spark*/spark*EL Backgrounder on

Explaining executive functions to children

We all hold some beliefs about our own intelligence, whether we're fully aware of it or not. These beliefs have important effects on our expectations from learning, school and life.

The two main personal theories of intelligence (TOI) are **entity** and **incremental**. People who believe in an entity TOI view intelligence as a fixed thing that doesn't change. They often just give up if they don't do well on a task or are given negative feedback on their performance. They seem to think, "Well, that's that! I just don't have the ability." Intelligence is to them like a box, either big or small if you are smarter or less smart. The entity TOI believers explain the concept of being smart in terms of how well they did, like getting good grades. They also tend to believe that, if you're smart, you don't have to put much effort into learning.

People who believe in the incremental TOI view intelligence as something that grows as you learn. They tend to explain being smart in terms of accomplishing things, like finishing their homework. Intelligence is more like a balloon that increases in size as you gain greater mastery.

About 40% of the general population believe in the entity theory, 40% endorse in the incremental theory, and 20% don't fit well into either category.

Why is this important?

Children's TOI shapes their responses to learning challenges. For those endorsing an entity theory, if they're met by failure or negative feedback, they tend to give up or withdraw. They often try to avoid any further demonstrations of inability.

In contrast, those endorsing the incremental theory put more effort into their learning if they encounter failure. Difficulty with learning is viewed as an opportunity to gain greater mastery.

Incremental believers versus entity believers tend to:

spark* *Self-regulation Program of Awareness and Resilience in Kids., is an innovative evidence-based program that teaches children how to manage and regulate their behavior, thinking and emotions.* ***spark*EL*** *is spark* for Elementary-school-aged children.*

Both programs are based on well-researched theory, current neurology, extensive clinical practice and ***spark**** *-specific research.*

spark* *and* ***spark*EL*** *are comprehensive, practical and systematic and provides all information and resources needed to implement the program successfully.*

Find out more at ***http://spark-kids.ca***

Why is it important? (cont'd)

- focus more on goals aimed at increasing their ability versus performance goals aimed at documenting their ability;
- believe in putting more effort into learning versus seeing effort as futile because of low ability
- attribute failure to not enough effort versus low ability
- respond to failure with changes in strategies and increased effort versus withdrawal or continuing to use unsuccessful strategies

Children who believe in the entity theory are more likely to adopt 'self-handicapping'. That means they'll create obstacles that make it more likely they'll fail. This lets them point to the 'handicap' as the reason there wasn't a better outcome. In an odd way, self-handicapping is self-protective; It allows the person to shift blame for poor performance to the handicap rather than their ability or efforts.

Children who are taught about an incremental TOI achieve significantly higher grades in school. They show greater increases in achievement than those who endorse an entity theory framework.

There appears to be no research into the concept personal TOI in people with autism. Many children with autism I've worked with seemed to believe in the entity TOI. They'd attempt a task and then immediately give up. They might crumble the piece of paper that they were using or have a meltdown or simply move on to something else. It's likely that there's the same distribution among the autism community, with 40% believing in incremental intelligence and 40% believing in entity. It's been my experience that those taught an incremental viewpoint persevere more and continue to work even in the face of failure.

How do we introduce incremental TOI in spark*EL?

We encourage children to adopt an incremental viewpoint by:

- describing basic information about brains regions, lobes and functions
- explaining executive functions and the role of each
- discussing brain plasticity and how learning changes the brain by forming new connections
- discussing something the child has learned to do (e.g. ride a bike) and talk about how practice made it easier
- reminding the child that everything is hard before it's easy
- discussing how some children are afraid to try new things or to work hard; some children think if they work hard other children will think they aren't cool, look stupid or are a nerd
- explaining the importance of challenge and trying difficult tasks
- describing how some things will be harder than others but It's important that you don't give up when you find it hard.