



by Saint Joseph

2653.6363/2653.6528

Cedula Jurídica 3-101-515287

3km del Cruce de Huacas hacia Villa Real

La Garita, Guanacaste Costa Rica

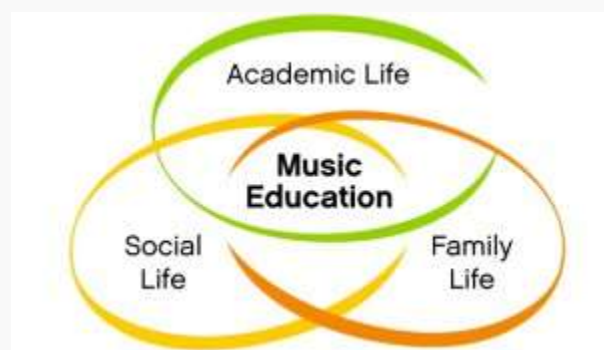
www.educartecostarica.com info@educartecostarica.com



School Integrated

We believe that every school should have PreK & K instrumental studies as an integrated part of their curricular offering. The study of a musical instrument should be the heart of music education. We wouldn't think of teaching math appreciation classes or science appreciation classes. We teach kids how to do math, how to do science, for themselves, from a very early age. We believe in the importance of teaching kids how to make music, as soon as they begin school. The skills learned and benefits received will manifest themselves over and over again, even decades later. (For more information, see [Scientific Research](#))

Our lessons are a natural part of the student's life in three distinct ways:



Academic Life. Children perceive in-school instrument study with an entirely different attitude than they do when it's outside of school. They treat it just like one of their other school subjects, so their success with the instrument is dramatically improved—and so are all the developmental benefits that come with it!

Social Life. Classes are not held with a group of people that they will never see again, but with their natural friends, with their natural peers in school. This has a profound effect on their approach to studying the instrument, their self-image, and their



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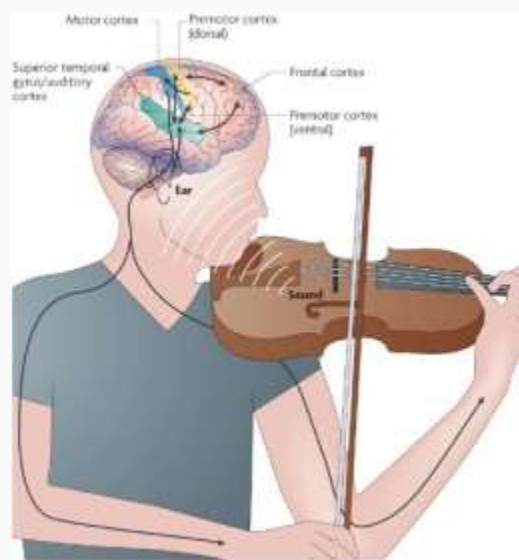
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behavioral development. Instead of socially identifying based on what they *LIKE* (SpongeBob, Star Wars, the other usual suspects...), they identify based on what they *DO*: they identify as young musicians among their peers, and their self-confidence is greatly enhanced.

Family Life. Families aren't just passive observers in the learning of a musical instrument, but are active participants. They participate in the process and journey of their child's music education, helping to facilitate at-home practicing and mini-recitals for family and friends.

Your Brain on an Instrument



Brain Development Studies

In 1997, a team of researchers set out whether or not "music training causes long-term enhancement of preschool children's spatial-temporal reasoning" (Rauscher, Shaw, Levine, Wright, Dennis, Newcomb, "Neurological Research," Volume 19, No. 1, February 1997). A study was conducted in which 78 preschool children were divided into four

Nature Reviews | Neuroscience



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groups. One received singing lessons, a second computer lessons, a third had free play, and the fourth had lessons on a musical instrument.

It was a tightly controlled experiment that went on for 6 months, with each group receiving 20 minutes of individualized instruction per day. A spacial-temporal test was administered at the beginning of the study and one at the end. The results were stunning to all involved. While the first three groups exhibited the normal projected increase that comes with age over time, the instrument group had a 46% increase in their raw spacial-temporal IQ scores.

These attributes were tested for long term effect and were considered by memory researcher standards to in fact be long-term in nature. The studying concludes by saying, "We suggest that an improvement of this magnitude may enhance the learning of standard school curricula that draw heavily upon spatial-temporal reasoning abilities, such as mathematics and science."

Since then, scientists and psychologists have gone on to researching in more detail the ways in which the study of a musical instrument has an effect on verbal ability and analytical reasoning skills, as well as a whole host of other areas such as mood, tension, and mental clarity (see the list of studies at the end of this page).

Why did this happen?

How the Brain Works

The brain stores information by receiving a sensory input (a pat on the back let's say), which sends an electrical impulse to a neuron, which travels through to what we call a synapse, or a place where the end of one neuron (the axon) connects with the end (or dendrite) of another.



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If you get patted on the back enough times in the early year of your life, that neural connection happens so frequently that the axon and dendrite makes a permanent connection. In other words, you don't need to be patted on the back again in order to know what it feels like. You have created capacity to store that information in your brain.

There are three ways information gets stored in the brain. One is through intensity, another through frequency, and still a third through duration. The brain is an amazingly beautiful thing, incredibly complex and inter connected such that there are literally billions and billions of neurons that make connections with each other — this is how we think. Connecting neurons creates capacity, and capacity facilitates high intelligence.

Timing is of the Essence

95% of all the neural connections you will make in your life happen in the first 12 years. So by the time you're 12, your brain has developed or made connections with as many neurons as it's possibly going to make. Life after 12 primarily involves using the connections that you developed during that earlier window of opportunity, with relatively little additional neural growth.

These connections determine a person's ability to think, to compute, and to reason. A person who has more neurons connected is more likely to be able to understand larger and more complex concepts better later on in life.

Instrumental Studies = The Ultimate Multi-Sensory Experience

Playing a musical instrument is the only thing that stimulates multi-sensory information at the same time with the same set of perfectly ordered information. Music is mathematical, music is perfect. There are no exceptions to the laws of music like there are in English. Music is arguably the highest form of communication, because it is so



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perfect. If you play a concert A on the violin, that pitch will vibrate at 440 Hz per second. If you play the next A up one octave (8 notes higher), it vibrates at 880 Hz per second. The next one down. Yup, you guessed it. 220 Hz. Vibration is mathematically perfect. Music is also perfect because it has a scale of notes that is very clearly regulated.

Perfectly Organized Sets of Information

When you play a musical instrument, you're doing a lot more than just making sound come out of it. You're seeing a set of organized information when you read the notes on a page or look at the instrument itself (or both), you're hearing that same set of organized information, and you're feeling it, tactilely and kinesthetically. You're getting all three of the major sensory input pathways to the brain stimulated simultaneously, with the same set of perfectly ordered information.

What this does is create a tremendous neural network, because those neurons are connecting up in complex, sophisticated ways. Practicing a musical instrument is like boosting the RAM, the processing memory, on your computer. You literally, neurologically, are growing your brain. And so it makes sense why studies have shown that it's the single most important thing you can do to help a child develop their capacity to be a more intelligent human being.

Organization is very important in the neurological life of a child. Learning and playing music is the only activity that engages all three senses using perfectly organized sets of information. No other activity has the power to do this.

At the Risk of Sounding Alarmist... it's Now or Never!

We tell our parents that when it's time to practice, it's not just time to practice, it's time to grow your child's brain. Whether a child continues on with their instrument into teenage or adult years doesn't matter at all, because whatever you do when they are



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young is what establishes the neural network that they will live with for the rest of their lives. Chances are, if you wait to see if your child shows an interest or demonstrates innate talent, you're going to miss the window of opportunity. It benefits them most to get the earliest possible experience.

Research Links

Music Training Causes Long-Term Enhancement of Preschool Children's Spatial-Temporal Reasoning
First Evidence That Musical Training Affects Brain Development In Young Children
Playing a Musical Instrument Helps Brain
Practicing a Musical Instrument in Childhood is Associated with Enhanced Verbal Ability and Nonverbal Reasoning
Effects of Music Instruction on Developing Cognitive Systems at the Foundations of Math and Science
A Grand Unified Theory of Music
Music Benefits the Brain, Research Reveals

Behavioral Effects

Behavioral Effects

Music instruction can also play an important role in a child's behavior. Some parents ask, "Is my child's behavior good enough for lessons?" However, a more important question might be, "How will my child's behavior be improved BY lessons?" Let's explore that.

Studies of young children (including pre-schoolers) experiencing early instruction in instrumental education indicate a remarkable increase in their ability to socialize, self-express, release energy and pay attention. It has also been shown to affect mood, tension, and mental clarity.

Attention & Focus

Learning to play a musical instrument helps children develop focused attention. The



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experience hones their ability to pay attention by focusing on the parts of the music they are learning, and then to re-create it using physical gestures both large and small.

Energy Release

Music brings forward emotions in all human beings and this includes even small children. Both a simple rhythm or melody can evoke a range of emotions, different from person to person. When preschool children learn an instrument and are asked to recreate music, the associated emotions are able to be released. Young children often have difficulty expressing and releasing what they feel inside (a difficulty some carry with them well into adulthood!). A musical instrument provides an outlet for this to occur.

Socialization

Our instrument education programs involve elements of group instruction, allowing for interaction between the young musicians. Playing beautiful music in ensemble teaches children to collaborate with others and also to develop leadership skills. Children self-identify as young musicians. (For more information, see [The Integrated Way](#))

Respect

Music Kids teachers help to instill respect in a variety of ways. These include respect for the teacher, the audience, the instrument, the composer, and most importantly, for oneself.

Self-Expression

Children often use their imagination to make up their own songs or make changes to an existing one to fit their liking. These natural tendencies are ways of expressing oneself. Playing a musical instrument provides a healthy opportunity for self-expression. Sharing a musical talent with others cultivates a generous spirit. (For more see [Creative Expression](#))

Emotional Security

Exposure to beautiful music helps children develop social and emotional skills in a safe and healthy environment. These emotional skills often translate into self-confidence,



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cooperation with others, self-regulation and good listening skills. All of these attributes are associated with well-behaved, successful children.

Mood & Attitude

Studies have investigated the impact of different types of music on tension, mood, and mental clarity. One such study took a total of 144 subjects who completed a psychological profile before and after listening for 15 minutes of music. With grunge rock music, significant increases were found in hostility, sadness, tension, and fatigue, and significant reductions were observed in caring, relaxation, mental clarity, and vigor (sorry, Kurt Cobain). In contrast, after listening to the designer music (music designed to have specific effects on the listener), significant increases in caring, relaxation, mental clarity, and vigor were measured, along with significant decreases in hostility, fatigue, sadness, and tension. The results suggest that music may be useful in the treatment of tension, mental distraction, and negative moods.