



Meetup for Struggling Algebra I Students

Please take a notecard and write down any questions you have for us. We will collect these cards and answer questions at the end of the session.



Meetup for Struggling Algebra I Students

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Engage with the Dana Center



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Conference Hashtag: #gotmath

About the Dana Center

— Equity — Access — Excellence —

Dana Center by the Numbers



We supported **60,500 K-12 students** attending school on U.S. military bases through our work with the **U.S. Department of Defense Education Activity.**

Dana Center by the Numbers

By the close of 2017, the Dana Center had contributed to the **implementation of math pathways** in higher education systems, institutions, and campuses in **29 states.**



Dana Center by the Numbers



We engaged with **118 districts in 23 states** to provide middle and high school math courses of the **highest quality**, as recognized by rigorous national and state reviews, including EdReports.org, Louisiana Department of Education, and Texas Education Agency panels.

Agenda

- **The Dana Center's work with struggling algebra students**
- **Research about the needs of struggling algebra students**
- **Table Talk**
- **Ask the Dana Center and Agile Mind**

An Architecture for Intensification

Struggling students need



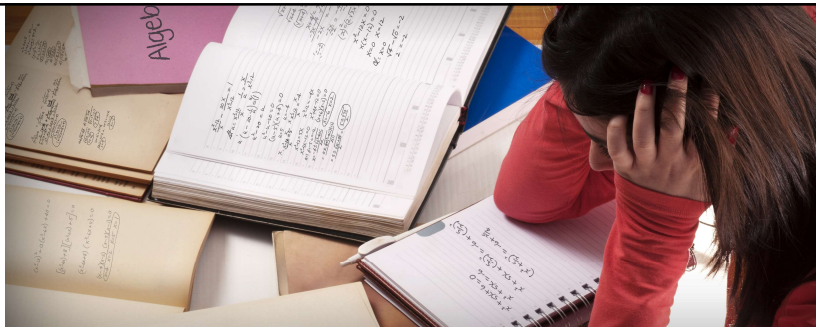
More Time



Challenging
Curriculum



Targeted
Interventions



Challenges

1. Half of students fail Algebra the first time they take it.
2. Students' beliefs and motivation impact their success.
3. Math failure impacts students' success in high school, their chances for college without remedial courses, and their lifelong earnings.

What Research Tells Us

- Promoting **learners' beliefs about their own intelligence** can increase their motivation and effort to learn mathematics (Dweck, Good, Midgely, Aronson).
- Engaging students with **challenging tasks** that involve active meaning-making increases learning (Horizon Research, Hiebert & Grouws).
- Accessing prior knowledge and **addressing students' misconceptions** increases learning (Swan & Bell, Burkhardt, Shell Centre).
- Ongoing, cumulative **distributed practice** improves learning and retention (Rohrer, Mayfield).
- **Routines and structures** help struggling students organize critical mathematical content and increases their learning (Deshler & Lenz).
- **Formative assessment** is a key intervention for improving student achievement (Black & Wiliam, Hiebert & Stigler).

Table Talk

- **READY: Choose a question of interest**
- **SET: Go to the appropriate table**
- **GO! Share answers and ideas for 10 minutes**

REPEAT!

Questions

- **Which of the six research-aligned instructional strategies we shared do you use with your struggling students, and how do you use them? What other research-based strategies have you found useful?**
 - Table(s) 1, 2, and 3
- **What has been your biggest success in addressing the needs of struggling algebra students and how did you achieve it?**
 - Table(s) 4, 5, and 6
- **How do you incorporate instruction on learning mindsets and motivation in your classroom?**
 - Table(s) 7, 8, 9

Ask the Dana Center and Agile Mind

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Visit Agile Mind at agilemind.com.