

Executive Function and Academics

SUMMARY

In this episode of Research Conversations, cognitive neuroscientist Dr. Eve Miller and former educators, Dr. Jennifer Chevalier, and Kim Yaris discuss the role that executive functioning skills play in student achievement.

DEFINITION

Executive function refers to a collection of cognitive abilities that enable individuals to effectively control their thoughts, emotions, and behaviors in order to achieve their desired objectives. These abilities encompass various skills including cognitive flexibility, working memory, and inhibitory control. By utilizing these executive functions, students are better equipped to plan, organize, problem-solve, prioritize tasks, and adapt to changing circumstances which, in turn, can positively impact their academic performance.

TRY THIS!

- **To develop cognitive flexibility:**
Teach students to use more than one strategy when solving a reading or math problem. For example, if a student focuses on context to figure out the pronunciation of a word, ask her how she can check her solution by using another strategy.
- **To develop working memory:**
Teach students to associate new information with information that they already know. For example, when they come to a word they don't know, ask, "What do you know? If needed, prompt students to chunk the word into smaller, more familiar parts.
- **To develop inhibitory control:**
Teach students patience and delayed gratification. For example, playing a game like musical chairs helps students wait their turn and remain seated until prompted to move.

MORE INFORMATION

- [School District and Community Factors Associated with Learning Loss During the Covid-19 Pandemic](#)
This article highlights the need for continued investments in student learning to mitigate the lasting effects of the pandemic.
- [What is Executive Function and How Does it Relate to Child Development?](#)
This infographic from Harvard University's Center for the Developing Child provides a high level overview of executive function and how developing provides lasting benefits.