

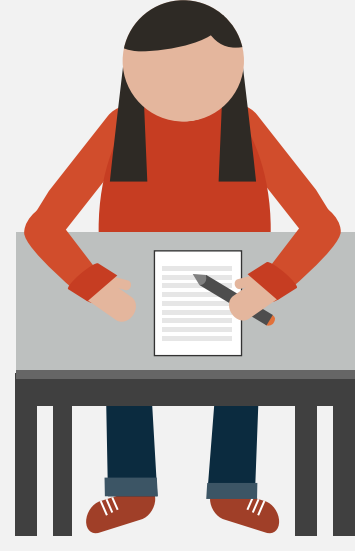
Beating the Odds:

What Factors Play a Role in Academic Resilience?

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educationpolicy.air.org

Disadvantaged students¹ who are academically successful are defined as academically resilient.² A recent International Association of Educational Achievement (IEA) study explored eight factors as possible predictors of academic resilience based on data from the 2011 eighth grade Trends in International Mathematics and Science Study (TIMSS).

STUDENT FACTORS



Educational aspirations



Valuing mathematics



Experiences with bullying

SCHOOL FACTORS



Teachers' beliefs that students can do well in mathematics



Percentage of economically disadvantaged students



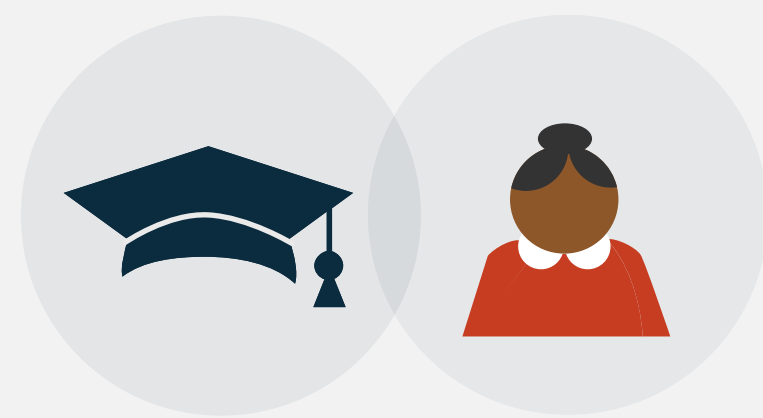
Emphasis on academic success



Safety and discipline



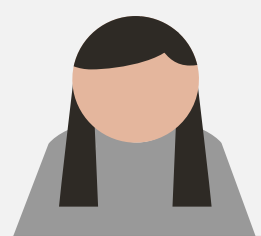
Instruction Resource Shortages



Educational aspirations and **teachers' beliefs that students can do well in mathematics** were the strongest student and school factors, respectively.³

EDUCATIONAL ASPIRATIONS

Disadvantaged students in Grade 8 who **aspired to a master's or doctoral degree had up to 8 times higher odds of being resilient** than those who aspired to less than a college degree.



Aspired to complete less than college



Aspired to a master or doctorate degree

TEACHERS' BELIEFS THAT STUDENTS CAN DO WELL IN MATHEMATICS

Disadvantaged students in Grade 8 who **agreed that their teacher thinks they can do well in mathematics had up to 5 times higher odds of being resilient** than those who disagreed.



Disagreed



Agreed

¹ Disadvantaged students are defined as those in the "few resources" category of the Home Educational Resources (HER) index, a composite measure in the TIMSS 2011 International Database. On average, these students reported having 25 or fewer books in the home, neither their own room nor an internet connection, and no parent had gone beyond upper-secondary education.

² Academically resilient students (ARS) are defined as disadvantaged students who performed at or above the TIMSS 2011 Intermediate International Mathematics Benchmark (475). The description of this benchmark is on page 125 of the TIMSS 2011 Mathematics Report at <http://timssandpirls.bc.edu/timss2011/international-results-mathematics.html>.

³ Six of the eight study factors explored statistically significant relationships with academic resilience in the expected direction in at least two education systems. The two factors that did not were "school's safety and discipline" and "instruction resource shortages."

Source: Erberber, E., Stephens, M., Mamedova, S., Ferguson, S., & Kroeger, T. (2015, March). Socioeconomically disadvantaged students who are academically successful: Examining academic resilience cross-nationally. IEA's Policy Brief Series, No. 5, Amsterdam, IEA, http://www.iea.nl/policy_briefs.html.