

Music Education Aids Children's Speech, Language Skills

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Music education can have a significant impact on children's sensory system, helping them better process speech and improving their language skills. Nina Kraus, Hugh Knowles Professor of Neurobiology, Physiology and Communication Sciences at Northwestern University believes that despite hard financial times, school districts should not cut music education from their K-12 curriculum.

Kraus, who presented her research and the research of other neuroscientists at the American Association for the Advancement of Science annual meeting on Saturday, February 20, suggests music education can help both normally developing children as well as those who have autism or other challenges. Many study results support this idea. A study from the University of London, for example, evaluated 4- and 5-year-old children and found that they have implicit knowledge of Western harmony, and that children who receive musical training show enhanced language skills, especially in memory for words.

A recent study from Germany explored how musical training can influence perceptual and cognitive abilities of children. The investigators found that the neurophysiological mechanisms that underlie syntax processing in music and language are developed earlier and more robustly in children who have music education.

Children who practice a musical instrument experience enhanced verbal ability and nonverbal reasoning, according to a 2008 study from Beth Israel Deaconess Medical Center and Harvard Medical School. The investigators found that children who received at least three years of instrumental music training were superior to their peers on auditory discrimination abilities, fine motor skills, vocabulary, and nonverbal reasoning skills.

Kraus and her colleagues have done much of their own research showing that music training may improve how children process sounds for language and emotion. Researchers in her lab also were the first to provide concrete evidence that playing a music instrument significantly boosts the sensitivity of the brainstem to sounds of speech.

Kraus and her researchers have found that the ability of the nervous system to utilize sound patterns correlates with the ability to read and to hear speech in noise. They have also found that the effectiveness of the nervous system to use sound patterns is associated with a person's musical ability. She notes that the nervous systems of musicians are more effective at utilizing both music and speech patterns.

It seems clear that music education has a significant role in how children learn speech and language. It's been said that music is a universal language, and for all children, and especially those who have learning disabilities and challenges, music education may be one way to reach these young people and help them get over some of the hurdles they face.

SOURCES:

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