

# the world ensemble

THE NEWSLETTER FOR THE WORLDWIDE EL SISTEMA MOVEMENT

## Developing & Supporting “Executive Function”

By Adele Diamond, Tier 1 Canada Research Chair Professor of Developmental Cognitive Neuroscience at the University of British Columbia, Canada

The abilities to exercise self-control and stay focused, hold information in mind and work with that information, problem-solve, and flexibly adjust to change or unexpected problems are important for all aspects of life – school, work, health, creativity, and not doing things you’ll regret. Collectively, these skills comprise what are called “executive functions” (EFs).

To improve EFs you need to practice, and the more you practice them and challenge yourself to improve, the better you get. While directly training EFs and pushing yourself to improve is needed for strengthening EFs, that alone is probably not enough. It’s likely that indirectly supporting EFs by lessening things that impair them (like stress or loneliness) and enhancing things that support them (like joy or physical vitality) is also critical.

What activities directly train and challenge EFs and indirectly support them by also addressing our social, emotional, and physical needs? Traditional activities! From the dawn of civilization, across all cultures, storytelling, dance, art, music and play have been part of the human condition. People in all cultures have made music, sang, danced, and played sports and games. There are good reasons why those activities have arisen everywhere and lasted so long.

El Sistema-inspired programs provide powerful support for executive functions. Indeed, there are characteristics of El Sistema that make it likely to be especially beneficial, compared with other arts, athletic or cultural programs. Here are some of those characteristics:

► *El Sistema’s emphasis on the sheer joy of making music, especially together.* EFs depend on the prefrontal cortex (PFC) and the other brain regions with which it is interconnected. PFC is the newest area of the brain and the most vulnerable. If you’re stressed, sad, lonely, or not physically fit, PFC and EFs take the first hit and the biggest. Stress impairs EFs and can cause someone to look as if he or she has an EF impairment (like ADHD) even when that’s not the case. Conversely, we show better EFs when we’re happy, healthy, and feel socially supported. In general, people show more creativity and are better able to maintain focused attention when they are happier than when they are more miserable.

This is why El Sistema’s emphasis on joy is so important. Joy is not the opposite of serious. Indeed, research shows we learn more, and get more done, when we’re happy. El Sistema concentrates

on building positive feelings like pride and self-confidence; children are encouraged not to worry about making mistakes, but to enjoy the process of music-making. In Abreu’s words, “Mistakes are simply what happens on the way to getting things right.”

► *El Sistema’s emphasis on community.* Humans are fundamentally social. We need to belong. Being part of something larger than oneself, working with others toward an important shared goal, is one of the greatest joys in life. We need to feel that there are others who care about us and are there for us. We need to fit in and be liked. PFC works more efficiently, and we have better EFs, when we feel we’re not alone. El Sistema’s practices of learning in ensemble and encouraging children to teach one another help to build feelings of community and solidarity.

► *El Sistema’s emphasis on the physical activities of playing and practicing.* The brain doesn’t recognize the same sharp division between cognitive and motor function that we impose in our thinking. The same or substantially overlapping brain regions serve both cognitive and motor functions. For example, an area of the brain known as the pre-SMA is important for sequential tasks, regardless of whether they are cognitive or motor.

The different parts of a person are interrelated. Each part (cognitive, spiritual, social, emotional, and physical) is affected by, and affects, the others. We have to care about children’s emotional, social, and physical well-being, if we want them to be able to problem-solve, exercise self-control, or display any of the other EFs. When they are stressed, sad, lonely or not physically fit, their academic performance suffers.

It is worrisome that activities needed for children to thrive (such as music-making and play) are disappearing from school curricula and children’s lives. Mainstream education may have it exactly backwards. Focusing exclusively on training cognitive skills is probably less efficient or effective than also addressing youths’ emotional, social, and physical needs. Addressing those needs may be key to whether children do well in school and in life. No program does a better job of addressing the whole child – mind, heart, and soul – than does El Sistema.

[For a version of this article that includes detailed footnotes, download the article here: <http://tinyurl.com/goldlg4>. To see Adele Diamond’s TEDx talk on this subject: <http://tedxtalks.ted.com/video/Turning-some-Ideas-on-their-Head>]

## NEWS

### EUROPE

#### [El Sistema Serbia Continues to Grow](#)

*El Sistema Serbia* has grown to include 360 students in six cities. A new program in the southern city of Vranje recently opened as a result of a community concert in which local children from Roma families, who traditionally play... [Continued on page 2 >](#)

### LATIN AMERICA

#### [Bringing Together Traditional & Classical Music](#)

A new artistic adventure took over the Simón Bolívar Hall of the [National Center of Social Action for Music](#) in Caracas from April thru May. For the first time, a series of concerts combined youth orchestras and student groups of the Alma Llanera Program with professional ensembles... [Continued on page 3 >](#)

### NORTH AMERICA

#### [Canada’s SONG Presents \*The Spirit Garden\*](#)

*Sounds of the Next Generation* (SONG) in Northumberland County, Canada, is collaborating with top talent across Canada to perform *The Spirit Garden*, an immersive outdoor music drama by Canadian composer R. Murray Schafer... [Continued on page 4 >](#)

### AFRICA

#### [New Youth Leaders for KNYO Courses & Concerts](#)

In April the [Kenya National Youth Orchestra](#) (KNYO) residential course was run, for the first time, entirely by musicians within the Young Leaders program. These young leaders were drawn from the first group of KNYO players that started in 2010. They organized all course activities... [Continued on page 4 >](#)

### ASIA

#### [Ang Mison Inc. Tours North America](#)

*Ang Mison Inc.* (AMI) launched its first International Awareness & Educational Tour in May. The tour showcased the Orchestra of the Filipino Youth (OFY) Strings Quorum in performances at various venues in New York City, Washington DC, and New Jersey... [Continued on page 4 >](#)

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