



Executive Functions in the Classroom

WORKING MEMORY

Our “mental workspace” comes with strict limitations and a tendency to be overwhelmed. It’s our capacity to hold on to information while completing a task.



Working memory is measured with items (“I have trouble with jobs or tasks that have more than one step”) and tasks, such as “Hearts and Flowers.”

How to help students who struggle...

You can recognize students with poor working memory because they tend to be easily distracted and require many reminders. Improving their working memory is not easy but we can use by-pass strategies to help them compensate for the difficulty.

Modelling goal-setting, setting up reminders, and breaking long-term assignments into shorter deadlines can be a help. Externalizing important information is essential!

Be aware of verbal streams.

We can only process one verbal stream at a time, and that includes our internal dialogue when reading silently to ourselves. When you need them to read something (slideshow, directions), stop talking and let them read in peace.

Build towards automaticity.

Practice and repetition sometimes get a bad reputation in modern schooling, but there are certain skills that we need to automatize. For example, memorizing the times tables reduces the cognitive load of solving mental math problems.

Hotwiring working memory. The central executive determines what is important and what can be ignored. As a teacher, you can hotwire that mechanism by incorporating topics of your students’ personal interest in your lessons. Using music mnemonics and acronyms use the capacity of the phonological loop to improve ordered recall.

Use visuals. Working memory is specific to information that we cannot currently perceive. That means you can take the load off their working memory by posting relevant information on the wall. Some students may need instructions (end-of-day procedures, instructions) printed off for them individually.



Pair visuals with verbal information. Because they use two different subsystems, we process verbal information (written or spoken) more effectively when it’s paired with visual information.



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