

# [Fine Arts Change the Brain](#)

## **Brain Development Affected by Music and Art**

May 27, 2009 [Barbara Pytel](#)

Has the focus on math and reading under NCLB actually hurt learning?

Schools are so focused on raising reading and math scores for No Child Left Behind that music, art and recess are getting the short shrift. Is this damaging the ability of children to learn?

### **Recess Recovery**

An organization called Recess Recovery has become very popular in regaining [recess](#) times in schools. Children need breaks. Learners need to run and play throughout the school day to better focus on academics. A general rule with young, active boys is – the longer they sit, the less they learn. Recess Recovery is a national initiative to bring back recess times in schools.

### **Fine Arts Brain Research**

In May of 2009, the new Neuro-Education Initiative at Johns Hopkins University, sponsored a seminar on the brain and the arts. It was held at Baltimore's American Visionary Art Museum. Neuroscientists are asking questions about how the brain is affected by music and art. Does putting a [violin](#) in the hands of an elementary school student help him to do math better? Will learning to dance or paint improve a child's spacial ability or ability to learn to read?

Ellen Winner of Boston College and Gottfried Schlaug of [Harvard](#) University are conducting a four-year study on whether studying piano and/or violin has an effect on elementary students. Students in the study are divided into two groups:

- Group One is learning an instrument.
- Group Two is not learning an instrument.

Schlaug states, "It is the first study to demonstrate brain plasticity in young children related to music playing." [1]

After a 30-minute lesson once a week and 10 minutes of practice a day, children in the group learning an instrument did have structural changes in their brains that could be measured. These students were also better at tests requiring finger dexterity. Unfortunately, these same students did not show improvement in the areas of math or reading.

### **Johns Hopkins Music Study**

Scientists are now able to use imaging technology to monitor brain activity as students are playing various instruments. Charles Limb, jazz musician and a Johns Hopkins doctor, takes

pictures of the brain activity in students as they improvise. He has discovered that creativity flows when students shut down areas of the brain that control inhibition and self-control. [1]

### **Music Training Improves Ability to Focus**

Does playing an instrument improve the ability to focus and pay attention? Apparently, so. Michael Posner, University of Oregon researcher, has found that the arts help develop attention and intelligence. Imaging technology is so sensitive that it can discern brain activity between a student playing a stringed instrument and one that plays the piano. [1]

Schools that are cutting art, music and recess from the curriculum may be working against the grain of how many students learn. What if the "arts" were a large enough factor to raise many student scores from non-proficient to proficient? Research continues and soon educators may know the answer to this question.

[1] Liz Bowie, "Arts appear to play role in brain development," *The Baltimore Sun*, May 18, 2009.

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