Memory and Thinking Skills

What is memory?

People often talk about memory as if it was a single function, but there are different types of memory. Some of the different kinds of memory you might have heard of are listed below:

- Long-term memory (e.g. memories of your childhood)
- Short-term memory (e.g. remembering the content of a conversation a minute ago)
- Visual memory (e.g. being able to remember a pattern or picture)
- Verbal memory (e.g. being able to remember a short story)

There are three different stages of memory. The first is *encoding*, where if you pay attention, the information is taken in. The second stage is *storage*; the information is stored until it is needed. The third stage is *retrieval*, when the information is recalled. You may experience memory problems because of difficulties with one or more of these stages.

If you experience memory problems, some of these types of memory may be affected whilst others are not. For example, memories from the long term past in our childhood are often *not* affected, whereas commonly people report difficulties learning *new* things. For example, remembering appointments or learning a new skill or routine.

Common misconceptions about memory!

Memory doesn't function like a "mental muscle". Practising over and over again might make you a bit better at that one task, but it doesn't necessarily mean you'll be better at other memory tasks. It is often just a frustrating way of continually reminding yourself of your difficulties.

Memory doesn't function on a "use it or lose it" basis. Using external memory aids such as diaries, mobile phone reminders or whiteboards won't damage your memory or make you lazy, they can help you cope with your memory difficulties and manage your everyday life better.

What are other thinking skills?

Attention

This is the ability to attend to something and concentrate on it. Just as with memory, there are different types of attention. You may experience difficulties in one or more of these types.

Selective attention. We have to *select* something to attend to and we have to *ignore* or *filter out* other things in order to concentrate on our task. For example, we have to concentrate on the person talking to you, and ignore all the other noise in the room.

Sustained attention. We have to *sustain* or *keep* our attention on the task over a period of time, even when it seems boring. For example, we have to sustain our attention whilst reading a book, or listening to a lecture, or watching a security camera for trouble.

Divided attention. We have to concentrate on *two things at once.* For example, cooking a meal whilst listening out for something to come on the radio.

We also need to be able to switch our attention flexibly, in order to notice any changes around us. We have to be able to *shift* our attention from the main task to check if other things need attending to. Then we have to *shift* our attention back to the task.

Different things can disturb attention. The environment is one - other people, noise, and music. Mood can also affect attention - worrying thoughts, stress, anxiety, anger, and depression. Pain and fatigue can also make it harder to concentrate.

Speed of Processing

The speed at which the brain can process information is related to other cognitive abilities such as attention, but in simple terms, this skill refers to how quickly we can take in, process and act upon information.

Executive Functioning

The easiest way to understand executive functioning is to draw a comparison with the chief executive of a business. This person needs to be able to do the following things:

- make long term plans and goals
- organise the steps needed to achieve those goals
- start the steps, and notice if things aren't working or are going wrong
- make changes to make sure things start working again
- to have good judgement
- to step back and look at the whole picture
- to focus in on the details

This is exactly what executive functioning is. For example, planning and cooking a meal relies heavily on executive functioning. This requires a person to:

- think of different meals they could possibly make
- decide which meal to make
- identify the ingredients they need
- check if they have the ingredients they need, and buy any that they don't have
- decide what time they want to eat the meal
- at the appropriate time, start preparing the ingredients if necessary.
- at the appropriate time, start cooking the meal, ensuring that items that need to cook longest are started first
- split their attention between two steps that need to take place at the same time
- continually monitor all parts of the meal to make sure that nothing is cooking too quickly or too slowly