

MISCONCEPTION

Executive function has a stronger relation to math achievement than other content areas. Scholars and educators suggest cognitive measures are helpful for designing individualized interventions.^a The belief that matching cognitive aptitudes, more recently executive functions, to plan for academic instruction and interventions persists.

TRUTH

Extensive research on executive function indicates there is no uniqueness in the relationship between executive functioning and math and no evidence that impacts on executive function lead to increases in academic achievement.^b

What is Executive Functioning?



The cognitive processes that learners use to self-regulate their thoughts and actions,^c which includes working memory, inhibitory control, attention, and planning.^d



IMPLICATIONS FOR PRACTICE



Address the learning needs of students who struggle by conducting a thorough assessment of their math skills. Identify strengths, areas for improvement, and the skills/concepts students have/have not mastered.



Assess students through curriculum-based assessments, review of classroom math work, interviews of teachers and caregivers, and systematic direct observations of students' engagement during math compared to other subjects.^e

^aFeifer (2018); Florello et al. (2006); Floyd et al. (2003); Hale et al. (2003); Hale et al. (2001)
^bJacob & Parkinson (2015)
^cCarlson (2005)
^dMiyake et al. (2000)
^eShapiro (2011)

