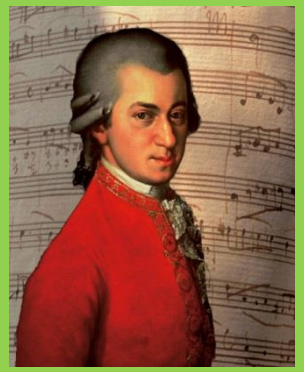
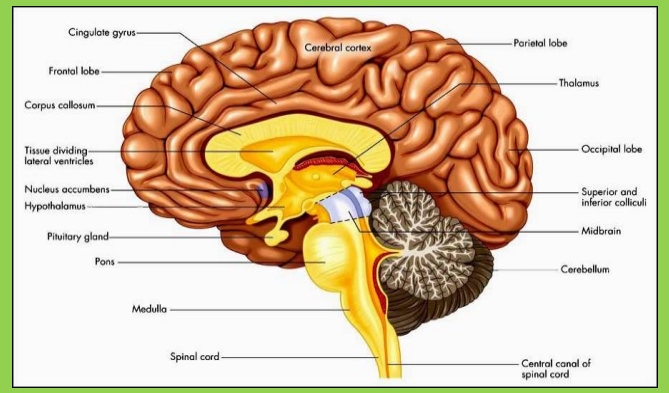
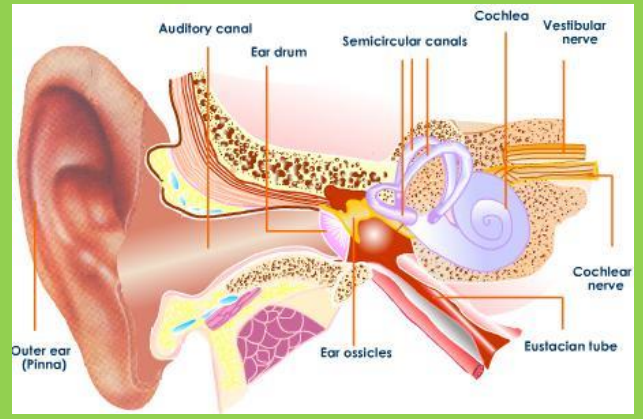


Myth or Truth: The Mozart Effect

Tiffany McVicker

April 2016





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Before Baby Mozart, There Was Baby Einstein

Baby Einstein was founded in 1996 by a mother, Julie Aigner-Clark, who used to be an art and literature teacher. She could not find any available products that could enrich the play experience between her and her baby daughter. Julie started Baby Eisntein in order to share her love of art, classical music, language, and poetry with her daughter.

Now, Baby Einstein products are available in CDs, tapes, toys, and videos in toy stores and baby stores. Baby Einstein has a wider market share than Baby Mozart because DVD series have been marketed by Walt Disney.

- Baby Einstein. Walt Disney Company. (1996). Retrieved from www.babyeinstein.com

Baby Einstein

Baby Einstein was merged into Baby Mozart.

Quote: **"Baby Einstein, founded in 1997, was one of the earliest players in what became a huge electronic media market for babies and toddlers. Acquired by Disney in 2001, the company expanded to a full line of books, toys, flashcards and apparel, along with DVDs including "Baby Mozart," "Baby Shakespeare" and "Baby Galileo." (Lewin, New York Times)**

- **Reference:** Lewin, T. No Einstein in Your Crib? Get a Refund. New York Times.

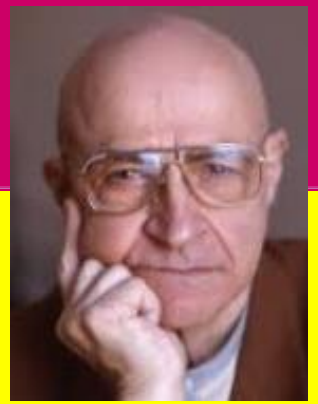
Definition of the Mozart Effect

The Mozart Effect is the idea that listening to Mozart boosts a young child's overall IQ.

Reference: Carrol, R. (1994). The Mozart Effect. The Skeptics Dictionary.

Retrieved from http://www.skepdic.com/mozart.html

Definition of the Mozart Effect



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The Mozart Effect was first introduced by Dr. Alfred Tomatis, a Parisian physician, psychologist, and educator.

Dr. Tomatis hypothesized that the lack of sound stimulation or abnormal stimulation in utero and/or in early childhood can cause **delays in communication skills** and promotes **aberrant behaviors**.

Campbell, D. (2009). *The Mozart Effect For Children*. New York, New York: Harper Collins.

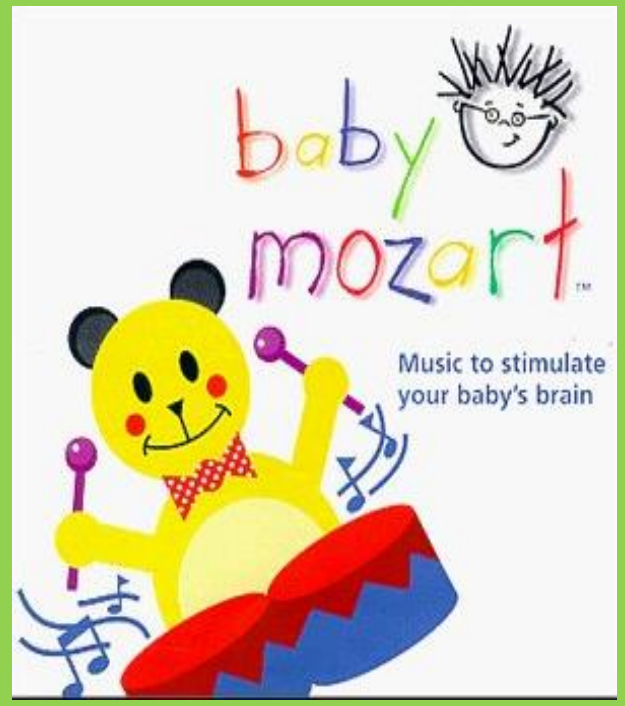
Who Was Dr. Tomatis?

Dr. Alfred Tomatis was a French physician who specialized in otorhinolaryngology. He was born on January 1st, 1920 and died on December 25th , 2001.

His discoveries on the ear and the voice were made at La Sorbonne in a physiology laboratory. His discoveries were then presented to the Academy of the Sciences and the Academy of Medicine in Paris in 1957 and 1960.

- Reference: Listening Clarity. Dr. Tomatis. Listening Clarity, Inc. Imagining Possibilities. Retrieved from http://www.listeningclarity.com/tomatis-method/dr-tomatis.html

Selling the Mozart Effect



Link for purchasing DVDs, CD, tapes of Baby Einstein with Baby Mozart: http://www.amazon.com

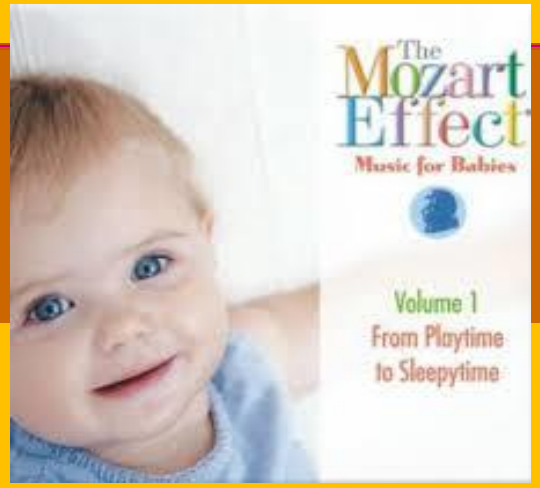
Mozart Music for Children-Classical Music Effects

- Click Here: https://www.youtube.com/watch?v=ebr-afDMIlo

Link out for Mozart music:

2004 Baby Mozart Festival

http://www.bing.com/videos/search?q=link+out+Mozart+music&view=detail&mid=005AC26F7FE3CC9E7356005AC26F7FE3CC9E7356&FORM=VIRE&adlt=strict



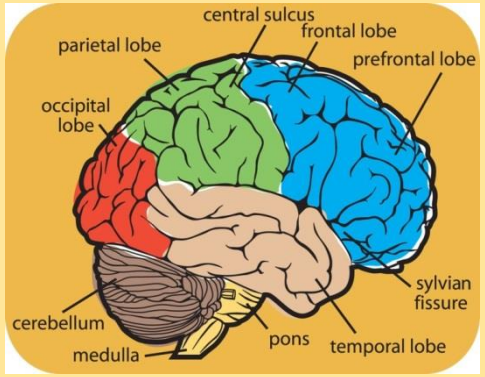
Selling the Mozart Effect

In 1998, Gov. Zell Miller (of Georgia), proposed **$105,000** a year in the state budget to provide every child born in Georgia with a tape or CD of classical music.

This Day in History. (1998). Georgia Governor Zell Miller proposes writing "The Mozart effect" into law. A&E Television Networks. Retrieved from http://www.history.com/this-day-in-history/georgia-governor-zell-miller-proposes-writing-the-mozart-effect-into-law

Thesis:

This presentation will discuss studies on the Mozart effect conducted on children.



Study 1: Mozart Effect Actually Boosted Paper-Folding and Cutting skills

Method:

- 36 undergraduate students listened to a relaxation tape, a Mozart Sonata, or silence.
- Students were given three spatial reasoning tasks from the Stanford-Binet tests.

Results:

- Professor Gordon L. Shaw concluded that the students who listened to Mozart boosted their IQ scores by an average from eight to nine points.

Dowd, W. (2007). The myth of the Mozart effect. *Skeptic, 13(4)*, 21-23.

Reflection

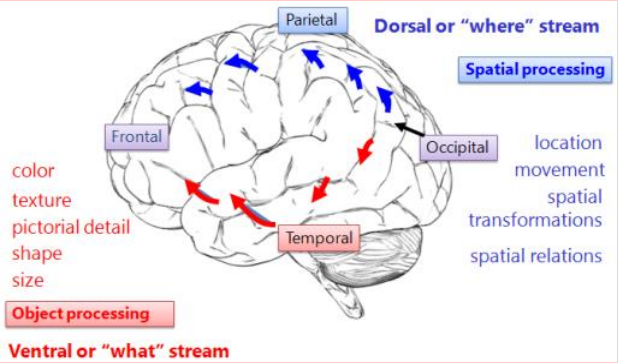
I thought this was interesting to read that the Mozart Effect worked on paper-folding and cutting skills. However, I would be interested in finding out more if the Mozart Effect works for other specific activities.

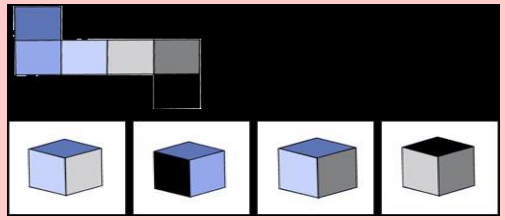
- Reference: Dowd, W. (2007). The myth of the Mozart effect. *Skeptic*, *13(4*), 21-23.

Study 2: Again, Does Listening to Mozart Boost Spatial Abilities?

Method: In 1993, Professor Frances Rauscher conducted an experiment where his subjects listened to ten minutes of Mozart Sonata for ten minutes.

Results: Dr. Rauscher claimed that after subjects listened to two of Mozart's Sonatas for ten minutes, they showed better spatial reasoning skills. However, this time, the enhancing effect only lasted 10-15 minutes.





Reference: Jenkins, J. (2001). The Mozart effect. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1281386

Study 3: Does Mozart Music Really Increase Spatial IQ?

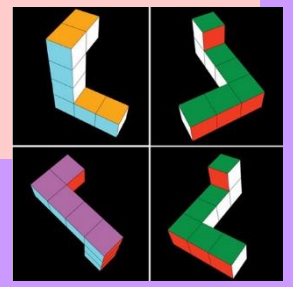
In 1995, Rauscher, Shaw, and Ky reproduced their original Mozart Effect experiment.

They divided 79 students into three groups.

This time a music by composer Phillip Glass was substituted for the relaxation tape. The group that listened to the Mozart music demonstrated an increase in spatial IQ scores.

Reference: Lerch, D. (2000). *The Mozart effect: A Closer Look*. Retrieved from http://lrs.edu/students/lerch1/edpsy/mozart_effect.html

Reflection for Studies 2 and 3:



My take on this is that testing the Mozart Effect on spatial abilities would need to be conducted more often. For this type of experiment, evidence would also need to show that the enhancing effect lasts a lot longer in regards to Mozart music and spatial abilities. For example, it would need to make a positive effect for several months in order to claim that Mozart music helps improve spatial reasoning skills.

- Jenkins, J. (2001). The Mozart effect. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1281386

Does the Mozart Effect work with first-grade students in regards to reading comprehension?

At the end of the first session of the three weeks of the Mozart Effect experiment, first graders completed a reading test consisting ten multiple-choice questions with a CARE test.

Another three-week session was conducted and the students were given another reading test of ten multiple-choice questions as well as a CARE test. At the end of the second three-week session, the researcher found that there was a significant difference at the 0.05 level of significance for reading and CARE.

This did not show much of a difference in the students **reading levels**. However, the researcher found that during CARE, music helped the students.

Reference: Lewis, E. (2002). The Relationship of Listening to Classical Music on First Graders' Ability to Retain Information. ED 471-383.

Reflection

Researchers found that no music helped the children during reading. In the article, it discusses about how researchers concluded that this was because the music used during the reading may have been too loud for the students while the teacher was talking. Apparently, during the treatments of music, the researchers noticed that the children's behavior was better than when the traditional methods of teaching were used.

This suggests to me that listening to classical music calms children down but does not significantly help them read better.

- Reference: Lewis, E. (2002). The Relationship of Listening to Classical Music on First Graders' Ability to Retain Information. ED 471-383.

Results of the Mozart Effect

MOZART EFFECT 837

TABLE 1

PATTERN ANALYSIS, MATRICES, AND PAPER-FOLDING: MEANS AND STANDARD DEVIATIONS FOR CONDITIONS OF MUSIC, RELAXATION, AND SILENCE

Condition	Pattern Analysis		Matrices		Paper Folding	
	M	SD	M	SD	M	SD
Music	56.08	2.27	53.25	7.35	63.33*	2.19
Relaxation	55.17	2.44	52.17	4.67	56.50	5.76
Silence	54.25	3.44	52.60	5.96	55.17	5.97

*$p < .01$ (Scheffé).

Analysis of Variance (One-Way)

Click on Tools and Share to a additional feat

Summary

Groups	*Sample size*	*Sum*	*Mean*	*Variance*
Classical	19	80.	4.21053	2.73099
Dubstep	19	56.	2.94737	1.60819

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*p-level*	*F crit*
Between Groups	15.15789	1	15.15789	6.98652	0.01208	4.11317
Within Groups	78.10526	36	2.16959			
Total	93.26316	37				

Table 1: This is a table showing the ANOVA output for the effects of classical and dubstep music on reading comprehension performance. Important to note from this table is the mean test score for classical music is higher than the mean test score for dubstep music, and the p-value shows significance. In regards to the mean squared error values, the smaller value for within groups (MS=2.16959) indicates smaller variance within each group, while the larger number for between groups (MS=15.15789) indicates larger variance between the two music types.

Reference for graphs: Google Images

Does the Mozart Effect Work in Some Populations More than Others?

The Mozart Effect may work on any population. It specifically helps with performing spatial-ability tasks and paper-folding and cutting skills.

References:

Dowd, W. (2007). The myth of the Mozart effect. *Skeptic*, *13(4*), 21-23.

Lerch, D. (2000). *The Mozart effect: A Closer Look*. Retrieved from http://lrs.edu/students/lerch1/edpsy/mozart_effect.html

Conclusion:

It is now established that the Mozart Effect boosts paper-folding and cutting skills. There is a possibility that Mozart music also improves spatial IQ. However, for this specific task, the Mozart Effect would need to be tested for a period of six or twelve months for example in order to see a bigger enhancing effect.

In the meantime, the Mozart Effect helps with relaxation and calming down when involved in more stressful situations, such as having an overwhelming schedule.

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Baby Einstein. Walt Disney Company. (1996). Retrieved from www.babyeinstein.com

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Dowd, W. (2007). The myth of the Mozart effect. *Skeptic, 13(4*), 21-23.

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This Day in History. (1998). Georgia Governor Zell Miller proposes writing "The Mozart effect" into law. A&E Television Networks. Retrieved from http://www.history.com/this-day-in-history/georgia-governor-zell-miller-proposes-writing-the-mozart-effect-into-law