The Benefits of Music Education

Neuroscientists have demonstrated that learning to play an instrument or sing leads to changes in a child's brain that make it more likely they will reach their full cognitive and academic potential.

**Music Education Contributes to Cognitive Development**

- Stronger connections between brain regions
- More grey matter
- Improved brain structure and function
- Better memory and attention
- Higher IQ

**Speech and Reading**

Young children taking music lessons showed dramatic improvement in their verbal intelligence after only four weeks of music training.

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<thead>
<tr>
<th>Raw Vocabulary Score</th>
<th>20</th>
<th>25</th>
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<tbody>
<tr>
<td>Music group before training</td>
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<td>Music group after training</td>
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<td>Visual arts group before training</td>
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<td>Visual arts group after training</td>
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**Academic Success**

The quality of a child's music education is linked to their academic achievement.

Elementary school students in higher quality music education programs had **20% improvement** in standardized tests of English and math.

“...The theory of relativity occurred to me by intuition, and music is the driving force behind this intuition. My parents had me study the violin from the time I was six. My new discovery is the result of musical perception.”

Albert Einstein

**Cognitive Benefits of Music Education**

- **Working Memory**
  - Individuals who are musically trained show better working memory abilities than those who are not.
  - Working memory allows us to remember things and is crucial to mental arithmetic and reading comprehension.

- **Creativity**
  - Scientists found a marked difference in communication between the right and left sides of the brain, which foster creativity, in individuals with musical training than in those without.

- **IQ**
  - In a study conducted through the University of Toronto, researchers showed greater increases in full-scale IQ scores among children in music lessons versus children in drama lessons or no extra lessons at all.

2. C.M. Johnson and J.E. Memmott, Examination of Relationships between Participants in School Music Programs of Differing Quality and Standardized Test Results, Journal of Research in Music Education (Winter 2000), Volume 54, Number 4
3. E. Glenn Schellenberg, Music Lessons Enhance IQ (Psychological Science, 15)
5. Gottfried Schlaug, The Brain of Musicians – A Model for Functional and Structural Adaptation

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