathematics.	Fact	Journal for Research in Music Education, June 2007; Dr. Christopher Johnson, Jenny Memmott

<b>Educational</b>	Child	Students in top-quality instrumental programs scored 17% higher in mathematics than children in schools without a music program, and 33% higher in mathematics than students in a deficient choral program.	Fact	Journal for Research in Music Education, June 2007; Dr. Christopher Johnson, Jenny Memmott
<b>Educational</b>	Child	Students in top-quality instrumental programs scored 19% higher in English than students in schools without a music program, and 32% higher in English than students in a deficient choral program.	Fact	Journal for Research in Music Education, June 2007; Dr. Christopher Johnson, Jenny Memmott
<b>Cognitive</b>	Child	Young Children who take music lessons show different brain development and improved memory over the course of a year, compared to children who do not receive musical training.	Fact	Dr. Laurel Trainor, Prof. of Psychology, Neuroscience, and Behavior at McMaster University, 2006



<b>Cognitive</b>	Child	Musically trained children performed better in a memory test that is correlated with general intelligence skills such as literacy, verbal memory, visiospatial processing, mathematics, and IQ.	Fact	Dr. Laurel Trainor, Prof. of Psychology, Neuroscience, and Behavior at McMaster University, 2006
<b>Cognitive</b>	Child	Music education sharpens student attentiveness.	Fact	Arts Education Partnership, 2011
<b>Cognitive</b>	Child	Music education equips students to be creative.	Fact	Arts Education Partnership, 2011
<b>Social</b>	Child	Music education supports better study habits and self-esteem.	Fact	Arts Education Partnership, 2011
<b>Educational</b>	Child	Substantial majorities of both teachers and parents view student access to music and arts education as “extremely” or “very” important.	Fact	NAMM Foundation and Grunwald Associates LLC (2015). Striking a Chord: The Public’s Hopes and Beliefs for K–12 Music Education in the United States: 2015.
<b>Educational</b>	Child	Both parents and teachers have high standards and expectations for quality music programs, especially the importance of competent, certified teachers	Fact	NAMM Foundation and Grunwald Associates LLC (2015). Striking a Chord: The Public’s Hopes and Beliefs for K–12 Music Education in the United States: 2015.

<b>Educational</b>	Child	On average, students have had only about three years of in-school music education, according to parents; more than a third have had one year or less, with one in six of all students having had no music instruction at all.	Fact	NAMM Foundation and Grunwald Associates LLC (2015). Striking a Chord: The Public's Hopes and Beliefs for K–12 Music Education in the United States: 2015.
<b>Social</b>	Child	Hispanic and African-American parents generally feel music provides more benefits to children than other parents do. Like their urban counterparts, however, they feel they're being shortchanged in a number of ways—though they're taking steps to overcome these deficits that could model solutions for other groups.	Fact	NAMM Foundation and Grunwald Associates LLC (2015). Striking a Chord: The Public's Hopes and Beliefs for K–12 Music Education in the United States: 2015.

<b>Social</b>	Child	Majorities of both parents and teachers see a myriad of social-emotional, academic, 21st century skill, community, and physical and health benefits from music education—especially social-emotional benefits	Fact	NAMM Foundation and Grunwald Associates LLC (2015). Striking a Chord: The Public's Hopes and Beliefs for K–12 Music Education in the United States: 2015.
<b>Social</b>	Child	Majorities of both parents and teachers are aware of research on the effects of music on the developing brain, and have personally experienced the benefits of music education on their own children or students.	Fact	NAMM Foundation and Grunwald Associates LLC (2015). Striking a Chord: The Public's Hopes and Beliefs for K–12 Music Education in the United States: 2015.
<b>Educational</b>	Child	Substantial majorities of both parents and teachers want to see the scope of elementary school music education expanded.	Fact	NAMM Foundation and Grunwald Associates LLC (2015). Striking a Chord: The Public's Hopes and Beliefs for K–12 Music Education in the United States: 2015.

<b>Educational</b>	Child	Substantial majorities of teachers and parents believe budget cuts in music programs hurt students and that music is not as adequately funded as other core subjects. Most teachers and parents rate the funding for their own school's music program as average or worse.	Fact	NAMM Foundation and Grunwald Associates LLC (2015). Striking a Chord: The Public's Hopes and Beliefs for K–12 Music Education in the United States: 2015.
<b>Educational</b>	Child	Asked about 15 possible ways to cut school budgets, both teachers and parents are more willing to make cuts in 12 of the 14 other curricular, administrative and service areas than cut music and arts education. Only the number and salaries of teachers are more sacrosanct.	Fact	NAMM Foundation and Grunwald Associates LLC (2015). Striking a Chord: The Public's Hopes and Beliefs for K–12 Music Education in the United States: 2015.

<b>Educational</b>	Child	More than 80 percent of teachers, and nearly as many parents, say that the time allotted to music education—adequate rehearsal time, class duration and class frequency— is important for a quality music education program.	Fact	NAMM Foundation and Grunwald Associates LLC (2015). Striking a Chord: The Public's Hopes and Beliefs for K–12 Music Education in the United States: 2015.
<b>Educational</b>	Child	Eight in 10 teachers and more than seven in 10 parents believe the number of minutes of music education required every week is an important quality component.	Fact	NAMM Foundation and Grunwald Associates LLC (2015). Striking a Chord: The Public's Hopes and Beliefs for K–12 Music Education in the United States: 2015.
<b>Educational</b>	Child	The number and quality of musical instruments, along with materials, are high on parents' lists of “must haves” for a quality program. But many teachers report that these essentials are in short supply.	Fact	NAMM Foundation and Grunwald Associates LLC (2015). Striking a Chord: The Public's Hopes and Beliefs for K–12 Music Education in the United States: 2015.

<b>Educational</b>	Child	Fewer than half of teachers (42 percent) and parents (46 percent) say their schools have the musical instruments they need for all students who want to learn to play.	Fact	NAMM Foundation and Grunwald Associates LLC (2015). Striking a Chord: The Public's Hopes and Beliefs for K–12 Music Education in the United States: 2015.
<b>Educational</b>	Child	Just 41 percent of teachers and 46 percent of parents say their schools have enough sheet music for every participating child.	Fact	NAMM Foundation and Grunwald Associates LLC (2015). Striking a Chord: The Public's Hopes and Beliefs for K–12 Music Education in the United States: 2015.
<b>Educational</b>	Child	Teachers in urban schools are more likely to consider music and arts education as core to the curriculum (38 percent) and value access to it (81 percent), compared to teachers in rural areas (30 percent of whom consider music and arts education as core to the curriculum and 70 percent of whom value access to it).	Fact	NAMM Foundation and Grunwald Associates LLC (2015). Striking a Chord: The Public's Hopes and Beliefs for K–12 Music Education in the United States: 2015.

<b>Educational</b>	Child	Urban teachers also believe more strongly that music education can build 21st century skills, such as communication, critical thinking, problem-solving and innovation skills.	Fact	NAMM Foundation and Grunwald Associates LLC (2015). Striking a Chord: The Public's Hopes and Beliefs for K–12 Music Education in the United States: 2015.
<b>Educational</b>	Child	African-American parents (76 percent) and Hispanic parents (75 percent) are significantly more likely than Caucasian parents (67 percent) to enroll their children in school music classes where opportunities exist, and they are more interested in their children participating in virtually every type of music class in or out of school.	Fact	NAMM Foundation and Grunwald Associates LLC (2015). Striking a Chord: The Public's Hopes and Beliefs for K–12 Music Education in the United States: 2015.

<p><b>Educational</b></p>	<p>Child</p>	<p>African-American and Hispanic parents generally believe more strongly in a wide array of potential benefits from music education, are more likely to have seen these positive impacts on their own child and more strongly support expanding music education programs. Ironically, these parents also are more likely to report that there are no music programs in their schools (21 percent of African-American parents and 22 percent of Hispanic parents report this, compared to 15 percent of Caucasian parents).</p>	<p>Fact</p>	<p>NAMM Foundation and Grunwald Associates LLC (2015). <i>Striking a Chord: The Public's Hopes and Beliefs for K–12 Music Education in the United States</i>: 2015.</p>
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<b>Educational</b>	Child	Students in the West are more likely to have school music programs that take place only outside of school hours—and they have access to fewer types of programs as well.	Fact	NAMM Foundation and Grunwald Associates LLC (2015). <i>Striking a Chord: The Public's Hopes and Beliefs for K–12 Music Education in the United States</i> : 2015.
<b>Social</b>	Child	Four of the top five benefits teachers see in the potential of music education to help students express themselves (cited by 92 percent of teachers), become more confident (90 percent), and develop better practice habits (89 percent) and more self-discipline (88 percent).	Fact	NAMM Foundation and Grunwald Associates LLC (2015). <i>Striking a Chord: The Public's Hopes and Beliefs for K–12 Music Education in the United States</i> : 2015.

<b>Educational</b>	Child	It's striking that both teachers (87 percent) and parents (79 percent) strongly believe music education has a positive impact on overall academic performance.	Fact	NAMM Foundation and Grunwald Associates LLC (2015). Striking a Chord: The Public's Hopes and Beliefs for K–12 Music Education in the United States: 2015.
<b>Social</b>	Child	Majorities of parents whose children are involved in music classes also credit music education for making them happier, more focused, more self-disciplined, stronger academically and more helpful.	Fact	NAMM Foundation and Grunwald Associates LLC (2015). Striking a Chord: The Public's Hopes and Beliefs for K–12 Music Education in the United States: 2015.
<b>Educational</b>	Child	More than eight in 10 teachers (83 percent) and more than seven in 10 parents (73 percent) say budget cuts in music education are detrimental to students.	Fact	NAMM Foundation and Grunwald Associates LLC (2015). Striking a Chord: The Public's Hopes and Beliefs for K–12 Music Education in the United States: 2015.

<b>Educational</b>	Child	On average, both teachers and parents would be more willing to cut spending in 12 of 15 other programs before they'd cut funding for music and arts education.	Fact	NAMM Foundation and Grunwald Associates LLC (2015). <i>Striking a Chord: The Public's Hopes and Beliefs for K–12 Music Education in the United States</i> : 2015.
<b>Educational</b>	Child	Teachers in Title I schools are more likely to report that their schools have no music program at all. In Title I schools that do offer music programs, teacher responses suggest that they have fewer full-time music teachers—and teachers in these schools are more likely to report there are no professional development opportunities for the music teachers they do have.	Fact	NAMM Foundation and Grunwald Associates LLC (2015). <i>Striking a Chord: The Public's Hopes and Beliefs for K–12 Music Education in the United States</i> : 2015.

<b>Educational</b>	Child	Federal education policy specifically authorizes the use Title I funds for music and arts education. But few teachers—even the majority who know what Title I is—are aware of this significant opportunity to provide or improve music programs in the country. Even fewer parents are familiar with Title I, let alone the fact that Title I funds can be used for music education	Fact	NAMM Foundation and Grunwald Associates LLC (2015). Striking a Chord: The Public's Hopes and Beliefs for K–12 Music Education in the United States: 2015.
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<b>Social</b>	Child	<p>Parents who are highly involved in supporting their school's music and other programs (including substantial numbers of parents who do not have high incomes) have higher expectations for music programs in their schools—and they're significantly more likely to see these demands for quality met.</p>	Fact	<p>NAMM Foundation and Grunwald Associates LLC (2015). <i>Striking a Chord: The Public's Hopes and Beliefs for K–12 Music Education in the United States</i>: 2015.</p>
<b>Cognitive</b>	Child	<p>Everyday listening skills are stronger in musically-trained children than in those without music training 4, 7. Significantly, listening skills are closely tied to the ability to: perceive speech in a noisy background, pay attention, and keep sounds in memory.</p>	Fact	<p>Strait, D.L. and N. Kraus, <i>Biological impact of auditory expertise across the life span: musicians as a model of auditory learning</i>. Hearing Research, 2013.</p>

<b>Cognitive</b>	Child	According to research published in a 2014 article in Parents magazine, learning how to play percussion instruments helps children develop coordination and motor skills, because they require movement of the hands, arms, and feet.	Fact	Kwan, A. (2013), "6 Benefits of Music Lessons," Parents.
<b>Social</b>	Child	Taking music lessons offers a space where kids learn how to accept and give constructive criticism, according to research published in The Wall Street Journal in 2014.	Fact	Joanne Lipman, "A Musical Fix for American Schools," The Wall Street Journal, October 10, 2014.
<b>Educational</b>	Child	The College Board identifies the arts as one of the six basic academic subject areas students should study in order to succeed in college.	Fact	Academic Preparation for College: What Students Need to Know and Be Able to Do, 1983 [still in use], The College Board, New York
<b>Cognitive</b>	Child	Music and math are highly intertwined. By understanding beat, rhythm, and scales, children are learning how to divide, create fractions, and recognize patterns.	Fact	Lynn Kleiner, founder of Music Rhapsody in Redondo Beach, CA

<b>Cognitive</b>	Child	Certain instruments, such as percussion, help children develop coordination and motor skills; they require movement of the hands, arms, and feet.	Fact	Kristen Regester, Early Childhood Program Manager at Sherwood Community Music School at Columbia College Chicago. Copyright © 2013 Meredith Corporation.
<b>Social</b>	Child	Group classes require peer interaction and communication, which encourage teamwork, as children must collaborate to create a crescendo or an accelerando.	Fact	Kristen Regester, Early Childhood Program Manager at Sherwood Community Music School at Columbia College Chicago. Copyright © 2013 Meredith Corporation.
<b>Social</b>	Child	Playing an instrument teaches kids to persevere through hours, months, and sometimes years of practice before they reach specific goals, such as performing with a band or memorizing a solo piece.	Fact	Mary Larew, Suzuki violin teacher at the Neighborhood Music School in New Haven, Connecticut. Copyright © 2013 Meredith Corporation.

<b>Social</b>	Child	Lessons offer a forum where children can learn to accept and give constructive criticism. Turning negative feedback into positive change helps build self-confidence, Register says. Group lessons, in particular, may help children understand that nobody, including themselves or their peers, is perfect,	Fact	Mary Larew, Suzuki violin teacher at the Neighborhood Music School in New Haven, Connecticut. Copyright © 2013 Meredith Corporation.
<b>Cognitive</b>	Child	In order to fully reap the cognitive benefits of a music class, kids can't just sit there and let the sound of music wash over them. They have to be actively engaged in the music and participate in the class.	Fact	Dr. Nina Kraus, director of Northwestern's Auditory Neuroscience Laboratory.



<b>Cognitive</b>	Child	Researchers found that after two years, children who not only regularly attended music classes, but also actively participated in the class, showed larger improvements in how the brain processes speech and reading scores than their less-involved peers.	Fact	Nina Kraus, director of Northwestern's Auditory Neuroscience Laboratory, quoted in Melissa Locker, "This Is How Music Can Change Your Brain," Time, December 16, 2014.
<b>Educational</b>	Child	"Early sustained music learning is actually the frame upon which education itself can be built for low-income kids."	Quote	MARGARET MARTIN, founder, Harmony Project, quoted in PBS NEWS HOUR. <a href="http://www.pbs.org/newshour/bb/education-jan-june14-harmony_01-04/">http://www.pbs.org/newshour/bb/education-jan-june14-harmony_01-04/</a>

<b>Cognitive</b>	Child	"In science I had very low grades and then once I started learning about music and being able to practice and concentrating, my science grades have gone higher and so have my other grade in other subjects. I would concentrate in my music and it was something to be focused on and not be bothered by anyone. I was using that on my homework and on any type of class work also. Science is now one of my best subjects."	Quote	VIANEY CALIXTO, student and Harmony Project Participant quoted in PBS NEWS HOUR. <a href="http://www.pbs.org/newshour/bb/education-jan-june14-harmony_01-04/">http://www.pbs.org/newshour/bb/education-jan-june14-harmony_01-04/</a>
<b>Cognitive</b>	Child	"While more affluent students do better in school than children from lower income backgrounds, we are finding that musical training can alter the nervous system to create a better learner and help offset this academic gap."	Quote	Dr. Nina Kraus, director of Northwestern's Auditory Neuroscience Laboratory quoted in "Musical training 'can improve language and reading'" <a href="http://www.bbc.com/news/health-28703013">http://www.bbc.com/news/health-28703013</a>

<b>Social</b>	Child	Music is no cure-all, nor is it likely to turn your child into a Nobel Prize winner. But there is compelling evidence that it can boost children's academic performance and help fix some of our schools' most intractable problems.	Quote	Joanne Lipman, "A Musical Fix for American Schools," The Wall Street Journal, October 10, 2014.
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<b>Cognitive</b>	Child	<p>A Canadian study of 48 preschoolers and published in 2011, found that verbal IQ increased after only 20 days of music training. In fact, the increase was five times that of a control group of preschoolers, who were given visual art lessons, says lead researcher Sylvain Moreno, an assistant professor of psychology at the University of Toronto. He found that music training enhanced the children's "executive function"—that is, their brains' ability to plan, organize, strategize and solve problems. And he found the effect in 90% of the children, an unusually high rate.</p>	Fact	<p>Joanne Lipman, "A Musical Fix for American Schools," The Wall Street Journal, October 10, 2014.</p>
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<b>Cognitive</b>	Child	In a 2009 study in the <i>Journal of Neuroscience</i> , researchers used an MRI to study the brains of 31 6-year-old children, before and after they took lessons on musical instrument for 15 months. They found that the music students' brains grew larger in the areas that control fine motor skills and hearing—and that students' abilities in both those areas also improved. The corpus callosum, which connects the left and right sides of the brain, grew as well.	Fact	Joanne Lipman, "A Musical Fix for American Schools," <i>The Wall Street Journal</i> , October 10, 2014.
<b>Cognitive</b>	Child	Exposing children to music during early development helps them learn the sounds and meanings of words. Dancing to music helps children build motor skills while allowing them to practice self-expression. For children and adults, music helps strengthen memory skills.	Fact	© 2015 Program for Early Parent Support (PEPS), a 501(C)(3) nonprofit organization

<b>Social</b>	Child	Making music together, children learn to work as a team while they each contribute to the song in their own way. At the same time, music helps children learn that together they can make something larger than the sum of its parts.	Fact	© 2015 Program for Early Parent Support (PEPS), a 501(C)(3) nonprofit organization
<b>Social</b>	Child	More benefits of music for children include learning cooperation, sharing, compromise, creativity, and concentration - skills that become invaluable as they enter school, face new challenges, and begin to form new friendships and develop social skills.	Fact	© 2015 Program for Early Parent Support (PEPS), a 501(C)(3) nonprofit organization

<b>Cognitive</b>	Child	A study at the University of California at Irvine demonstrated that young kids who participated in music instruction showed dramatic enhancements in abstract reasoning skills. In fact, researchers have found neural firing patterns that suggest that music may hold the key to higher brain function.	Fact	Rauscher, Shaw, Levine , Ky and Wright, "Music and Spatial Task Performance: A Causal Relationship," University of California , Irvine , 1994
<b>Educational</b>	Child	Research at McGill University in Montreal, Canada showed that grade-school kids who took music lessons scored higher on tests of general and spatial cognitive development, the abilities that form the basis for performance in math and engineering.	Fact	<a href="http://nisom.com/index.php/instruction/health-benefits">http://nisom.com/index.php/instruction/health-benefits</a>
<b>Social</b>	Child	Kids who make music have been shown to get along better with classmates and have fewer discipline problems. More of them get into their preferred colleges, too.	Fact	<a href="http://nisom.com/index.php/instruction/health-benefits">http://nisom.com/index.php/instruction/health-benefits</a>

<b>Cognitive</b>	Child	Playing a musical instrument strengthens eye-hand coordination and fine motor skills, and kids who study an instrument learn a lot about discipline, dedication and the rewards of hard work.	Fact	<a href="http://nisom.com/index.php/instruction/health-benefits">http://nisom.com/index.php/instruction/health-benefits</a>
<b>Educational</b>	Child	A study of 8 to 11-year-olds found that, those who had extra-curricular music classes, developed higher verbal IQ, and visual abilities, in comparison to those with no musical training.	Fact	Forgeard et al., "Practicing a Musical Instrument in Childhood is Associated with Enhanced Verbal Ability and Nonverbal Reasoning," PLOS One, 2008.
<b>Educational</b>	Child	A study of almost one thousand Finnish pupils who took part in extended music classes, found they reported higher satisfaction at school in almost every area, even those not related to the music classes themselves.	Fact	Eerola & Eerola, "Extended music education enhances the quality of school life," Music Education Research, 2013.



<b>Cognitive</b>	Child	Music training not only helps children develop fine motor skills, but aids emotional and behavioral maturation as well, according to a new study, one of the largest to investigate the effects of playing an instrument on brain development.	Fact	<a href="#">Amy Ellis Nutt, "Music lessons spur emotional and behavioral growth in children, new study says," The Washington Post, January 7, 2015.</a>
<b>Cognitive</b>	Child	"A kid with a music degree isn't limited to a performance or teaching career. Musicians are everywhere. We are project managers, marketers, Finance folks, IT people and engineers. In my twenty-some years as a corporate HR person, I was always impressed by the way musical people excelled at logic and non-linear thinking, both."	Quote	Liz Ryan, "Let the kids study music, already!" Forbes, September 3, 2014.

<b>Educational</b>	Child	"Being able to think on your feet, approach tasks from different perspectives and think 'outside of the box' will distinguish your child from others. In an arts program, your child will be asked to recite a monologue in 6 different ways, create a painting that represents a memory, or compose a new rhythm to enhance a piece of music. If children have practice thinking creatively, it will come naturally to them now and in their future career."	Quote	Lisa Phillips, "The artistic edge: 7 skills children need to succeed in an increasingly right brain world," ARTSblog, Americans for the Arts, 2013.
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<b>Cognitive</b>	Child	"When a child picks up a violin for the first time, she/he knows that playing Bach right away is not an option; however, when that child practices, learns the skills and techniques and doesn't give up, that Bach concerto is that much closer. In an increasingly competitive world, where people are being asked to continually develop new skills, perseverance is essential to achieving success."	Quote	Lisa Phillips, "The artistic edge: 7 skills children need to succeed in an increasingly right brain world," ARTSblog, Americans for the Arts, 2013.
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<b>Cognitive</b>	Child	"The ability to focus is a key skill developed through ensemble work. Keeping a balance between listening and contributing involves a great deal of concentration and focus. It requires each participant to not only think about their role, but how their role contributes to the big picture of what is being created. Recent research has shown that participation in the arts improves children's abilities to concentrate and focus in other aspects of their lives."	Quote	Lisa Phillips, "The artistic edge: 7 skills children need to succeed in an increasingly right brain world," ARTSblog, Americans for the Arts, 2013.
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<b>Social</b>	Child	"When a child has a part to play in a music ensemble, or a theater or dance production, they begin to understand that their contribution is necessary for the success of the group. Through these experiences children gain confidence and start to learn that their contributions have value even if they don't have the biggest role."	Quote	Lisa Phillips, "The artistic edge: 7 skills children need to succeed in an increasingly right brain world," ARTSblog, Americans for the Arts, 2013.
<b>Educational</b>	Child	"I believe arts education in music, theater, dance, and the visual arts is one of the most creative ways we have to find the gold that is buried just beneath the surface. They (children) have an enthusiasm for life a spark of creativity, and vivid imaginations that need training – training that prepares them to become confident young men and women."	Quote	Richard W. Riley, Former US Secretary of Education

<b>Educational</b>	Child	"Music education opens doors that help children pass from school into the world around them – a world of work, culture, intellectual activity, and human involvement. The future of our nation depends on providing our children with a complete education that includes music."	Quote	Gerald Ford, Former President of the United States
<b>Educational</b>	Child	"Music is about communication, creativity, and cooperation, and by studying music in schools, students have the opportunity to build on these skills, enrich their lives, and experience the world from a new perspective."	Quote	Bill Clinton, Former President of the United States

<b>Educational</b>	Child	A 2012 U.S. Department of Education report that compared surveys from 1999-2000 and 2009-2010 found that music was offered in 94 percent of elementary schools during both timeframes, and that visual art offerings dropped only slightly, from 87 percent of schools in 2000 to 82 in 2010.	Fact	Jessica Siegel, "Amid Tests and Tight Budgets, Schools Find Room for Arts," CityLimits.Org, June 7, 2013.
<b>Cognitive</b>	Child	Music training leads to greater gains in auditory and motor function when begun in young childhood; by adolescence, the plasticity that characterizes childhood has begun to decline. Nevertheless, our results establish that music training impacts the auditory system even when it is begun in adolescence, suggesting that a modest amount of training begun later in life can affect neural function.	Fact	Adam T. Tierney, Jennifer Krizman, Nina Kraus, "Music training alters the course of adolescent auditory development," Proceedings of the National Academy of Sciences, 2015.

<b>Social</b>	Child	95 percent of Americans consider music to be part of a well-rounded education, and 93 percent feel that schools should offer music education as part of the regular curriculum. Nearly four in five (79 percent) even say that music education should be mandated for every student in school.	Fact	2003 Gallup Poll conducted for NAMM.
<b>Educational</b>	Child	"A broad education in the arts helps give children a better understanding of their world... We need students who are culturally literate as well as math and science literate."	Quote	Paul Ostergard, Vice President, Citicorp.
<b>Educational</b>	Child	"Arts education aids students in skills needed in the workplace: flexibility, the ability to solve problems and communicate, the ability to learn new skills, to be creative and innovative, and to strive for excellence."	Quote	Joseph M. Calahan, Director of Cooperate Communications, Xerox Corporation.



<b>Educational</b>	Child	Learning a musical language could have cognitive benefits similar to those evident in bilingual children. Although this view has intuitive appeal because music and language are both auditory communication systems, the positive effects of bilingualism are evident for fluid intelligence (i.e., executive control) but not for crystallized intelligence (e.g., knowledge acquired through experience, such as vocabulary), whereas the effects of music lessons appear to extend to both domains.	Fact	E. Glenn Schellenberg, "Music and Cognitive Abilities," <i>Current Directions in Psychological Science Journal</i> , Vol. 14, No. 6, December 2005.
<b>Social</b>	Child	The hope of our music, the entire future of our music, unquestionably lies in our children.	Quote	Aubertine Woodward Moore, "Our Children, The Hope of Music: Building a Musical America," <i>The Art World</i> , Vol. 2, No. 6, pp. 512-514, September 1917.

<b>Health</b>	Child	Research indicates the brain of a musician, even a young one, works differently than that of a non-musical. "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."	Quote	Dr. Eric Rasmussen, chair of the Early Childhood Music Department at the Peabody Preparatory of The John Hopkins University, quoted in "The Benefits of Music Education," pbs.org, Laura Lewis Brown.
<b>Educational</b>	Child	Nine in ten adults believe students benefit from having music included in their curriculum (89 percent)...	Fact	"Public Schools are Improving Their Grades, but Private Schools Remain at the Head of the Class," Harris Poll, September 29, 2015.
<b>Educational</b>	Child	"I would teach children music, physics, and philosophy; but most importantly music, for the patterns in music and all the arts are the keys to learning."	Quote	Plato.

<b>Cognitive</b>	All	Musicians are found to have superior working memory compared to non-musicians.	Fact	Berti, et al., 2006; Pallesen et al., "Cognitive Control in Auditory Working Memory Is Enhanced in Musicians," PLOS One, June 15, 2010.
<b>Social</b>	All	"To you beautiful wonderful students, you lifted us all up this morning. That's what music does, it lifts you up."	Quote	Larry Morton, former NAMM Board Chairman & President of Hal Leonard Corporation
<b>Social</b>	All	"Music is a tool for social justice."	Quote	Dinorah Marquez, Program Director, Latino Arts Strings Program
<b>Social</b>	All	"Music became my voice and it became the bridge to a larger culture."	Quote	Dinorah Marquez, Program Director, Latino Arts Strings Program
<b>Educational</b>	All	Music programs are constantly in danger of being cut from shrinking school budgets even though they're proven to improve academics.	Fact	National Center for Education Statistics. "Arts Education in Public Elementary and Secondary Schools, 1999-2000 and 2009-2010." National Center for Education Statistics. Accessed February 24, 2015. .
<b>Cognitive</b>	All	A Stanford study shows that music engages areas of the brain which are involved with paying attention, making predictions and updating events in our memory.	Fact	Baker, Mitzi. "Music moves brain to pay attention, Stanford study finds." Stanford Medicine. Accessed February 24, 2015.

<b>Cognitive</b>	All	Much like expert technical skills, mastery in arts and humanities is closely correlated to a greater understanding of language components.	Fact	Trei, Lisa. "Musical training helps language processing, studies show." Stanford News. Accessed February 24, 2015.
<b>Educational</b>	All	Students in high-quality school music education programs score higher on standardized tests compared to students in schools with deficient music education programs, regardless of the socioeconomic level of community.	Fact	Nature Neuroscience, April 2007
<b>Cognitive</b>	All	Early childhood training in instrumental music improves the ability to pay attention--visual focus, active listening, and staying on task.	Fact	Neville, H., et al. (2008). Effects of Music Training on Brain and Cognitive Development in Underprivileged 3- to 5-year-old Children: Preliminary Results. In C. Asbury & B. Rich (Eds.), Learning, Arts, and the Brain: The Dana Consortium Report on Arts and Cognition (pp. 105-116). New York, NY: Dana Press.
<b>Social</b>	All	Perseverance is developed and strengthened through music education.	Fact	Scott, L. (1992). Attention and Perseverance Behaviors of Preschool Children Enrolled in Suzuki Violin Lessons and Other Activities. Journal of Research in Music Education, 40(3), 225-235.

<b>Social</b>	All	Music education helps develop originality and flexibility, which are key components of creativity and innovation.	Fact	Craft, A. (2001). An Analysis of Research and Literature on Creativity and Education. Report Prepared for the Qualifications and Curriculum Authority. Coventry, England. Strategic National Arts Alumni Project (SNAAP). (2010). Forks in the Road: The Many Paths of Arts Alumni: Strategic National Arts Alumni Project 2010 Findings. Bloomington, IN.
<b>Educational</b>	All	Music education prepares the brain for achievement.	Fact	Arts Education Partnership, 2011
<b>Educational</b>	All	Music education fosters superior working memory.	Fact	Arts Education Partnership, 2011
<b>Educational</b>	All	Music education cultivates better thinking skills.	Fact	Arts Education Partnership, 2011
<b>Educational</b>	All	Music education improves recall and retention of verbal information.	Fact	Arts Education Partnership, 2011
<b>Educational</b>	All	Music education advances math achievement.	Fact	Arts Education Partnership, 2011
<b>Educational</b>	All	Music education boosts reading and English language skills.	Fact	Arts Education Partnership, 2011

<b>Social</b>	All	Music education strengthens perseverance.	Fact	Arts Education Partnership, 2011
<b>Educational</b>	All	Fewer than half of school music programs have the musical instruments or even sheet music they need for all participating students, both teachers and parents say.	Fact	NAMM Foundation and Grunwald Associates LLC (2015). Striking a Chord: The Public's Hopes and Beliefs for K-12 Music Education in the United States: 2015.
<b>Educational</b>	All	Parents and teachers in urban schools are clamoring for expansion of programs to match the access to and attributes of programs in suburban schools.	Fact	NAMM Foundation and Grunwald Associates LLC (2015). Striking a Chord: The Public's Hopes and Beliefs for K-12 Music Education in the United States: 2015.

<b>Social</b>	All	Parents and teachers in Western states report that schools trail their counterparts in other regions on a number of measures; they feel more strongly than those in other regions that music should be a core subject. Parents and teachers in the West are the least satisfied about the status of their music programs.	Fact	NAMM Foundation and Grunwald Associates LLC (2015). Striking a Chord: The Public's Hopes and Beliefs for K–12 Music Education in the United States: 2015.
<b>Cognitive</b>	All	Musical experience strengthens many of the same aspects of brain function that are impaired in individuals with language and learning difficulties, such as the neural timing precision which allows differentiation between speech syllables.	Fact	Kraus, N. and B. Chandrasekaran, Music training for the development of auditory skills. Nature Reviews Neuroscience, 2010. 11(8): p. 599-605.

<b>Cognitive</b>	All	Musical expertise is associated with distinctive enhancements in how the nervous system encodes sound (such as stronger representation of harmonic information and greater resilience to noise) that emerge with musical training, even in early childhood.	Fact	Strait, D.L., et al., Musical training during early childhood enhances the neural encoding of speech in noise. <i>Brain Lang</i> , 2012. 123(3): p. 191-201.
<b>Cognitive</b>	All	Studies show that even a few years of musical training early in life improve how the brain processes sound, and that the benefits of early exposure to music education last well into adulthood, years after the training has ceased	Fact	Skoe, E. and N. Kraus, A little goes a long way: how the adult brain is shaped by musical training in childhood. <i>The Journal of Neuroscience</i> , 2012. 32(34): p. 11507-11510.



<b>Social</b>	All	"The arts are central to who we are as a people, and they are central to the success of our kids. This is not an afterthought. This is not something you do because it's nice to do. It is necessary for these young people to succeed that we promote the arts."	Quote	President Barack Obama
<b>Social</b>	All	Seven in ten Americans (71%) say that the learning's and habits from music education equip people to be better team players in their careers.	Fact	July 2014 Harris Poll
<b>Social</b>	All	Two-thirds (67%) of Americans say music education provides people with a disciplined approach to solving problems.	Fact	July 2014 Harris Poll

<b>Social</b>	All	Two-thirds (66%) of Americans say that music education prepares someone to manage the tasks of their job more successfully.	Fact	July 2014 Harris Poll
<b>Cognitive</b>	All	Three in five Americans (61%) said it [music education] provided a disciplined problem solving approach and 59% said it prepared people to manage tasks more successfully.	Fact	July 2014 Harris Poll
<b>Social</b>	All	Four out of five Americans (80%) believe their music education has contributed to their level of personal fulfillment.	Fact	July 2014 Harris Poll
<b>Social</b>	All	"I was twelve when I learned my first three chords on guitar and wrote my first song. My life changed forever... music became the way I told my stories."	Quote	Taylor Swift

<b>Social</b>	All	Music education lays the foundation for individual excellence in group settings, creative problem solving, and flexibility in work situations.	Fact	July 2014 Harris Poll
<b>Health</b>	All	"We don't see these kinds of biological changes in people who are just listening to music, who are not playing an instrument. I like to give the analogy that you're not going to become physically fit just by watching sports."	Quote	Nina Kraus, director of Northwestern's Auditory Neuroscience Laboratory, quoted in Melissa Locker, "This Is How Music Can Change Your Brain," Time, December 16, 2014.
<b>Social</b>	All	"Music is like a dialogue because we can play a certain thing – let's say the violins can play something back –it could be the same melody different notes and it's like a conversation talking back and forth."	Quote	VIANEY CALIXTO, student and Harmony Project Participant quoted in PBS NEWS HOUR. <a href="http://www.pbs.org/newshour/bb/education-jan-june14-harmony_01-04/">http://www.pbs.org/newshour/bb/education-jan-june14-harmony_01-04/</a>

<b>Cognitive</b>	All	<p>"People who had musical training are better at hearing speech in noise. And it's not that different from what you're asking your nervous system to do when you're listening for a teacher's voice in a noisy classroom.</p> <p>And so we just simply know that if we ask people to repeat back sentences that are presented to them in background noise that if you have musical training, that you are better at repeating back the sentences accurately than if you did not have that musical training."</p>	Quote	<p>Dr. Nina Kraus, director of Northwestern's Auditory Neuroscience Laboratory quoted PBS NEWS HOUR, <a href="http://www.pbs.org/newshour/bb/education-jan-june14-harmony_01-04/">http://www.pbs.org/newshour/bb/education-jan-june14-harmony_01-04/</a></p>
<b>Health</b>	All	<p>Music can meaningfully reduce the perceived intensity of pain, especially in geriatric care, intensive care, or palliative medicine (an area of healthcare that focuses on preventing and relieving the suffering of patients).</p>	Fact	<p>Scott Christ, "20 surprising, science-backed health benefits of music," USA Today, December 17, 2013.</p>

<b>Health</b>	All	One study found that listening to music after a workout can help the body recover faster. While slow music produced a greater relaxation effect post-exercise, it seems that any kind of music can help the physical recovery process.	Fact	Scott Christ, "20 surprising, science-backed health benefits of music," USA Today, December 17, 2013.
<b>Health</b>	All	One study found that playing soft music (and dimming the lights) during a meal can help people slow down while eating and ultimately consume less food in one sitting.	Fact	Scott Christ, "20 surprising, science-backed health benefits of music," USA Today, December 17, 2013.
<b>Health</b>	All	Scientists have found that the emotions patients experience while listening to music have a healthy effect on blood vessel function. Music both made study participants feel happier and resulted in increased blood flow in their blood vessels.	Fact	Scott Christ, "20 surprising, science-backed health benefits of music," USA Today, December 17, 2013.

<b>Cognitive</b>	All	<p>Have you ever felt chills down your spine while listening to music?          According to a study by Nusbaum and Silvia (2010), over 90% of us have. How powerful the effects of music, though, depends on your personality. People who are high in one of the five personality dimensions called 'openness to experience', are likely to feel the most chills while listening to music.</p>	Fact	<p>Nusbaum and Silvia, "Shivers and Timbres          Personality and the Experience of Chills From Music," Social Psychology &amp; Personality Science, (2010).</p>
<b>Social</b>	All	<p>People high in openness to experience are more likely to play a musical instrument, and more likely to rate music as important to them.</p>	Fact	<p>Nusbaum and Silvia, "Shivers and Timbres          Personality and the Experience of Chills From Music," Social Psychology &amp; Personality Science, (2010).</p>

<b>Social</b>	All	In research by Ferguson and Sheldon (2013), participants who listened to upbeat classical compositions by Aaron Copland, while actively trying to feel happier, felt their moods lift more than those who passively listened to the music. This suggests that engaging with music, rather than allowing it to wash over us, gives the experience extra emotional power.	Fact	Ferguson and Sheldon, "Trying to be happier really can work: Two experimental studies," The Journal of Positive Psychology: Dedicated to furthering research and promoting good practice, (2013).
<b>Social</b>	All	A review of 23 studies covering almost 1,500 patients found that listening to music reduced heart rate, blood pressure and anxiety in heart disease patients.	Fact	Bradt & Dileo, "Music for stress and anxiety reduction in coronary heart disease patients," PubMed.Gov, 2009

<b>Cognitive</b>	All	<p>According to a study by Kawakami et al. (2013), sad music is enjoyable because it creates an interesting mix of emotions; some negative, some positive.</p> <p>Crucially, we perceive the negative emotions in the music, but don't feel them strongly.</p>	Fact	Kawakami et al., "Sad music induces pleasant emotion," <i>Frontiers in Psychology</i> , (2013).
<b>Social</b>	All	<p>A study by Logeswaran et al. (2009) found that a quick blast of happy music made participants perceive other's faces as happier. The same was true for a snippet of sad music. The biggest effect was seen when people looked at faces with a neutral expression.</p> <p>In other words: people projected the mood of the music they were listening to onto other people's faces.</p>	Fact	Logeswaran et al., "Crossmodal transfer of emotion by music," <i>Neuroscience Letters</i> , (2009).



<b>Social</b>	All	In a study by Palmer et al. (2013), people from both Mexico and the US showed remarkable similarities in connecting duller, darker colors with sadder pieces of music and lighter, more vivid colors with happier music. A follow-up study showed that these music-to-color associations were seen because of the emotional content of the music.	Fact	Palmer et al., "Music–color associations are mediated by emotion," PNAS, (2013).
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<b>Cognitive</b>	All	<p>"Look carefully and you'll find musicians at the top of almost any industry. Woody Allen performs weekly with a jazz band. The television broadcaster Paula Zahn (cello) and the NBC chief White House correspondent Chuck Todd (French horn) attended college on music scholarships; NBC's Andrea Mitchell trained to become a professional violinist. Both Microsoft's Mr. Allen and the venture capitalist Roger McNamee have rock bands. Larry Page, a co-founder of Google, played saxophone in high school. Steven Spielberg is a clarinetist and son of a pianist. The former World Bank president James D. Wolfensohn has played cello at Carnegie Hall."</p>	Quote	<p>Joanne Lipman, "Is Music the Key to Success?" The New York Times, October 13, 2013.  <a href="http://www.nytimes.com/2013/10/13/opinion/sunday/is-music-the-key-to-success.html?_r=0">http://www.nytimes.com/2013/10/13/opinion/sunday/is-music-the-key-to-success.html?_r=0</a></p>
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<b>Cognitive</b>	All	"Music may not make you a genius, or rich, or even a better person. But it helps train you to think differently, to process different points of view — and most important, to take pleasure in listening."	Quote	Joanne Lipman, "Is Music the Key to Success?" The New York Times, October 13, 2013. <a href="http://www.nytimes.com/2013/10/13/opinion/sunday/is-music-the-key-to-success.html?_r=0">http://www.nytimes.com/2013/10/13/opinion/sunday/is-music-the-key-to-success.html?_r=0</a>
<b>Cognitive</b>	All	Researchers found that those who played an instrument for two years showed a stronger "neurophysiological distinction" between certain sounds than children who didn't get the instrumental training. For instance, the music-makers more easily could tell the difference between the words "bill" and "pill," a key skill in learning to read.	Fact	Skoe, E. & Kraus, N. (2012). A Little Goes a Long Way: How the Adult Brain Is Shaped by Musical Training in Childhood, <i>Journal of Neuroscience</i> , 32 (34) 11510. DOI: 10.1523/JNEUROSCI.1949-12.2012
<b>Cognitive</b>	All	"When you play a musical instrument you have to learn about tone and about scores and your ability to store audio information becomes better. So not only does this make it easier to pick up other languages and have a better verbal memory in your own language, we have also seen that musicians are able to pick out exactly what others are feeling just on the tone of their voices. Empathy, disappointment, that kind of thing."	Quote	Quoted in "Playing a Musical Instrument Makes you Brainier," by Richard Alleyne, <i>The Telegraph</i> , 10/27/2009.

<b>Health</b>	All	Studies show that music can trigger the brain to release chemicals that distract the body from pain. When music reaches the brain's auditory cortex, there's communication between the cortex and the brain's areas that control emotion, memory, and motor control.	Fact	Abbie Fenress Swanson, "Music helps vets control symptoms of PTSD," Time, March 8, 2010.
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<b>Cognitive</b>	All	Researchers from Ohio State University's Wexner Medical Center looked at how different types of music and silence were processed in the brains of 21 people with epilepsy. Whether listening to classical music or jazz, all of the participants had much higher levels of brain wave activity when listening to music, the study found. Brain wave activity in the epilepsy patients tended to synchronize more with the music, especially in the temporal lobe, the researchers said.	Fact	Robert Preidt, HealthDay, August 10, 2015
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<b>Cognitive</b>	All	<p>"Music has positive affects on people's emotions and creativity. When we sing together, we synchronize our breathing and feel more connected. Music is also an effective, almost magical medium for learning and retaining information, [because] it activates three different centers of the brain at the same time: language, hearing, and rhythmic motor control. By inducing emotions, it also creates a heightened condition of awareness and mental acuity. Words paired with music are far easier to retain. As an example, most of us can remember the words and meanings of songs we haven't heard for years. Isn't it interesting how you still remember your ABCs?"</p>	Quote	<p>Don McMannis quoted in, "Use Music to develop kids' skill and character," Edutopia, March 19, 2009.</p>
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<b>Cognitive</b>	All	<p>"The perception of music and the emotions it can stir is not solely dependent on memory, and music does not have to be familiar to exert its emotional power. I have seen deeply demented patients weep or shiver as they listen to music they have never heard before, and I think that they can experience the entire range of feelings the rest of us can, and that dementia, at least at these times, is no bar to emotional depth. Once one has seen such responses, one knows that there is still a self to be called upon, even if music, and only music, can do the calling."</p>	Quote	<p>Oliver Sacks quoted in, "Use Music to develop kids' skill and character," Edutopia, March 19, 2009.</p>
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<b>Cognitive</b>	All	<p>“We need people who think with the creative side of their brains—people who have played in a band, who have painted...it enhances symbiotic thinking capabilities, not always thinking in the same paradigm, learning how to kick-start a new idea, or how to get a job done better, less expensively.”</p>	Quote	Annette Byrd, GlaxoSmithKline
<b>Social</b>	All	<p>“I must study politics and war, that my sons may study mathematics and philosophy...in order to give their children the right to study painting, poetry, music and architecture.”</p>	Quote	John Q. Adams



<b>Social</b>	All	"Music is universal. It's a gazillion dollar industry, and it is omnipresent. How many hours in a row do you ever go without listening to music? Everywhere you go, everything you watch– music. Always music. We are surrounded in it, bathe in it, soak in it. Why would we not want to know more about something constantly present in our lives? Would you want to live in a world without music? Then why would you want to have a school without music?"	Quote	Peter Greene, "Stop 'defending' music education," The Huffington Post, June 11, 2015.
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<b>Social</b>	All	<p>"Music is freakin' magical. In 40-some years I have never gotten over it — you take some seemingly random marks on a page, you blow air through a carefully constructed tube, and what comes out the other side is a sound that can convey things that words cannot. And you just blow air through a tube. Or pull on a string. Or whack something. And while we can do a million random things with a million random objects, somehow, when we just blow some air through a tube, we create sounds that can move other human beings, can reach right into our brains and our hearts. That is freakin' magical."</p>	Quote	<p>Peter Greene, "Stop 'defending' music education," The Huffington Post, June 11, 2015.</p>
<b>Social</b>	All	<p>"Music is awesome. It's human. It's universal. It's big business precisely because it is something that everybody wants."</p>	Quote	<p>Peter Greene, "Stop 'defending' music education," The Huffington Post.</p>

<b>Health</b>	All	Due to the overlap of brain circuits dedicated to speech and music, and the distributed network of cognitive, sensorimotor, and reward circuits engaged during music making, we believe that music training is a particularly potent driver of brain plasticity that influences the biological processes important for listening, language, and learning.	Fact	"Neuroeducation: From the Lab to the Classroom," School-Based Music Summary, Northwestern University.
<b>Health</b>	All	Musical training is thought to improve nervous system function by focusing attention on meaningful acoustic cues, and these improvements in auditory processing cascade to language and cognitive skills.	Fact	Nina Kraus, Jessica Slater, Elaine C. Thompson, Jane Hornickel, Dana L. Strait, Trent Nicol, Travis White-Schwoch, "Music Enrichment Programs Improve the Neural Encoding of Speech in At-Risk Children," Journal of Neuroscience, September 3, 2014.
<b>Social</b>	All	"Music is a higher revelation than all wisdom and philosophy."	Quote	Ludwig van Beethoven quoted in "Music Is a Potent Source of Meaning," Tom Jacobs, August 20, 2015.

<b>Social</b>	All	"Music is a more potent instrument than any other for education, because rhythm and harmony find their way into the inward places of the soul."	Quote	Plato.
<b>Educational</b>	All	"Music learning supports all learning. Not that Mozart makes you smarter, but it's a very integrating, stimulating pastime or activity."	Quote	Kenneth Guilmartin, cofounder of Music Together, quoted in "The Benefits of Music Education," PBS.org, Laura Lewis Brown.
<b>Educational</b>	All	"Students of all ages - that includes adults - generally find that music helps them focus more clearly on the task at hand and puts them in a better mood for learning."	Quote	Chris Brewer, founder of LifeSounds Educational Services, quoted in "Boost Memory and Learning with Music," pbs.org, Cheri Lucas.

<b>Health</b>	All	<p>It is said that the state of mankind improves through music; music not only trains but educates individuals and makes them fit for a life of community. Music is spiritual and mental food, an edifying and educational power. In comparison with sports (the motion of bodies), music (the motion of sounds) belongs to a higher sphere. In extreme cases, one encounters the tenet that music actually elevates man into a higher realm, transforming him into a new form of the human species.</p>	Fact	<p>Albrecht Riethmüller, "Music Beyond Ethics," Archiv für Musikwissenschaft, p. 170, Volume 65, Issue 3, 2008.</p>
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<b>Cognitive</b>	All	Both music and language are complex communication systems, in which basic components are combined into high-order structures in accordance with rules. Whether music was an evolutionary precursor to language or merely a byproduct of cognitive faculties that developed to support language, music is pervasive across human cultures and throughout history...	Fact	Nina Kraus, Jessica Slater, "Music and language: relations and disconnections," <i>The Human Auditory System: Fundamental Organization and Clinical Disorders</i> , Vol. 29, 3rd Series, 2015.
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<b>Cognitive</b>	All	Cross-sectional comparisons of musicians to non-musicians have established a variety of musician enhancements in auditory skills and their neural substrates, extending from enhanced perception and neural encoding of speech, most notably in suboptimal listening conditions, to more proficient auditory working memory and auditory attention.	Fact	Nina Kraus, Dana L. Strait, "Emergence of biological markers of musicianship with school-based music instruction," Annals of the New York Academy of Sciences, 2015.
<b>Educational</b>	All	"Whoever has skill in music is of good temperament and fitted for all things. We must teach music in schools."	Quote	Martin Luther
<b>Social</b>	All	"Music expresses that which cannot be put into words and that which cannot remain silent."	Quote	Victor Hugo.

<b>Social</b>	All	"I would say that music is the easiest means in which to express, but since words are my talent, I must try to express clumsily in words what the pure music would have done better."	Quote	William Faulkner.
<b>Social</b>	All	"After silence, that which comes nearest to expressing the inexpressible is music."	Quote	Aldous Huxley.
<b>Educational</b>	Adult	"Music has impacted me... helping my ability to do math and to read, and to think critically."	Quote	Fatima Gomez, BGCS/Latino Arts Strings Program Alumnus
<b>Educational</b>	Adult	The College Entrance Examination Board found that students involved in public school music programs scored 107 points higher on the SAT's than students with no participation.	Fact	Profiles of SAT and Achievement Test Takers, The College Board, compiled by the Music Educators National Conference (2002)



<b>Cognitive</b>	Adult	<p>Adults who receive formal music instruction as children have more robust brainstem responses to sound than peers who never participate in music lessons and that the magnitude of the response correlates with how recently training ceased. These results suggest that neural changes accompanying musical training during childhood are retained in adulthood.</p>	Fact	<p>Skoe, E. &amp; Kraus, N. (2012). A Little Goes a Long Way: How the Adult Brain Is Shaped by Musical Training in Childhood, <i>Journal of Neuroscience</i>, 32 (34) 11510. DOI: 10.1523/JNEUROSCI.1949-12.2012</p>
<b>Social</b>	Adult	<p>Graduates from music programs report that creativity, teamwork, communication, and critical thinking are skills necessary in their work, regardless of whether they are working in music or other fields.</p>	Fact	<p>Craft, A. (2001). <i>An Analysis of Research and Literature on Creativity and Education</i>. Report Prepared for the Qualifications and Curriculum Authority. Coventry, England. Strategic National Arts Alumni Project (SNAAP). (2010). <i>Forks in the Road: The Many Paths of Arts Alumni: Strategic National Arts Alumni Project 2010 Findings</i>. Bloomington, IN.</p>

<b>Educational</b>	Adult	Nearly half of parents and teachers support integrating music into the professional development of all educators	Fact	NAMM Foundation and Grunwald Associates LLC (2015). Striking a Chord: The Public's Hopes and Beliefs for K–12 Music Education in the United States: 2015.
<b>Health</b>	Adult	A study of healthy male college students found that, while riding stationary bicycles, the participants worked harder while listening to fast music. Extra bonus: They also enjoyed the music more.	Fact	Scott Christ, "20 surprising, science-backed health benefits of music," USA Today, December 17, 2013.
<b>Health</b>	Adult	Listening to classical music has been shown to effectively treat insomnia in college students.	Fact	Scott Christ, "20 surprising, science-backed health benefits of music," USA Today, December 17, 2013.

<b>Social</b>	Adult	Both the Greek and Roman armies used brass and percussion instruments — including the ancestors of the modern cornet and tuba — to convey information on the march, in the field and in camp. Greek armies on campaign employed musicians to accompany poetic recitations of odes and paeans designed to remind soldier and citizen alike of the valor of past heroes. After the collapse of Rome in the West, its tradition of martial music was preserved and refined by the Eastern empire in Byzantium.	Fact	<a href="#">HistoryNet Staff, "The Music of War," History.net, June 6, 2012.</a>
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<b>Educational</b>	Adult	<p>Soldiers of the 1700s were required to function almost as automatons, to obey, smoothly and in formation, whatever commands were given by their superiors. With clouds of gun smoke added to the din of combat, oral commands or personal example were not always reliable means of giving direction to an army. An order that was not heard — or worse, not understood — could be as dangerous as the enemy. Musically transmitted signals, however, could be heard above the crash of gunfire. The voice of the trumpet and the cadence of the drums were clear and unambiguous, making them vital to command and control.</p>	Fact	<p><a href="#">HistoryNet Staff, "The Music of War," History.net, June 6, 2012.</a></p>
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<b>Social</b>	Adult	When the first American soldiers manual — compiled by Maj. Gen. Wilhelm von Steuben — was issued to the Continental Army in 1778, it contained a list of beats and signals modeled on those used in European armies. More quickly than in Europe, however, the bugle replaced the fife and drum ensemble in the American ranks. In 1867 bugle calls for the U.S. armed forces, mostly patterned after French models, were codified and standardized into a form that largely survives today.	Fact	<a href="#">HistoryNet Staff, "The Music of War," History.net, June 6, 2012.</a>
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<b>Social</b>	Adult	While burgeoning technology eclipsed the need for music to accompany movement on the battlefield by the mid-20th century, it remained an effective means by which states could manipulate the morale, energies and attitudes of armies and indeed entire populations.	Fact	<a href="#">HistoryNet Staff, "The Music of War," History.net, June 6, 2012.</a>
<b>Cognitive</b>	Adult	"You have to understand what it means for a combat veteran to be agitated in the waiting room. Their pupils are dilated. They are angry or waiting for something to happen. But when we have live music that day, they come to me far more relaxed. It's like an amazing miracle, and I don't say that lightly."	Quote	Dr. Hani Khouzam, quoted in, "Live music at Fresno's VA Hospital makes a big difference," by Diana Marcum, <i>Los Angeles Times</i> , January 16, 2013.

<b>Educational</b>	Adult	<p>The formal discipline of music therapy has a rich, long history in providing services for our American heroes. It began after World Wars I and II, when community musicians performed in veterans' hospitals and medical professionals noticed patients' positive and emotional responses to music. In 1944, when it became evident that these hospital musicians required special training, the first music therapy degree program was founded. Currently, approximately 50 qualified music therapists work in VA hospitals throughout the U.S., according to Al Bumanis, director of communications at the American Music Therapy Association.</p>	Fact	<p>"Music Therapy and the Military," by Ronna Kaplan, Huffington Post, March 4, 2013.</p>
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<b>Cognitive</b>	Adult	Music therapy utilizing improvisation on hand drums helped veterans modulate their "often misdirected, exaggerated, and unrecognized emotions," with the goal being generalization of these skills to everyday life. Drumming provided an opportunity for the men to express and control their feelings and helped build a sense of connectedness and group mission.	Fact	Burt, J. W. (1995). Distant Thunder: Drumming with Vietnam Veterans. <i>Music Therapy Perspectives</i> , 13, 110-112; quoted in, "Music Therapy and the Military," by Ronna Kaplan, <i>Huffington Post</i> , March 4, 2013.
<b>Social</b>	Adult	Since 2005, the VA has more than doubled the number of music therapists at its clinics.	Fact	Abbie Fenress Swanson, "Music helps vets control symptoms of PTSD," <i>Time</i> , March 8, 2010.
<b>Educational</b>	Adult	Schools with music programs have an estimated 90.2% graduation rate and 93.9% attendance rate compared to schools without music education programs who average 72.9% graduation and 84.9% attendance.	Fact	(2017). Why Music Education; quoted in <i>Sounds Academy</i> , February 2, 2017.



<b>Educational</b>	Adult	"The value of music programs is immeasurable in the development of a young person's identity in being part of a community."	Quote	Colin Cripps, 2017, quoted in, "2017 MusiCounts Teacher of the Year Recipient," MusicCounts, February 6, 2017.
<b>Educational</b>	Adult	"Music isn't optional. It needs to be given priority in schools as they're deciding what's important."	Quote	Jimi Westbrook, Little Big Town, quoted in "Little Big Town Surprises a High School Choir to Promote Music Education," by Steve Helling, People, January 21, 2017
<b>Educational</b>	Adult	"Music education is so important for kids. Obviously, it helps them learn about music, but it also develops their creativity. The students learn to work together as a group. There are so many life lessons that can be taught through music."	Quote	Karen Fairchild, Little Big Town, quoted in "Little Big Town Surprises a High School Choir to Promote Music Education," by Steve Helling, People, January 21, 2017
<b>Cognitive</b>	Adult	"Playing a musical instrument in a group engages more regions of the brain simultaneously than any other activity."	Quote	Bryan Tuk, quoted in "Creativity Works column: The consequences of cutting music programs," by William Childs, The Morning Call, January 19, 2017

<b>Educational</b>	Adult	Research indicates that musicians perform significantly better on tests of Spatial-Temporal Skills, Math Ability Reading Skills, Vocabulary, Verbal Memory, and Phonemic Awareness.	Fact	(2017). Why Music Education; quoted in Sounds Academy, February 2, 2017.
<b>Educational</b>	Adult	89% of school principals surveyed believed a high-quality music education program helps to their school achieving higher graduation rates.	Fact	(2017). Why Music Education Matters; quoted in Mark Wood Music Foundation, February 6, 2017.
<b>Educational</b>	Child	"I think every child deserves to learn music, just like every child deserves to learn how to read and do math."	Quote	Lydia Kontos, quoted in "NYC's only K-12 school with music as core subject sees high outcomes," by Tara Garcia, Education Dive, January 17, 2017
<b>Educational</b>	Child	"The research is clear and undisputed: students who study music perform better overall. Music study enhances other academic studies through the intrinsic development of creative thinking, problem solving, and language skills."	Quote	Dr. Richard Nickerson, quoted in "Fostering Empowerment: Music Educator Award™ Finalist Richard Nickerson," by Brendan McAloon, NAFME, February 6, 2017

<b>Educational</b>	Teen	Playing an instrument helps youngsters better process speech in noisy classrooms and more accurately interpret the nuances of language that are conveyed by subtle changes in the human voice.	Fact	(2017). Why Music Education Matters; quoted in the Phoenix Symphony, February 6, 2017.
<b>Educational</b>	Child	Students who report consistent high levels of involvement in instrumental music over the middle and high school years show significantly higher levels of mathematics proficiency by grade 12.	Fact	(2017). Why Music Education Matters; quoted in the Phoenix Symphony, February 6, 2017.

<b>Educational</b>	Child	Music engages both sides of the brain and your child must concentrate on doing several things simultaneously: reading the music; creating the right sounds with their instrument; listening to the sounds created; following the music; keeping tempo; listening to other musicians; and paying attention to the conductor's instructions.	Fact	(2017). Top 10 Facts About Music Education; quoted in Trinity Grammar School, February 6, 2017.
<b>Educational</b>	Child	"Music has saved a lot of children because sometimes children are hyperactive and they don't know what to do with all that energy. When you get them involved in music and the arts it gives them something to focus on and they realize it's something that they're good at."	Quote	Kalena Bovell, quoted in "Chicago Sinfonietta conductor Kalena Bovell talks importance of music education," by Lauren Martinez, Rolling Out, December 24, 2016.

<b>Educational</b>	Child	"The development of multicultural music teaching would help to make music education more appealing for all; support in overcoming barriers to participation such as providing transportation for inter-school activities and buddy systems would also help. We need to communicate the value of music education as a pathway to creative industries to parents, and also encourage partnerships between schools and musicians".	Quote	Professor Graham Welch, quoted in "Children still face barriers in accessing music education," UCL, April 20, 2016.
<b>Educational</b>	Child	The researchers found that studying music alters teen brains in a way that makes them better able to focus and process sound — a development that's particularly important for learning.	Fact	(2017). Northwestern study finds music education changes the teen brain; quoted in The Chicago Crusader, February 6, 2017.

<b>Educational</b>	Teen	“While we’re teaching them music skills, we’re teaching them life skills, too — how to be self-disciplined, motivate themselves and get through the tasks that have been assigned to them and come back with a little bit of a product that we can work with next time.”	Quote	Bryan Holbrook, quoted in "Hayward: Mariachi enlivens Winton music program," by Darin Moriki, East Bay Times, February 3, 2017.
<b>Social</b>	Teen	“Last year, there were a lot of women in the [mentor band] program; this year, there’s a lot of ethnic diversity. It’s important for kids to see people who look like them.”	Quote	Katie Carroll, quoted in "Strings' Mozart Masters program begins in Steamboat Springs area schools," by Julia Ben-Asher, Steamboat Today, October 13, 2016
<b>Educational</b>	Child	Music teacher Gavriel Patterson said he has seen "an increased level of engagement and motivation when students are playing new instruments."	Quote	Gavriel Patterson, quoted in "Music teacher wants to give students 'joy of ensemble playing': Season of Sharing 2016," by Susan Green, Oregon Live, October 12, 2016

<b>Educational</b>	Teen	"Being a part of a music department 'family' can change a kid's life. The skills that they learn and develop will help them succeed no matter where life leads them after high school."	Quote	Amy Rangel, quoted in "\$20k grant helps fulfill Glendale High's musical wish list," by Kelly Corrigan, Los Angeles Times, October 11, 2016
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<b>Cognitive</b>	Teen	<p>"When you think about the process of playing a wind instrument, there's a lot more than just moving your fingers and blowing air, because you're actually looking at a page and processing what you see on that page and converting that information into a whole array of fingers, air and using your tongue and everything else at the same time, and then you have to actually physically do that. It uses so much of your brain, and when you're a fifth-grader, that's a lot. You're using more parts of your brain simultaneously than you've ever done."</p>	Quote	<p>Joey Sam, quoted in "Despite obstacles, music education still thrives in county," by Chance Farmer, The Paris Post-Intelligencer, October 11, 2016</p>
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<b>Cognitive</b>	Child	Research shows that making music changes the brain, and that these brain changes have tangible impacts on listening skills, learning and cognition.	Fact	(2017). Music, hearing, and education: from the lab to the classroom; quoted in Northwestern University, September/October, 2017.
<b>Cognitive</b>	Child	Individuals who took music lessons as children show stronger neural processing of sound: young adults and even older adults who have not played an instrument for up to 50 years show enhanced neural processing compared to their peers.	Fact	(2017). Music, hearing, and education: from the lab to the classroom; quoted in Northwestern University, September/October, 2017.
<b>Social</b>	Child	“Music students are engaged, focused, happy, excited to come to school, and feel like they have a family that they can relate to in their school setting. We see a correlation between music participation and ACT scores and grade-point averages in graduation rates.”	Quote	Laurie Schell, quoted in "Expanding Music Education: It's OK to be Iterative," by Talking Up Music Education, October 20, 2015

<b>Social</b>	Teen	"Music education has given me the experience to know how music impacts people; and to see it at such a large scale, like Grand Nationals, it's really remarkable." -	Quote	Noah Burgess, quoted in "LIVE from Music for All-Bands of America: Band Kids Rock," by Talking Up Music Education, November 25, 2015
<b>Social</b>	Teen	"The number-one challenge facing this generation is social isolation. Music and the arts create community, and they can end social isolation, they can create connection." –	Quote	David Brooks, quoted in "Be Bold! Music & Arts Advocacy at the RNC," by Talking Up Music Education, August 18, 2016
<b>Cognitive</b>	Infant	Careful observation of children's musical development has shown that it is never too early for musical learning. Musical aptitude may actually begin in the womb.	Fact	Learning the language of music: is it child's play?, by Wendell Hanna, OUPblog, March 4, 2017

<b>Educational</b>	Child	"I took it for granted until all these years later, where I'm looking at schools that do away with music programs quickly, because it's seen to be the easiest thing to get rid of. I find that shocking. I've met so many kids over the years that use music to communicate. It's where they get their self-esteem from. To just do away with that is scary to me."	Quote	Keith Urban, quoted in "Keith Urban on Gutting School Music Programs: 'I Find That Shocking'" by Robert Crawford, Rolling Stone Magazine, March 2, 2017
<b>Cognitive</b>	All	"People who get the chills from music actually have structural differences in the brain. They have a higher volume of fibers that connect their auditory cortex to the areas associated with emotional processing, which means the two areas communicate better."	Quote	Matthew Sachs, quoted on "If You Get the Chills From Music, You May Have a Unique Brain," Neuroscience News, February 27, 2017. <a href="http://neurosciencenews.com/music-chills-neuroscience-6167/">http://neurosciencenews.com/music-chills-neuroscience-6167/</a>

<b>Social</b>	All	"[Drumming] allows you to relate with others, non-verbally, and still talk to each other through rhythm. It also allows you to be aware of those around you, to be part of something bigger than just yourself."	Quote	Teresa Dunn, quoted in "Drumming out Stress" by Samuel Northrup, UC Tangerine, 2/24/2017
<b>Cognitive</b>	Infant	If [a] mother enjoys the music she is listening to and is in a relaxed state of mind, the unborn child benefits.	Fact	"Why You Should Consciously Introduce Music In Your Child's Life," by Lina Asher, Huffington Post, February 25, 2017
<b>Cognitive</b>	Adult	"[Music] brings patients suffering from Alzheimer's or dementia] back to life, allowing them to socialize and converse better than they had been able to before."	Quote	Jenny Bourque, quoted in "Music & Memory is changing how doctors treat memory-related diseases in the elderly," The Daily Orange, February 21, 2017
<b>Educational</b>	Teen	"Music isn't just a fun things kids can do, it's a legitimate career path."	Quote	Hamish Tait, quoted in "Music improves the brain" The Daily Advertiser, February 18, 2017

<b>Cognitive</b>	Child	"Music opens up a child's eyes, ears, heart and soul and gives them the ability to step into a life of prosperity. It has been proven that when a child is provided with music education, it leaves a profound effect on the rest of their lives."	Quote	Mary Fanaro, quoted in "How music is changing lives of vulnerable children," by Lydia Atieno and Donata Kiiza, The New Times, February 17, 2017
<b>Educational</b>	Teen	"Music can help with you with language acquisition, math, reasoning and multi-tasking. You might not get that experience in other electives."	Quote	Darryl Miyasato, quoted in "Music Classes More Than Learning to Sing, Play Instruments," by David McCracken, The Garden Island, February 14, 2017
<b>Cognitive</b>	Child	Music can bolster listening skills, improve motor skills, assist with problem solving, and promote spatial-temporal reasoning.	Fact	"How Music and Singing Benefits Children." The Gleaner, February 14, 2017
<b>Cognitive</b>	All	"Our auditory systems, our nervous systems, are indeed exquisitely tuned for music."	Quote	Oliver Sacks, quoted in "How Music Inspires and Empowers Rural Africans to Steward Their Environment," by Alex Paullin, February 15, 2017

<b>Cognitive</b>	Child	"[Music] improves their memory and concentration, their social skills and their self esteem, they develop patience and perseverance and those skills can be applied to everything in life."	Quote	Jaci Bates, quoted in "£1m endowment fund for children to take up music," by Colette Hume, BBC News, February 13, 2017
<b>Cognitive</b>	All	From making you smarter, to diminishing the effects of brain aging, to improving emotional stability, it seems that playing an instrument has a hand in reconfiguring your brain and enhancing it.	Fact	"10 Reasons Why Making Music is Good For Your Brain," True Viral News, January 2, 2017
<b>Cognitive</b>	All	"Stroke patients who have lost the ability to speak can be trained to say hundreds of phrases by singing them first."	Quote	Gottfried Schlaug, quoted in "Making Music Boosts Brain's Language Skills," by Victoria Jaggard, National Geographic, February 13, 2017

<b>Cognitive</b>	Infant	Music- whether it's prenatally, in infancy, or throughout childhood- helps neurons in our brains form connections that may help us understand language; in adults, music can lower blood pressure and help regulate heart rate.	Fact	"The Amazing Benefits of Music for Kids," by Lauren Slater, Parenting
<b>Social</b>	All	"We need music, not because it will improve us, but because it's a part of who we are, a part of our human cultural heritage."	Quote	Robert Cutietta, quoted in "The Amazing Benefits of Music for Kids," Parenting
<b>Cognitive</b>	All	"Music passes into our limbic system, which is where our emotions lie. So music gets to the heart of our emotions. Music is so intuitively good for us."	Quote	Russell Hilliard, quoted in "Hospice Music Therapy Provides Support for Dying Patients," by Bill Ward in Next Avenue, February 7, 2017
<b>Educational</b>	Teen	"Music is just enjoyable and the reason behind that is it brings me happiness and joy."	Quote	Andrew Roof, quoted in "Jamestown High School Music Brings Benefits To Students," The Post Journal, March 5, 2017

<b>Educational</b>	Teen	“Sometimes it is a misconception that music might take away from your academics but it is the complete opposite. It is such a relaxing activity that it helps you when you go back to your academics to stay in the zone.”	Quote	Emily Anderson, quoted in "Jamestown High School Music Brings Benefits To Students," The Post Journal, March 5, 2017
<b>Cognitive</b>	All	One easy way for older adults to get deeper sleep and stronger memories is to listen to a certain soothing sound called “pink noise”—a mix of high and low frequencies that sounds more balanced and natural than its better-known cousin, 'white noise.'	Fact	Frontiers in Human Neuroscience, "The Sound of 'Pink Noise' Improves Sleep and Memory," by Amanda MacMillan, TIME, March 8, 2017
<b>Social</b>	All	On music, “We don't share a language, home, culture or ethnicity, but we have this repertoire that binds us together. We have this fabric across the country.”	Quote	Gordon Stobbe, quoted in "Famed violinist inspires students," by Paul Krajewski, High River Times, March 10, 2017



<b>Cognitive</b>	All	"High pitch, high distortion, and fast tempo are associated with high energy."	Quote	Janice Wang, quoted in "Music makes curries taste 10pc spicier, scientists find," by Katie Morley, The Telegraph, March 12, 2017
<b>Cognitive</b>	Child	Musical play has also been shown to increase overall attention as well as heighten musical skill development. When adults participate alongside children in musical play, the benefits are increased even further.	Fact	"Learning the language of music: is it child's play?," by Wendell Hanna, OUPblog, March 4, 2017
<b>Social</b>	All	"Music and the arts are among the forces that define us as a nation."	Quote	Neil Portnow, president of the National Academy of Recording Arts and Sciences, quoted in "As arts funding is 'under attack,' celebs and lawmakers urge support at Grammys on the Hill," The Washington Post, April 6, 2017
<b>Cognitive</b>	All	"The rehabilitative effect of music is undeniable, it's amazing and incredibly moving what it does for all sorts of people."	Quote	Alexander Armstrong, quoted in "Alexander Armstrong: Government needs to support music education and therapy," The Irish News, June 19, 2017

<b>Educational</b>	Child	"Let's give every child the chance to learn an instrument. Let them act and paint and write poetry, too, but learning to read and play music gives you access to a new language, other worlds. It is one of the greatest gifts, along with security and self-belief and simple love, that a child can be given."	Quote	"Why not put music at the heart of education?," by Stephen Moss, The Guardian, June 19, 2017
<b>Social</b>	All	"Music allows us to communicate humanity to each other. It models the value of diversity in ways you don't readily see in other parts of our lives."	Quote	Jake Harwood, quoted in "Humanizing, harmonizing effects of music aren't a myth," Science Daily, May 23, 2017
<b>Cognitive</b>	Adult	Making or listening to music improves stroke, dementia and autism sufferers' ability to communicate.	Fact	"The Amazing Benefits of Music for Kids," by Lauren Slater, Parenting
<b>Social</b>	Adult	Making or listening to music benefits families by making them feel less isolated and neglected from their communities.	Fact	"The Amazing Benefits of Music for Kids," by Lauren Slater, Parenting

<b>Cognitive</b>	Adult	Patients working with a music therapist can learn to express themselves through song, which can translate into improved speech potentially through the utilization of neural pathways more heavily relied on during singing.	Fact	"An NIH-Kennedy Center Initiative to Explore Music and the Mind," by Francis S. Collins, The JAMA Network
<b>Educational</b>	Adult	Music training assists development of language skills, auditory processing, and educational achievement compared with untrained peers.	Fact	"An NIH-Kennedy Center Initiative to Explore Music and the Mind," by Francis S. Collins, The JAMA Network
<b>Educational</b>	Child	Scientific research has proven that music education is a powerful tool for attaining children's full intellectual, social, and creative potential.	Quote	"The Multiple Benefits of Music Education" by Eunice Maratas, Pattaya Today

<b>Educational</b>	Child	Music education develops children's critical skills: their ability to listen, to appreciate a wide variety of music, and to make judgments about musical quality. It also increases self-discipline, creativity, aesthetic sensitivity and fulfillment.	Quote	"The Multiple Benefits of Music Education" by Eunice Maratas, Pattaya Today
<b>Educational</b>	Child	"It's incredibly important to keep music in the schools as well as all the arts. Kids need to be exposed to music as early as possible. As in all the arts it creates an outlet for their creativity."	Quote	Joe Perry, quoted in "Miley Cyrus, Chris Stapleton & More Celebrate VH1 Save the Music Foundation's 20th Anniversary With Custom Gibson Guitars: Exclusive," Billboard, June 1, 2017
<b>Educational</b>	Child	"It's all connected to how we view the arts, what we imagine the arts are, who we imagine as an artist and what we imagine the purpose of art to be."	Quote	Ruben Gaztambide-Fernandez, University of Toronto, quoted in "Some Ontario schools go silent as music programs are defunded," CBC News, May 15, 2017

<b>Educational</b>	Child	"Research continues to indicate that music education supports creative problem solving and working towards common goals in group settings. These are critical, lifelong skills."	Quote	Bob Frampton, quoted in "Washington Twp. Public Schools named a 2017 Best Communities for Music Education," NewJersey.com, April 20, 2017
<b>Cognitive</b>	Child	"The arts help students learn to give and receive constructive criticism, pay attention to fine detail and appreciate aesthetic qualities."	Quote	Bob Frampton, quoted in "Washington Twp. Public Schools named a 2017 Best Communities for Music Education," NewJersey.com, April 20, 2017
<b>Educational</b>	Child	"Music gives students the opportunity to learn to creatively solve problems, because many times in music there isn't a clear-cut answer."	Quote	Brian Monroe, quoted in "District's music program honored," Stow Sentry, April 23, 2017
<b>Educational</b>	Child	Music also helps improve reasoning, memorization and math aptitude."	Quote	Brian Monroe, quoted in "District's music program honored," Stow Sentry, April 23, 2017

<b>Educational</b>	Child	"Being in the music program has taught me to stay disciplined, responsible, and has influenced me to learn new instruments such as the piano and guitar... Furthermore, when I play my trumpet, I feel free, strong, and happy all at the same time."	Quote	Alyssa, Music Student, 8th grade, quoted in, "Essay Contest," SBO Magazine, December 31, 2016
<b>Cognitive</b>	Child	"[My school music program] helps me as a student as well. It helps me by giving me better memory so I can better memorize things as a student."	Quote	Jalen, Music Student, 7th grade, quoted in, "Essay Contest," SBO Magazine, December 31, 2016
<b>Educational</b>	Child	"My school music program has not only increased both my love and knowledge for music, but it has taught me the value of a strong work ethic."	Quote	Kathryn, Music Student, 12th grade, quoted in, "Essay Contest," SBO Magazine, December 31, 2016
<b>Social</b>	Child	"There is joy in creating music, and happiness in being with friends, but when the two are put together it creates something I never want to let go."	Quote	Drew, Music Student, 12th grade, quoted in, "Essay Contest," SBO Magazine, December 31, 2016

<b>Social</b>	Child	"I love my school music program because it introduced me to my best friend, music. She calms my mind, fills me with joy, and helps me relax."	Quote	Georgia, Music Student, 6th grade, quoted in, "Essay Contest," SBO Magazine, December 31, 2016
<b>Social</b>	Child	"It is fun to play alone, but it is the best when we all get to play together. Instruments are just like ingredients, making a perfect meal."	Quote	Georgia, Music Student, 6th grade, quoted in, "Essay Contest," SBO Magazine, December 31, 2016
<b>Social</b>	Child	My school music program provides the foundation for my success as a musician and as a citizen."	Quote	Lauren, Music Student, 7th grade, quoted in, "Essay Contest," SBO Magazine, December 31, 2016
<b>Social</b>	Child	"I love my music program because it has let me travel across the coast, learn leadership skills, and has given me the chance to make the best friends a girl could as for.	Quote	Nicole, Music Student, 12th grade, quoted in, "Essay Contest," SBO Magazine, December 31, 2016
<b>Social</b>	Child	On taking music classes, "Not only have I learned notes and scales, I've improved my character."	Quote	Ty, Music Student, 12th grade, quoted in, "Essay Contest," SBO Magazine, December 31, 2016

<b>Social</b>	Adult	"In international surveys, people consistently rank music as one of life's supreme sources of pleasure and emotional power. We marry to music, graduate to music, mourn to music."	Quote	Natalie Angier, quoted in "New Ways Into the Brain's 'Music Room,'" The New York Times, Feb. 8, 2016
<b>Cognitive</b>	All	"The idea that the brain gives specialized treatment to music recognition, that it regards music as fundamental a category as speech, is very exciting to me."	Quote	Josef Rauschecker (Director of the Laboratory of Integrative Neuroscience and Cognition at Georgetown University), The New York Times, "New Ways Into the Brain's 'Music Room,' Natalie Angier, Feb. 8, 2016
<b>Cognitive</b>	All	Music sensitivity may be more fundamental to the human brain than is speech perception. "There are theories that music is older than speech or language... Some even argue that speech evolved from music."	Quote	Josef Rauschecker (Director of the Laboratory of Integrative Neuroscience and Cognition at Georgetown University), The New York Times, "New Ways Into the Brain's 'Music Room,' Natalie Angier, Feb. 8, 2016



<b>Social</b>	All	"Music-Making with other people in your tribe is a very ancient, human thing to do."	Quote	Josef Rauschecker (Director of the Laboratory of Integrative Neuroscience and Cognition at Georgetown University), The New York Times, "New Ways Into the Brain's 'Music Room,' Natalie Angier, Feb. 8, 2016
<b>Cognitive</b>	All	... brief exposure (10 minutes) to a Mozart sonata generates short-term increases in spatial-reasoning abilities (the Mozart effect)	Fact	"Music and Nonmusical Abilities," by E. Glenn Schellenberg, Department of Psychology, University of Toronto at Mississauga
<b>Cognitive</b>	All	... positive, relatively long-term cognitive side effects result from taking music lessons	Fact	"Music and Nonmusical Abilities," by E. Glenn Schellenberg, Department of Psychology, University of Toronto at Mississauga
<b>Cognitive</b>	All	... musical aptitude is a function of general intelligence	Fact	"Music and Nonmusical Abilities," by E. Glenn Schellenberg, Department of Psychology, University of Toronto at Mississauga

<b>Educational</b>	Child	In another study, four-year-old children who received individual 10-minute piano lessons once or twice a week for six to eight months performed better on a test of spatial skills than children assigned to comparison conditions.	Fact	"Music and Nonmusical Abilities," by E. Glenn Schellenberg, Department of Psychology, University of Toronto at Mississauga
<b>Educational</b>	Child	Standley and Hughes found that children in prekindergarten classes (four to five years of age) who took 15 music lessons over a period of two months showed enhanced pre-reading and writing skills compared to other children.	Fact	"Music and Nonmusical Abilities," by E. Glenn Schellenberg, Department of Psychology, University of Toronto at Mississauga
<b>Educational</b>	Child	... music activities provided pleasure and excitement about academic participation, possibly generating long range motivation for reading and writing.	Fact	"Music and Nonmusical Abilities," by E. Glenn Schellenberg, Department of Psychology, University of Toronto at Mississauga

<b>Cognitive</b>	All	Music lessons have positive nonmusical side effects	Fact	"Music and Nonmusical Abilities," by E. Glenn Schellenberg, Department of Psychology, University of Toronto at Mississauga
<b>Cognitive</b>	All	Compared to non-musicians, accomplished players of string instruments show increased representation in the cerebral cortex for the fingers of their left hand, which implies that musical training can alter patterns of cortical organization.	Fact	"Music and Nonmusical Abilities," by E. Glenn Schellenberg, Department of Psychology, University of Toronto at Mississauga

<b>Cognitive</b>		On the other hand, music lessons are likely to improve many general skills, such as attending to rapidly changing temporal information, honing skills of auditory stream segregation, developing the ability to detect temporal groups, becoming attentive to signals of closure and other gestalt cues of form, developing emotional sensitivity and expressiveness and developing fine motor skills.	Fact	"Music and Nonmusical Abilities," by E. Glenn Schellenberg, Department of Psychology, University of Toronto at Mississauga
<b>Cognitive</b>	All	[A decrease in anxiety] evident after only 10 weeks of lessons, remained after 20 weeks of lessons. Decreased anxiety helps improve cognitive performance, and enhances learning, decision-making, and general feelings of well being.	Fact	"Music Making + Wellness = Opportunity!," by Karl Bruhn, Kim Sammons, Mel Wisniewski, Lynda Garcia & Sandy Porter, Dan Rodowicz, January 18, 2002

<b>Social</b>	Teen	... students changed their perception of loneliness, or sense of being alone, and that this feeling most likely derived from the music lessons. Loneliness, a major problem among older people, has a profoundly detrimental effect on overall health and well being."	Fact	Music Making + Wellness = Opportunity!, by Karl Bruhn, Kim Sammons, Mel Wisniewski, Lynda Garcia & Sandy Porter, Dan Rodowicz, January 18, 2002
<b>Educational</b>	Adult	"[It's] never too late for music. It is an established fact that the adult brain is perfectly capable of learning and remembering music throughout life span."	Quote	Dr. Norman M. Weinberger, quoted in "Music Making + Wellness = Opportunity!," Writing in MuSICA, Research Notes, University of California at Irvine

<b>Educational</b>	Child	<p>Music lessons involve long periods of focused attention, daily practice, reading musical notation, memorization of extended musical passages, learning about a variety of musical structures (e.g. intervals, scales, chords, chord progressions), and progressive mastery of technical (i.e. fine-motor) skills and the conventions governing the expression of emotions in performance. This combination of experiences could have a positive impact on cognition, particularly during the childhood years, when brain development is highly plastic and sensitive to environmental influence (Huttenlocher, 2002).</p>	Fact	<p>"Music Lessons Enhance IQ," by E. Glen Schellenberg, University of Toronto at Mississauga, 2004, American Psychological Society.</p>
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<b>Cognitive</b>	Child	... simple attendance at school raises IQ (Ceci & Williams, 1997) and school instruction is particularly effective when classes are small (Ehrenberg, Brewer, Gamoran, & Wilms, 2001). Music lessons, taught individually or in small groups, may provide additional boosts in IQ because they are like school but still enjoyable.	Fact	"Music Lessons Enhance IQ," by E. Glen Schellenberg, University of Toronto at Mississauga, 2004, American Psychological Society.
<b>Cognitive</b>	Infant	... vocal interactions between mothers and infants provide the foundation for a system of emotional communication that is used in music and other arts.	Fact	"Decoding Speech Prosody: Do Music Lessons Help?," by William Forde Thompson, E. Glenn Schellenberg & Gabriela Husain, University of Toronto
<b>Cognitive</b>	All	... music lessons are associated positively with decoding speech prosody.	Fact	"Decoding Speech Prosody: Do Music Lessons Help?," by William Forde Thompson, E. Glenn Schellenberg & Gabriela Husain, University of Toronto

<b>Cognitive</b>	All	... musically trained adults were better than untrained adults at identifying sadness and fear	Fact	"Decoding Speech Prosody: Do Music Lessons Help?," by William Forde Thompson, E. Glenn Schellenberg & Gabriela Husain, University of Toronto
<b>Cognitive</b>	All	Indeed, training in music may facilitate a basic skill of emotional intelligence: the ability to decode emotional meaning in speech prosody.	Fact	"Decoding Speech Prosody: Do Music Lessons Help?," by William Forde Thompson, E. Glenn Schellenberg & Gabriela Husain, University of Toronto
<b>Educational</b>	Child	... the analyses show that those students who join the band in the fifth grade and stay in the band score significantly higher on the A.C.T. tests of English, Mathematics and Reading and on their Rank in Class.	Fact	"Comparison of Fifth Grade Band Students with Other Fifth Grade Students on A.C.T. Tests and Rank in Class in Later Years," by Kevin McCarthy, University of Colorado at Boulder, Alan W. Mills, University of Arizona Graduate Student
<b>Cognitive</b>	Teen	The ability to copy geometric forms, which requires coordination between visual perception and motor planning, has also been found to be enhanced by music training (Miller & Orsmond, 1999)	Fact	"Are There Neural, Cognitive, or Motoric Markers for Musical Ability Prior to Instrumental Training?," by Andrea Norton, Ellen Winner, Karl Cronin, Katie Overy, Dennis J. Lee, Gottfried Schlaug, January 28, 2004



<b>Cognitive</b>	All	Recently, Schellenberg (2003) found that music training increased general IQ.	Fact	Children Beginning Instrumental Music Training, "Are There Neural, cognitive, or Motoric Markers for Musical Ability Prior to Instrumental Training?," Andrea Norton, Ellen Winner, Karl Cronin, Katie Overy, Dennis J. Lee, Gottfried Schlaug, January 28, 2004
<b>Cognitive</b>	Adult	Verbal memory has been shown to be enhanced in adult musicians (Chan, Ho & Cheung, 1998; Kilgour, Jakobson, & Caddy, 2000).	Fact	"Are There Neural, Cognitive, or Motoric Markers for Musical Ability Prior to Instrumental Training?," by Andrea Norton, Ellen Winner, Karl Cronin, Katie Overy, Dennis J. Lee, Gottfried Schlaug, January 28, 2004
<b>Cognitive</b>	Child	Music training has been shown to enhance verbal memory in children (Ho, Cheung, & Chan, 2003), and Gardiner (1996) reported that children receiving both art and music instruction improved in standardized test scores.	Fact	"Are There Neural, Cognitive, or Motoric Markers for Musical Ability Prior to Instrumental Training?," by Andrea Norton, Ellen Winner, Karl Cronin, Katie Overy, Dennis J. Lee, Gottfried Schlaug, January 28, 2004

<b>Educational</b>	Child	In addition, children with dyslexia have been found to improve on phonological processing and spelling tests after only 15 weeks of rhythm-based music training (Overy, 2000, 2003)	Fact	"Are There Neural, Cognitive, or Motoric Markers for Musical Ability Prior to Instrumental Training?," by Andrea Norton, Ellen Winner, Karl Cronin, Katie Overy, Dennis J. Lee, Gottfried Schlaug, January 28, 2004
<b>Educational</b>	All	Music and the other arts represent an important difference between existing and living. Animals exist in the sense that they manage to survive. Humans live; they attempt to make life interesting and satisfying. Music, the visual arts, and dance enrich life and bring to it special meaning by providing an avenue for expression.	Quote	"Introduction to Music Education," by Charles Hoffer, Waveland Press, Inc., 2017, p. 3
<b>Educational</b>	All	Music has been present in every society since the dawn of civilization. It is found in every part of the globe, from the remote areas of Africa and Australia to the streets of Chicago and Beijing.	Fact	"Introduction to Music Education," by Charles Hoffer, Waveland Press, Inc., 2017, p. 3

<b>Cognitive</b>	All	The brain is able to compensate for other deficits sometimes by using music to communicate.	Quote	Dr. Francis Collins quoted in "Forget medication - try hip hop: Major study is exploring music's healing powers," by Natalie Rahhal, Daily Mail, December 19, 2017
<b>Cognitive</b>	All	Recent work by Cambridge University researchers found that free-styling puts a rapper's brain into a rare 'flow state' that stimulates parts of the brain responsible for emotion, language, motivation, motor function and motor processing.	Fact	Forget medication - try hip hop: Major study is exploring music's healing powers, by Natalie Rahhal, Daily Mail, December 19, 2017
<b>Cognitive</b>	All	Music has the unique ability to evoke memories and emotions from long ago.	Fact	"Music reduces stress, anxiety, and pain in seniors," by Dogwood Forest of Grayson, December 12, 2017

<b>Cognitive</b>	All	Current findings indicate that music around 60 beats per minute most effectively engages the brain, causing it to synchronise with the rhythm, which induces alpha brainwaves.	Fact	"Music & Mental Health: Why we should all learn a musical instrument," by Donny Gruendler, December 24, 2017
<b>Educational</b>	All	Music is such a significant way to help youth learn and excel in school, gain confidence, and become productive citizens in society. It teaches discipline without the kids even realizing it.	Quote	Janice Clemmons, Club Director of the Boys & Girls Club. Quoted in "New music program aims to boost kids' self-esteem," by Faran Fagen, December 27, 2017
<b>Cognitive</b>	All	"Musical memory is profoundly linked to emotions."	Quote	Sarah Overton, education and support coordinator, Alzheimer Society. Quoted in "Art program helps woman with dementia cope with illness," by CBC News, Jan. 8, 2018

<b>Educational</b>	Teen	"[Music] requires commitment. That sort of discipline is important when you are going to college, looking for a job or when you are in a professional position, because you've learned the discipline and focus that you need to devote to something in order to be successful."	Quote	Jennifer Koch, executive director at Community Music School. Quoted in "Music helps kids develop relationships, build self-esteem," by Sarah Crawford, The Buffalo News, Jan. 10, 2018
<b>Cognitive</b>	All	The researchers explained that musical training might improve speech perception in noisy environments.	Fact	"Music could improve speech processing," by Deccan Chronicle, Dec. 5, 2017
<b>Cognitive</b>	All	Playing a musical instrument impacts multiple areas of the brain, especially enhancing our executive functions and researchers note it is comparable to a full-body workout.	Fact	"Intellectual nourishment and the brain," by Dawn Davis, Illinois State University, Oct. 18, 2017

<b>Social</b>	All	"The song lyric message as well as the melody and rhythm can most definitely modulate moods."	Quote	Jay Anderson, certified neurologic music therapist. Quoted in "Sing Yourself to Happiness," by Cathy Cassate, Healthline, Jan. 4, 2018
<b>Cognitive</b>	All	"[Music] can be a powerful and curative complementary therapy in a person's journey to wellness and recovery."	Quote	Jay Anderson, certified neurologic music therapist. Quoted in "Sing Yourself to Happiness," by Cathy Cassate, Healthline, Jan. 4, 2018
<b>Cognitive</b>	All	"Quantifiable research demonstrates music and music activities effect positive changes in a person's physiological, psychological, and cognitive well-being."	Quote	Jay Anderson, certified neurologic music therapist. Quoted in "Sing Yourself to Happiness," by Cathy Cassate, Healthline, Jan. 4, 2018

<b>Cognitive</b>	All	"Music has a way of invoking memory. It has been used to help people suffering from dementia to become more aware of their surroundings."	Quote	Judy Woodruff, quoted in "Music helps people in nursing home once considered unreachable," by PBS Newshour, Jan. 5, 2018
<b>Cognitive</b>	All	"New research suggests music therapy could help with recovery in people with coma or in a vegetative state. It may even help diagnose consciousness, which continues to mystify scientists."	Quote	Joanne Faryon, quoted in "Music helps people in nursing home once considered unreachable," by PBS Newshour, Jan. 5, 2018
<b>Social</b>	All	"The babies in the NICU do not have language; their world is a musical one." -	Quote	Laura Beer, director and associate professor of music therapy at Marylhurst University. Quoted in "Babies Find Healing and Comfort in Music," by Pamplin Media

<b>Cognitive</b>	Adult	Listening to a low-pitched noise appears to break down toxic clumps in the brain associated with Alzheimer's disease.	Fact	"Low-pitched noises may curb dementia by shrinking toxic clumps in the brain by half, study finds," by Alexandra Thompson, DailyMail.com, Jan. 3, 2018
<b>Cognitive</b>	Adult	"Listening to a noise is an entirely doable kind of therapy."	Fact	David Reynolds, chief scientific officer, Alzheimer's Research UK. Quoted in "Low-pitched noises may curb dementia by shrinking toxic clumps in the brain by half, study finds," by DailyMail.com, Jan. 3, 2018
<b>Social</b>	Adult	"[Music] is one of the few things people our age can actually get better at as you go on."	Quote	Bob Bergesch, quoted in "DIRIGO STORIES: Group of musicians revives love of music in retirement," by Jana Barnello, Dec. 20, 2017



<b>Social</b>	Adult	"Music is a really powerful way to bring people out and have them connect."	Quote	Marcus Soifer, Cooley Dickinson's music therapist. Quoted in "Yankee Candle founder's road to recovery started with following a beat," by Lisa Spear, Dec. 8, 2017
<b>Cognitive</b>	Adult	"[Music] is the universal language."	Quote	Marcus Soifer, Cooley Dickinson's music therapist. Quoted in "Yankee Candle founder's road to recovery started with following a beat," by Lisa Spear, Dec. 8, 2017
<b>Cognitive</b>	Adult	"I see the patients who are pacing in the hallways and then they go into music therapy and they start connecting and singing."	Quote	Jacquielyn Ouellette, director of inpatient behavioral health. Quoted in "Yankee Candle founder's road to recovery started with following a beat," by Lisa Spear, Dec. 8, 2017

<b>Cognitive</b>	Adult	Traditional depression treatments like psychotherapy or medication might work better for some patients when doctors add a dose of music therapy.	Fact	Quoted in "Music therapy may help ease depression," by Lisa Rapaport, Reuters, Dec. 13, 2017
<b>Cognitive</b>	Child	A 'music tracker' showed that children in all four pre-K/K settings improved their musical abilities in listening and participating during the year.	Fact	Pitts, S. E. (2016). Music, Language and Learning: Investigating the Impact of a Music Workshop Project in Four English Early Years Settings. International Journal of Education & the Arts, 17(20).
<b>Cognitive</b>	Child	A 'language tracker' showed an improvement in English language skills and understanding across the year, at higher than expected levels of attainment.	Fact	Pitts, S. E. (2016). Music, Language and Learning: Investigating the Impact of a Music Workshop Project in Four English Early Years Settings. International Journal of Education & the Arts, 17(20).

<b>Cognitive</b>	Child	Ethnographic research showed an increase in confidence and communication, particularly for children with English as a second language.	Fact	Pitts, S. E. (2016). Music, Language and Learning: Investigating the Impact of a Music Workshop Project in Four English Early Years Settings. <i>International Journal of Education &amp; the Arts</i> , 17(20).
<b>Cognitive</b>	Child	The early years teachers reported a growth in their confidence and capacity to use music in the classroom	Fact	Pitts, S. E. (2016). Music, Language and Learning: Investigating the Impact of a Music Workshop Project in Four English Early Years Settings. <i>International Journal of Education &amp; the Arts</i> , 17(20).
<b>Social</b>	Adult	I discovered my path and passion through the study of music,	Quote	Hannah Whitehouse, Student at Northwestern University. Quoted in "Research charts course for global study of music education" by Erin Karter. <i>News.northwester.edu</i> , Jan. 25, 2018

<b>Social</b>	Child	"If they're feeling anxious, maybe they don't have the words to express themselves," she said. "They can actively release by playing a drum."	Quote	Christine Vaskas, Music therapist quoted in "Girl battling cancer gets relief from music therapy program" by Kristin Thorne. Jan., 16, 2018
<b>Social</b>	All	According to [Wendell] Hanna, the body naturally synchronizes to externally perceived rhythm, a concept called entrainment. Simply put, when people hear music their bodies automatically move to the beat. "It's a basic human impulse everyone has, regardless of age or background. Using entrainment with these exercises should help with the execution of the movements."	Quote	Wendell Hanna, Professor of Music Education at San Francisco State University. Quoted in "Professor's choreography aims to ease hospice patients' pain" by Jamie Oppenheim. Jan. 12, 2018
<b>Cognitive</b>	All	A pilot study – the first of its kind in the UK – has found that patients taking part in percussion sessions twice a week improved the function in their arms and hands.	Fact	Beat a stroke by banging a drum! How percussion therapy could transform the lives of thousands of sufferers by Sophie Goodchild. Jan. 13, 2018

<b>Cognitive</b>	All	'The sound and vibration from playing also causes the hearing parts of the brain to connect more with the movement parts. It helps people build new pathways to replace those lost by stroke damage.'	Quote	Dr. Street, a music therapist at the Music for Health Research Centre. Quoted in "Beat a stroke by banging a drum! How percussion therapy could transform the lives of thousands of sufferers" by Sophie Goodchild. Jan. 13, 2018
<b>Cognitive</b>	All	'The visual, auditory and motor centres of the brain work hard during a group drumming session – improving concentration, co-ordination and problem- solving skills. It's also really fun.'	Quote	Ruairi Glasheen, award-winning percussionist. Quoted in "Beat a stroke by banging a drum! How percussion therapy could transform the lives of thousands of sufferers" by Sophie Goodchild. Jan. 13, 2018
<b>Cognitive</b>	All	'Drumming is a way to feel connected to others without speaking. You don't need to be an extrovert, you don't need to be musical and you don't need to have played an instrument before. But you get to meet new people and also be part of creating an incredible shared experience.'	Quote	Ruairi Glasheen, award-winning percussionist. Quoted in "Beat a stroke by banging a drum! How percussion therapy could transform the lives of thousands of sufferers" by Sophie Goodchild. Jan. 13, 2018

<b>Social</b>		<p>"We would take as many as interested, as we would always have patients for (volunteers) to visit," Lietaert said.</p> <p>"When you can see a patient's response to music, someone in advanced stages of illness, and know that you provided joy or comfort for that moment — there's no feeling like it."</p>	Quote	<p>Gordon Berg, Volunteer at Hospice of Michigan. Quoted in "Musical volunteers a high note for hospice patients" by Brooke Kansier. Jan. 4, 2018</p>
<b>Social</b>	All	<p>"Music is a hidden arithmetic exercise of the soul."</p>	Quote	<p>Gottfried Leibniz, German philosopher and mathematician. Quoted in "We use music to say things we could never say with words" by Andrea Bocelli. Feb. 7, 2018</p>
<b>Social</b>		<p>"Music reinforces your confidence in the ability to create. [In music] something is pushing you to look beyond what currently exists and express yourself in a new way."</p>	Quote	<p>Paul Allen quoted in "Here's proof music education can lead to success" by Sydney Myers. Feb. 2, 2018</p>

<b>Social</b>	All	"Where there is trust, there is music. Where there is no trust, the music quite simply withers away."	Quote	Charles Hazlewood quoted in "Here's proof music education can lead to success" by Sydney Myers. Feb. 2, 2018
<b>Social</b>	Infant	"Ensemble playing trains you, quite literally, to play well with others, to know when to solo and when to follow."	Quote	Steve Hayden quoted in "Here's proof music education can lead to success" by Sydney Myers. Feb. 2, 2018
<b>Cognitive</b>	All	"We're using music to better understand brain function in general."	Quote	Daniel Levitin, psychologist at McGill University in Montreal. Quoted in "This is your brain on music" by Elizabeth Landau. Jan. 23, 2018

<b>Social</b>	Child	"In my work, children become composers. Three to seven year olds learn music by making their own piece. It starts from their imagination, stimulating them and motivating them to persist in finding what they want to tell in the language of music. It makes children grow personally, and that is what life is about."	Quote	Hanne Deneire, composer. Quoted in "Appreciating Music as a Foundational Aspect of Creativity" by Joanne Foster. Feb. 3, 2018
<b>Social</b>	All	"I do not only write music, I also write programs and models where music is the vehicle to connect, empower, stimulate, and motivate people."	Quote	Hanne Deneire, composer. Quoted in "Appreciating Music as a Foundational Aspect of Creativity" by Joanne Foster. Feb. 3, 2018
<b>Social</b>	All	"When we sing or create music, we use all the parts of the brain: left, right, front, and back. All these parts collaborate. That is very unique! Music is complex; that is, it uses so many aspects of a person's being."	Quote	Hanne Deneire, composer. Quoted in "Appreciating Music as a Foundational Aspect of Creativity" by Joanne Foster. Feb. 3, 2018



<b>Social</b>	All	"Music is also the only art from that moves in so many different dimensions. A painting stays the same if you look at it five minutes later. Interpretation can grow but the work itself does not change. However, a piece of music develops over time and in space, and each performance is a new creation. Every musician will interpret the music in his or her own way. A composition develops creatively each time it is performed."	Quote	Hanne Deneire, composer. Quoted in "Appreciating Music as a Foundational Aspect of Creativity" by Joanne Foster. Feb. 3, 2018
<b>Social</b>	All	"Creativity is driven from within the child, from education, from culture, from surroundings... The challenge is to help children keep the balance."	Quote	Hanne Deneire, composer. Quoted in "Appreciating Music as a Foundational Aspect of Creativity" by Joanne Foster. Feb. 3, 2018
<b>Social</b>	All	"Music is an outburst of the soul."	Quote	Frederick Delius, European composer. Quoted in "Appreciating Music as a Foundational Aspect of Creativity" by Joanne Foster. Feb. 3, 2018

<b>Social</b>	All	"Classroom musical activities require teachers to constantly watch and listen to their students so they can respond accordingly as they work toward solutions to musical problems."	Quote	"Design and Analysis for Quantitative Research in Music Education" by Peter Miksza & Kenneth Elpus, 2018, p. 7
<b>Social</b>	All	"Music can lift us out of depression or move us to tears. It is a remedy, a tonic for the ear. But for many, music is not a luxury, but a necessity."	Quote	Oliver Sacks, quoted in "How music therapy changed my life" by Tim Cumming. Feb. 6, 2018
<b>Social</b>	Toddler	"Music introduces children to new words, sound patterns, and more, which helps develop listening and comprehension skills. These skills help build the necessary foundation for learning how to read."	Quote	"Let's sing! The benefits of music in early childhood" by Too Small to Fail. Aug. 1, 2017

<b>Social</b>	All	"We have widened our educational sphere to be one that promotes more than just discipline. Students will now learn about the fundamentals of life; about human nature, human values, social interaction and emotion well-being."	Quote	Dr. Pradeep Nair, Professor at Taylor's University in Malaysia. Quoted in "How important is the arts within STEM-centric education?" by Louisa Kendal. Feb. 22, 2018
<b>Social</b>	All	"A liberal arts education may be just what you need to stand out in a job market flooding in technology."	Quote	Alex Chriss, Chief Product Officer at QuickBooks. Quoted in "How important is the arts within STEM-centric education? By Louisa Kendal
<b>Social</b>	All	Modern music teachers are striving to prepare their students for a more competitive job market and are also teaching them the value of leadership and cooperation.	Quote	"Music education adapts to technology and a competitive job market" by Trent Thompson. Feb. 5, 2018

<b>Social</b>	All	"Any kind of teaching is a worthy job because you are giving yourself to other people. At the end of the day, I can go to bed happy because I'm playing music, I get to touch other people's lives and I get to bring joy to those who might not have it."	Quote	Anna Wessels, Music Education student. Quoted in "Music education adapts to technology and a competitive job market" by Trent Thompson. Feb. 5, 2018
<b>Social</b>	All	"Not every kid is destined to be a superstar in sports. Not every kid is destined to be an academic. Find your child's passion. The arts are full of areas in which your child can find what they love, express themselves, develop lifelong skills like discipline and grit, grow and thrive... Participation in the arts will build your child's confidence and prepare them for life."	Quote	Alexis Carter-Black. Quoted in "Art changes lives: Diagnosed with ADHD, OKC student finds success in music" by Michaela Marx Wheatley. Feb. 22, 2018
<b>Social</b>	All	"Tell legislators that music doesn't consist of just notes, numbers, and rhythms. Music consists of reading, the description that is before every piece; foreign language, the written cues in pieces that are not always in English; history, when a piece of music was composed and how the modern events of the time influenced the piece; math, the counting of the subdivision of notes; and science, the auditory value each pitch has and whether they need to change the pitch by changing the amount of space that is able to vibrate in the instrument."	Quote	Thomas Cass, Student at Lynchburg College. Quoted in "Music education majors speak out in support of the arts" Feb. 5, 2018

All	"Academic studies have backed up the common sense notion that in all times, and in all cultures, music seems to have been closely associated with individual, social, and spiritual healing.		Quoted in "The Oxford handbook of community music" by Brydie-Leigh Bartleet & Lee Higgins. Jan. 2018.
All	"Research has shown that creative arts therapies improve patient outcomes. Blast injury often results in damage to white matter and connective tissue, and psychological trauma resulting in post-traumatic stress disorder disrupts processes in multiple brain regions, heightening some systems and deactivating others. Studies suggest that music has a strong effect on multiple neural networks and can assist with rebuilding connections between various regions of the brain."	Fact	Quoted in "Music therapy helps treat combat-related psychological injuries in military personnel." News Medical Life Sciences Online. March 20, 2018.
All	"Studies also show that the brain releases dopamine while patients listen to music. This promotes motivation, learning, and reward-seeking behavior. Thus, listening to music can create an enhanced learning environment and rebuild damaged neural connections."	Fact	Quoted in "Music therapy helps treat combat-related psychological injuries in military personnel." News Medical Life Sciences Online. March 20, 2018.

	Child	"Structured music lessons significantly enhance children's cognitive abilities - including language-based reasoning, short-term memory, planning and inhibition - which lead to improved academic performance."	Fact	Quoted in "Music lessons improve children's cognitive skills and academic performance: study" by Frontiers in Neuroscience. March 26, 2018.
	Child	"Music develops in children the social skills they need to become productive and contributing members of a community."	Quote	Quoted in "Can music really change a kid's life? Three amazing stories that say 'yes' it can" by Anne Fitzgibbon. March 27, 2018.
	All	"According to one theoretical framework known as the OPERA (overlap, precision, emotion, repetition, and attention) hypothesis, the high demands that music places on such shared circuits, combined with music's strong links to the brain's reward systems, make musical training a strong driver of adaptive neural plasticity in circuits involved in speech processing."	Quote	Quoted in "NIH/Kennedy Center workshop on music and the brain: Finding harmony" by Thomas Cheever, Anna Taylor, Robert Finkelstein, Emmeline Edwards, Laura Thomas, Joke Bradt, Steven J. Holochwost, Julene K. Johnson, Charles Limb, Aniruddh D. Patel, Nim Tottenham, Sunil Lyengar, Deborah Rutter, Renee Fleming, and Francis S. Collins. March 21, 2018.

All	"One study showed that, for adults with depression, improvisational music therapy was more effective than standard of care. Another study showed that group singing reduces stress and arousal as measured by adrenocorticotrophic hormone levels, though the effects on oxytocin were less clear."	Quote	Quoted in "NIH/Kennedy Center workshop on music and the brain: Finding harmony" by Thomas Cheever, Anna Taylor, Robert Finkelstein, Emmeline Edwards, Laura Thomas, Joke Bradt, Steven J. Holochwost, Julene K. Johnson, Charles Limb, Aniruddh D. Patel, Nim Tottenham, Sunil Lyengar, Deborah Rutter, Renee Fleming, and Francis S. Collins. March 21, 2018.
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All	"Perhaps the most important problem in neuroscience is understanding what it means to be human, and music is an essential part of this."	Quote	Robert Zatorre. Quoted in "NIH/Kennedy Center workshop on music and the brain: Finding harmony" by Thomas Cheever, Anna Taylor, Robert Finkelstein, Emmeline Edwards, Laura Thomas, Joke Bradt, Steven J. Holochwost, Julene K. Johnson, Charles Limb, Aniruddh D. Patel, Nim Tottenham, Sunil Lyengar, Deborah Rutter, Renee Fleming, and Francis S. Collins. March 21, 2018.