



Music to your kids' brain

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Researchers at Hamilton's McMaster University found that studying music helps kids retain information, according to a paper published in the latest issue of Brain magazine.

"What the musical training is doing -- and it's probably doing many things -- is training the attentional system," said Laurel Trainor, a professor of psychology, neuroscience and behaviour at McMaster and director of the school's Institute for Music and the Mind.

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Her study, conducted in conjunction with the Rotman Research Institute at Toronto's Baycrest Centre, studied the brain images and memories of six children between the ages of four and six.

Three of the kids were taking music lessons, and three were not.

Over the course of one year, the kids studying music showed an improvement in their memory, able to better remember series of numbers read to them. Scans revealed the portion of their brains that deals with retention had changed.

Ms. Trainor said she does not believe parents should instantly sign their toddlers up for violin lessons, but that the findings are the first to prove that music plays a role in improving cognitive responses.

The relationship between musical study and increased brain activity is not new. Previous studies have shown that musicians' brains respond differently than those of non-musicians, said Ms. Trainor, but it has never been clear whether the variation was naturally occurring or a direct result of their studies.

"It's unclear from most of these studies whether the effects were there before music lessons even started or whether the music lessons actually had an effect," she said. "So that was one of our big questions."

Ms. Trainor said another study compared the IQ of school-aged students, some of whom were studying music and the others drama.

"The kids who were in music lessons had a larger increase in IQ than the kids who were in drama," she said. "So that suggests music is having an effect, but nobody really knew what the mechanism was whereby the lessons were having these general effects on cognition."

The McMaster study measured the children's responses four times over a one-year period.

"We looked at how the brains of the two groups changed as they took music lessons."

The study's sample size was small, she acknowledged, but the fact that they saw results in such a minimal group suggests a major finding.

"We still had significant effects with this number, so that tells us that these effects are probably quite large because they show up with a reasonably small number of children," said Ms. Trainor. "Music is certainly one thing that does appear to have wide cognitive benefits."

She is not advocating for music as the only means to better memory, but Ms. Trainor does believe the study should be required reading for policy makers dealing with school curriculum.

"Music is actually very important," she said. "Not only important because kids enjoy making music but it's a benefit for cognitive development. So I definitely think it should be a core part of the preschool and school curriculum."

There have been no studies exploring whether the same effect could be found in adults who study music, but Ms. Trainor's group is now looking at whether their findings will have any impact for the elderly.

"There's been studies showing that bilinguals, people who actively practice speaking two languages, as they age show less cognitive deterioration as they age," she said. "We think music might also have similar effects on ageing."

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