

The Role of Music in Learning



by Dr Roy J. Paget

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About the Author



Dr Roy J. Paget is a neuro-psychologist and a leading authority on Brain Based Learning and the educational and academic achievements of children. He has devoted his life's work to raising human potential and personal effectiveness and his unique approach to consultancy and training has assisted companies from here and abroad to dramatically increase their business.

Since gaining his PhD in right brain thinking, Roy has become a highly respected author, lecturer, television and radio personality and consultant. In his clinical work, he has also successfully treated hundreds of people in their personal quest for harmonious and balanced lives.

He is also the founder of the British Academy of Advanced Training, a company dedicated to empowering both people and organisations towards achieving greater success and increasing their performance capability.

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Recent research has proven that music affects the body. It appears to massage organs, entrain biorhythms alter hormone levels, reduce stress and increase learning. Music carries with it more than just feelings; it can be a powerful vehicle for information.

Music acts as a premium signal carrier whose rhythms, patterns, contrasts and varying tonalities encode new information. The use of music as a partner can be a powerful way to carry a large volume of content. In fact, music can do 60% of the teaching work in about 5% of the time!

How does music do this?

It activates more than just the right brain, for both sides of the brain are used in processing music.

It elicits emotional responses, receptive or aggressive states and stimulates the limbic system which, along with the sub-cortical regions, is involved in engaging musical and emotional responses. More importantly, research has proven that the limbic part of the brain is responsible for long-term memory. This means that when information is imbued with music, there's a greater likelihood that the brain will encode it in long-term memory.

The effects of music on the mind and body are best summarized in these eight areas:

- The effects on muscular energy tones and scales
- An increase in molecular energy
- The influence of rhythm on the heartbeat
- Changes in metabolism that affect physical energy
- A reduction in stress levels
- Relief from fatigue and low energy
- The release of emotions, feelings and character
- The stimulation of creativity, sensitivity and thinking

Which music is best for learning?

There is a greater consistency in the body's pulse response to classical music (circa 1750 - 1825) and Baroque (circa 1820 - 1900) than there is to rock music, for example. In other words, you get more predictable, safer and more consistent responses because the pitch and rhythm is compatible with the cyclic wave patterns of the brain. It has also been established that music containing the sounds of nature and the wild, such as lapping waves and running water or the chants of whales and dolphins, can have a very soothing effect.

We suggest the music of the following composers as being suitable listening material for learning:

Slow Baroque Music for Super Learning:

Vivaldi Largo from 'Winter': The Four Seasons
 Largo from Concerto in D Major for Guitar and Strings

Largo from Concerto in C Major for Mandolin, Strings and Harpsichord

Telemann Largo from Double Fantasia in G Major for Harpsichord

Bach, J.S Largo from Harpsichord in F Minor
Air for the G String
Largo from Harpsichord in C Major

Corellie Largo from Concerto No.10 in F Major from Twelve Concerti Grossi
Concerti Grossi, op.6 No.2, 8, 5 & 9

Albinoni Adagio in G for Strings

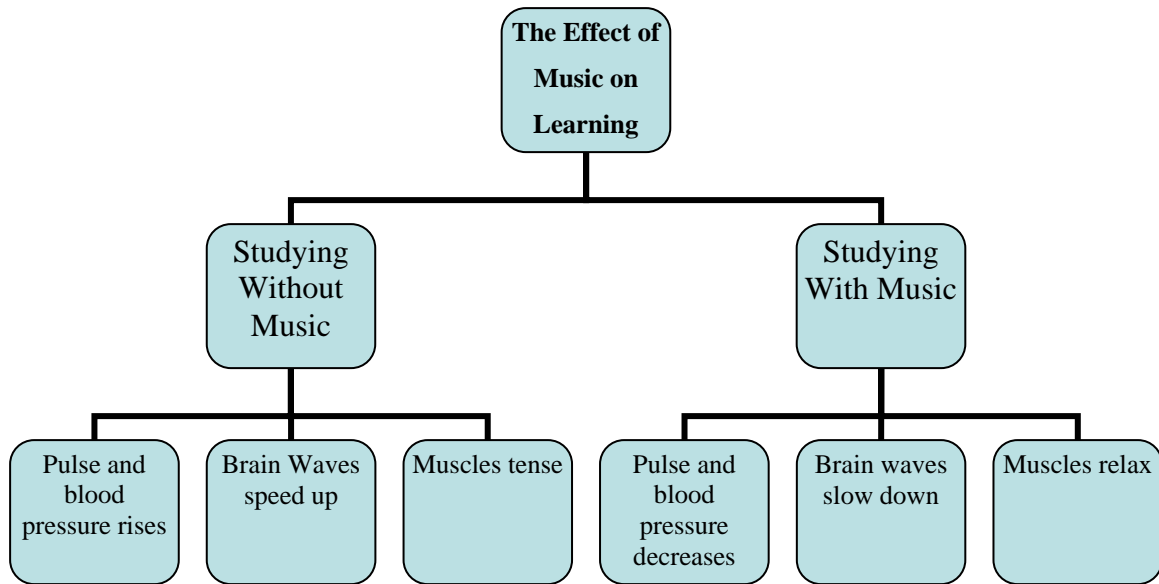
Brahms Concerto for Violin and Orchestra in D Major

Pachelbel Canon Suite in D

Also,

Beethoven - Chopin - Grieg - Handel - Hadyn - Mozart

These composers often used specific beats (sixty beats per minute) and patterns that automatically help us to relax when studying. How does it work? Research in this field seems to indicate the following:



However, the music should only be played at a level that still allows for normal conversation to take place.

The Mozart Effect

The National Broadcasting Corporation of America produces 'Dateline', a weekly TV news magazine which, on the first of September 1994, ran a special edition devoted to the music of Mozart.

Researchers stated that listening to selected compositions by Mozart during either active or passive learning can measurably increase spatial learning, memory and reasoning. In studies carried out on pre-schools children, secondary-level students, college students and undergraduates, another interesting fact was discovered: the computer generated images of the brain activity had striking similarities to the written score of Mozart's music. Coincidence? Could it be that Mozart activates the brain in a way that we are biologically receptive or programmed to think?

At the Centre for the Neurobiology of Learning and Memory at California's UC Irvine Campus, a study measured the impact of listening to Mozart before taking a standardized test. The participants, who had listened to ten minutes of Mozart's Sonata for Two Pianos in D Major, raised their test scores in spatial and abstract reasoning! On an intelligence test, the gain was nine points after just ten minutes listening!

Al though the effect in the brain is only temporary, the results can be duplicated with additional reactivation time. Those who listened only to a relaxations tape, or who simply had silence, either improved only slightly or stayed the same.

Further Resources

BAAT offers a wide range of training courses and products catering for the needs of individuals, parents, corporate and educational organisations using the principles of Emotional Intelligence (EQ) and Brain Based Learning.

We provide online training (eLearning), child development aids, parenting aids, distance learning, teacher training, staff development and self development resources in the form of eBooks, web-based courses, training seminars, DVDs and books.

To view the full range of courses, publications and resources BAAT have to offer, please visit one of our websites listed below (click on the name of the site and if you are connected to the internet, the site will open in a new window):

- [BAAT](#) - This is the main website for BAAT which gives a 'flavour' of all our products and services from all the areas of our business. The 'Shop' and E-Learning website are also housed here.
- [BAAT Self Development and Self Improvement](#) - BAAT website aimed specifically at training to empower people from all walks of life to achieve success.
- [BAAT Adult Learning and Life Skills](#) - Emotional Intelligence (EQ) and Brain Based Learning resources for people of all ages to maximise their lives and achieve their goals.
- [BAAT Staff Development and Corporate Training](#) - BAAT site offering resources and courses for corporate organisations to maximise management and employee performance.
- [BAAT Practical Parenting and Child Development](#) - Emotional Intelligence (EQ) and Brain Based Learning resources for parents looking to maximise the learning potential of their children.
- [BAAT Schools and Colleges](#) - BAAT site covering the whole of the courses and services we offer to educational organisation including teacher training and student workshops