EXECUTIVE FUNCTION
HOW THE BRAIN ORGANIZES AND IMPLEMENTS THE TASKS AT HAND...

3 Important Elements

WORKING MEMORY
Hold information mentally long enough to process and act on.
Just as a conductor maintains various parts of a musical piece (tempo, rhythm, flow, and melody) to ensure a coherent performance, working memory is the brain system for maintaining and manipulating information in real-time. This ability to hold small bits of information at once, synthesize them, and act on them is critical for academic tasks, reasoning, and planning.

ACTIVATION
Ability to get started on a task.
The conductor cues musicians when to start playing during a piece by pointing at them or making eye contact. Similarly, activation is the part of executive function that initiates focus in preparation to think or act. It’s the necessary first step in playing a musical piece or in completing an academic task – such as starting a homework assignment, concentrating in class, or motivating to leave for class on time.

INHIBITION
Ability to monitor and regulate one’s behaviors.
The dynamics of a musical piece, such as the volume and timing of certain instruments, is directed by the conductor. Some instruments may stop playing for an entire section of a composition and the conductor may need to indicate to the players when this occurs. Inhibitory control is the brain process that forestalls impulses. It quiets parts of the brain when they’re not needed. Inhibition is needed to ignore distractions, to stop from blurting out the first thing that comes to mind, and to resist what is immediately gratifying to achieve a later goal.

...MUCH LIKE
THE CONDUCTOR
who guides the orchestra through the piece of music — setting tempo, cueing instruments, and controlling dynamics.

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