



Evidence of Impact: Brainology® & Mindset Works® SchoolKit

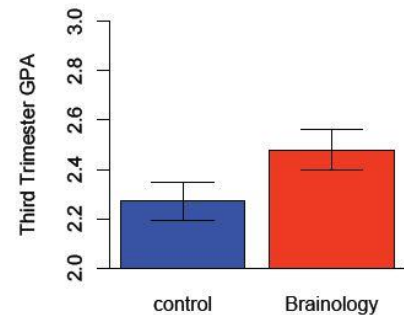
Brainology®

The award-winning blended learning curriculum **Brainology®** was developed from decades of research in psychology demonstrating that teaching students **a growth mindset** –the knowledge that ability can be developed– leads to greater student **challenge-seeking, effort, persistence, & achievement**.

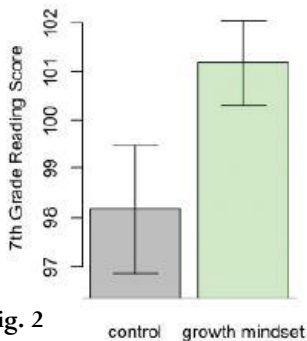
Recent Brainology randomized-trial studies:

Latino students at a U.S. middle school were randomly assigned to either a Brainology or control group. At the end of the third trimester, students in the Brainology group earned statistically significantly **higher GPAs** (Fig.1). Also, among students who had received lower **conduct scores (citizenship grades)** at the beginning of the year, those in the Brainology condition improved their conduct scores by the end of the third trimester relative to their counterparts in the control condition.¹

Fig. 1 Third Trimester GPA of Latino Students by Group



P7 Reading Test Scores
Average by Group
Range: 70-130



Additional research with middle schools in the U.K. found that students that used Brainology reported greater **life satisfaction**, were more likely to **attribute academic failure to lack of effort and study**, and also earned **higher scores on a standardized reading assessment** relative to students in a control condition (Fig.2).²

Positive academic outcomes have also been documented in math. One study with middle school boys in the U.K. found that students who used Brainology earned **higher math scores**.³

Finally, a recent university study investigated the impact of a Brainology vs. control intervention for 7th grade science classrooms at predominately low income U.S. middle schools. At the end of the intervention period, girls who had participated in Brainology reported **higher engagement, self-efficacy, and valuation of science** compared to girls in the control condition.⁴

Mindset Works SchoolKit

Developed under a contract with the U.S. Department of Education, the **Mindset Works® SchoolKit** is a suite of online resources designed to foster a school environment that supports students in maintaining **positive motivation, effort, and resilience**. It provides students and teachers with critical knowledge, skills and tools to support the development of a growth mindset in students, including a professional development course for educators, a professional learning community, and classroom tools to support their students' learning.

Results from our recent school pilot study:

Preliminary results from the first phase of pilot-testing showed that teachers who used the SchoolKit professional development resources had an increased **sense of self-efficacy as teachers**, and reported using more **growth mindset classroom practices** after the training (Table 1).

Students—especially those who began with a fixed mindset—**developed a growth mindset, increased their effort, and showed improved achievement** after using the Brainology program (Fig.3). A second phase of pilot-testing showed that students continued to improve their achievement in the term following the intervention.

Table 1. Impact of Professional Development on Teachers

| Teacher Beliefs & Practices | Change post-program (relative to those who did not complete PD)* | p value |
|-----------------------------|--|-----------|
| Focus on Effort | +1.4 | $p < .05$ |
| Fixed Ability Beliefs | -2.00 (negative is desirable) | $p < .02$ |
| Teaching Self-Efficacy | +0.51 | $p < .10$ |
| Mastery-Focus in Classroom | +1.14 | $p < .10$ |

* Numbers indicate change on a 6-point measurement scale.

Becoming more growth minded over time (larger change) boosts student grades

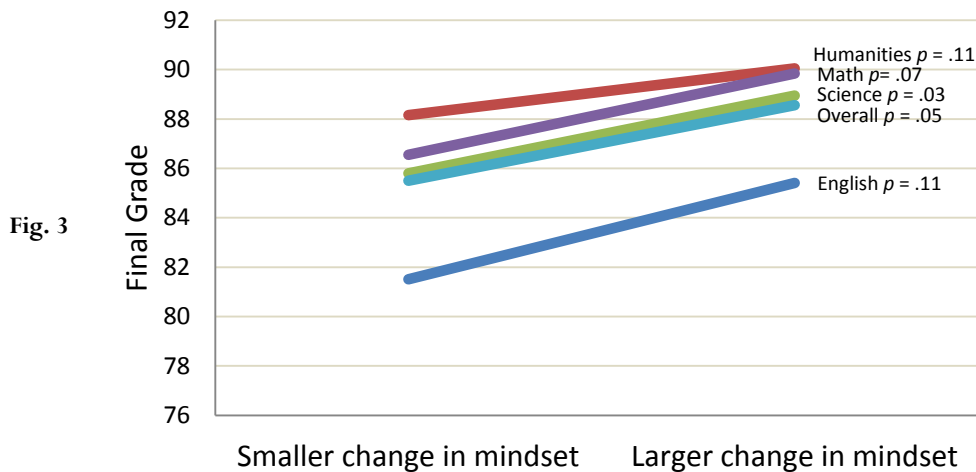


Fig. Note: Separate regression analyses were conducted for each subject as well as for an averaged composite score (labeled “Overall”). Graph depicts predicted values computed 1 SD above/below Mindset Change score.

Additional Research: <http://www.mindsetworks.com/webnav/whatismindset.aspx>

References:

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- Schmidt, J.A., Shumow, L., & Durik, A. (2012). Incremental Mindset and Utility for Science Learning and Engagement (IMUScLE): Presentation of Preliminary Findings. Unpublished Report to IMUScLE Advisory board. DeKalb, IL, June.