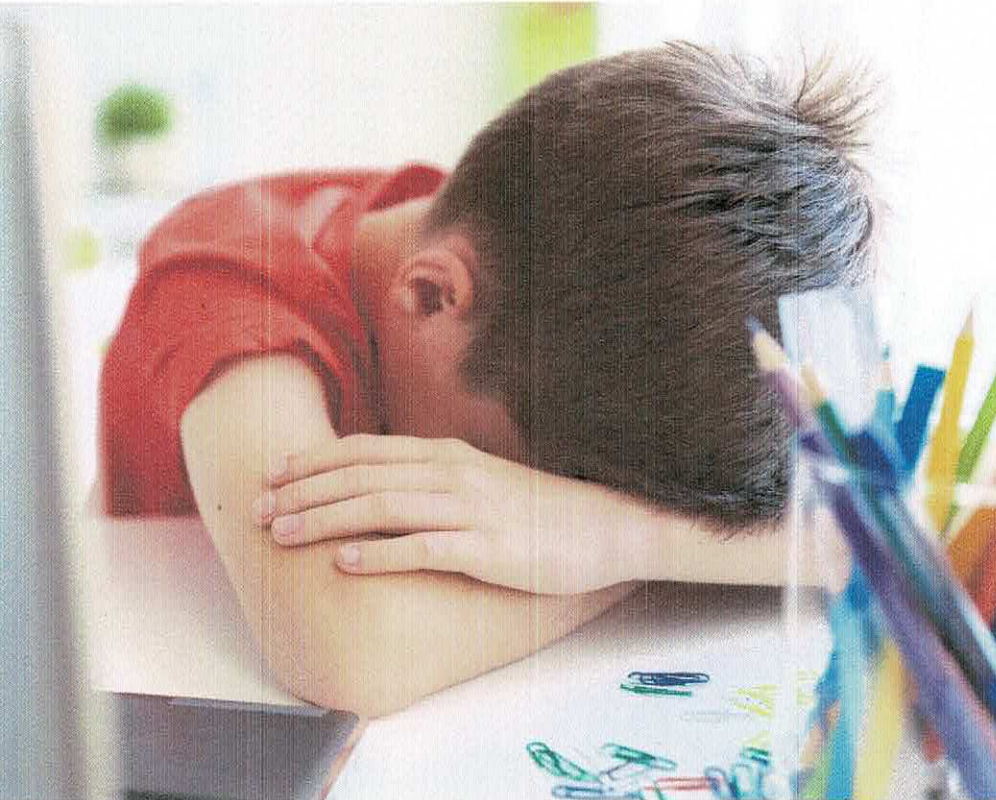


There are always ways to solve learning challenges. Co-founder and Managing Director of BrainAbility South Africa, Dalena van Westhuizen, explains the issues in relation to cognitive skills and the role they play in the learning process



When learning is hard, life is hard

I'm so excited to start this journey with you; firstly, explaining the core brain skills that form the basis of how we process information and then, in upcoming SAH issues, exploring different learning frustrations and disabilities to give you research-based study tips, explain twice-exceptional (2e) kids and look at executive functions, as well as exercises to strengthen memory and concentration.

What are cognitive skills?

These are the core skills the brain uses to think and learn, and explains why certain tasks are easier or more difficult than others. Brain skill strengths and weaknesses can even explain learning style preferences.

We use cognitive skills to learn, read, remember, concentrate, make decisions, etc. In other words, brain skills are responsible for how you take in, process, store and recall information. They are also the skills that make up your IQ.

Let's look at the core cognitive brain skills and their functions:

Attention plays a role in everything we do, especially during the learning process.

Although there are many different types of attention, there are three major categories/types of attention spans:

- **Selective attention:** The ability to stay focused and on a task, despite auditory (noises) or

visual distractions. If this skill is weak, you'll easily be distracted.

- **Divided attention:** This enables you to remember information while doing two things at once. If this skill is weak, you'll have difficulty multi-tasking, make frequent mistakes, etc.
- **Sustained attention:** This helps you stay focused and on task for a specific period. If this skill is weak, you'll usually have lots of unfinished projects because of jumping from task to task, an inability to concentrate for a sustained period, etc.

Working memory refers to the temporary storage and manipulation of the information necessary for complex cognitive tasks – eg

remembering which items are in your shopping basket, then working out how much they cost.

Processing speed refers to the ability to perform cognitive tasks quickly – an important skill for complex tasks or tasks that have many steps, eg if you're dividing two numbers in your head, but the processing is slow, you might have forgotten an earlier calculation before you're done and will have to start all over again. You took longer to do the problem than your ability to remember.

Short-term memory is the ability to store and recall small amounts of information about the current situation. Someone with short-term memory problems may need to look several times at something before copying, have problems following instructions or need to have information repeated often.

Long-term memory is the ability to recall information when needed that was stored in the past. This



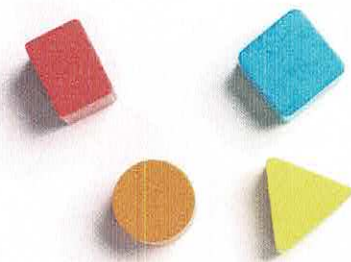
is essential for spelling, recalling facts for tests and exams, and comprehension.

Auditory processing refers to the ability to perceive, analyse and conceptualise what is heard. This is critical in reading and spelling because it includes hearing, identifying and blending sounds, as well as sounding out words. It also affects concentration.

Visual processing refers to the ability to perceive, analyse and think in visual images. This includes visualisation, which is the ability to create a picture in your mind. Pupils who have problems with visual processing may reverse letters or have difficulty following instructions, reading maps, doing word maths problems and comprehension.

Logic and reasoning enable you to reason, form ideas and solve problems. They play an important role in the ability to transfer knowledge/information and find starting points in processes.

Why do cognitive strengths (and weaknesses) vary?



‘The ability to learn new things, keep up with change, think on your feet, remember more and for longer... can be changed and improved.’

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We all have different strengths and weaknesses within our cognitive profile. In other words, a child might have strong visual processing skills, but have a weak working memory or auditory processing skills.

What is cognitive brain development and why is it important?

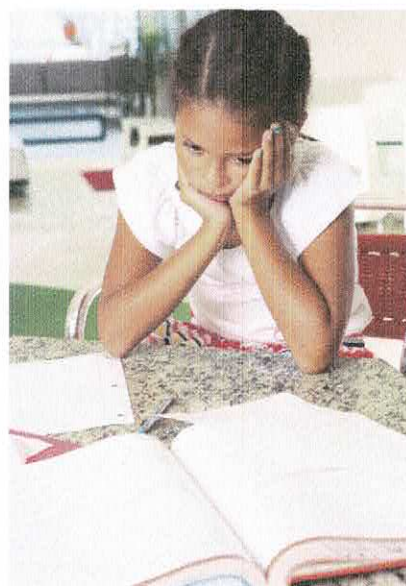
Your cognitive profile influences all your experiences in school, at home and – eventually – in the workplace. Because cognitive skills all work together, even one weak skill can make learning (and life) harder than it needs to be.

That is why even intelligent kids may sometimes struggle with certain tasks. Research has shown that 80% of struggles with reading, memory, attention and learning are typically caused by weak cognitive skills – a condition common in children and adults which is often overlooked.

How easy or difficult learning is depends on our cognitive strengths and weaknesses. However,

catching up (if needed) and keeping up can be difficult and frustrating if there's a combination of weak cognitive skills within your cognitive profile.

Neuroplasticity is a scientific term used to describe how our brains are malleable and can be developed at any stage or phase



of our life. That means that the ability to learn new things, keep up with change, think on your feet, remember more and for longer – and the speed at which you can do all of these things – can be changed and improved.

Simply put, it means your child doesn't have to be stuck with a cognitive weakness. Whether they're an average or gifted pupil who simply wants to give their learning skills a boost or still struggling

despite all the tutoring and/or therapy they're receiving, weak cognitive skills can be strengthened and improved with systematic, intensive brain skill development exercises.

If a child is struggling with learning, reading, attention or memory, is it possible to find out why – and how can brain training (brain skills development) help?

It's possible to find the 'why' behind these struggles – and surprisingly easy. I often work with parents who've done dozens of assessments to find out why their child is struggling with learning, reading, attention or memory, without finding any real answers or solutions.

Start with a brain skills test (cognitive test) from an organisation specialising in brain skills testing and development. The information will provide you with insight into your child's specific cognitive profile and act as a guide on how to best support him/her.

At what point should you have your child assessed if you believe he/she isn't developing at the same pace as other children?

As a mom and a professional, my advice to any parent would be to have the right assessment done as soon as possible. You want to make life a little easier for your child – and to do it without delay.

