



# What Works in Education: A Quiet Revolution

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# What Works is What Matters

- Evidence-Based Reform
- Modeled on medicine, agriculture, engineering
- Creates a dynamic of progressive improvement

# Stop the Pendulum, I Want to Get Off

- Fields lacking respect for evidence
  - Fashion
  - Art
  - Education
- Innovation in Education
  - Word of mouth
  - Tradition
  - Politics
  - Marketing

**This must change.**

# How Do We Know What Works?

- Reviews using consistent standards of evidence
- What Works Clearinghouse (WWC)
- Best-Evidence Encyclopedia (BEE)

# BEE Inclusion Standards

- Programs compared to control group - random or matched
- Control group within  $\pm 0.25$  SD of experimental group at pretest
- Posttests adjusted for pretests
- Measures are not inherent to treatment
- Duration at least 12 weeks



# Best Evidence Encyclopedia

Empowering Educators with Evidence on Proven Programs

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## Program Reviews

### Mathematics

Elementary  
Middle/High School  
Effectiveness of Technology

### Reading

Beginning  
Upper Elementary  
Elementary  
Middle/High School  
English Language Learners  
Struggling Readers  
Effectiveness of Technology

### Science

Elementary  
Secondary (New!)

### Comprehensive School Reform

Elementary (CSRQ)  
Middle/High School (CSRQ)  
K-12 Meta-Analysis (Borman)  
Education Service Providers (CSRQ)

### Early Childhood

Early Childhood Education (New!)

### Methods

Methodological Features and Effect Sizes (New!)

## New Reviews Added to the BEE!

The BEE has recently added two major new reviews:

[Secondary Science](#), A comprehensive review of research on science programs for grades 6-12.

[Early Childhood Education](#), A comprehensive review focusing on studies comparing programs for four-year-olds using either "balanced" approaches, which include phonemic awareness and early phonics along with traditional preschool activities, to "developmental" approaches, which include little focus on pre-reading skills.

Other reviews being substantially updated and revised include:

- Elementary math
- Secondary reading
- Methodology effects in systematic reviews

Watch this space!

[Information about the upcoming Education Innovation Briefing on Thursday, October 29, 2015;](#)

- [Informational Flyer](#)
- [Media Announcement](#)












## Spotlight

Effective Programs for Secondary Science

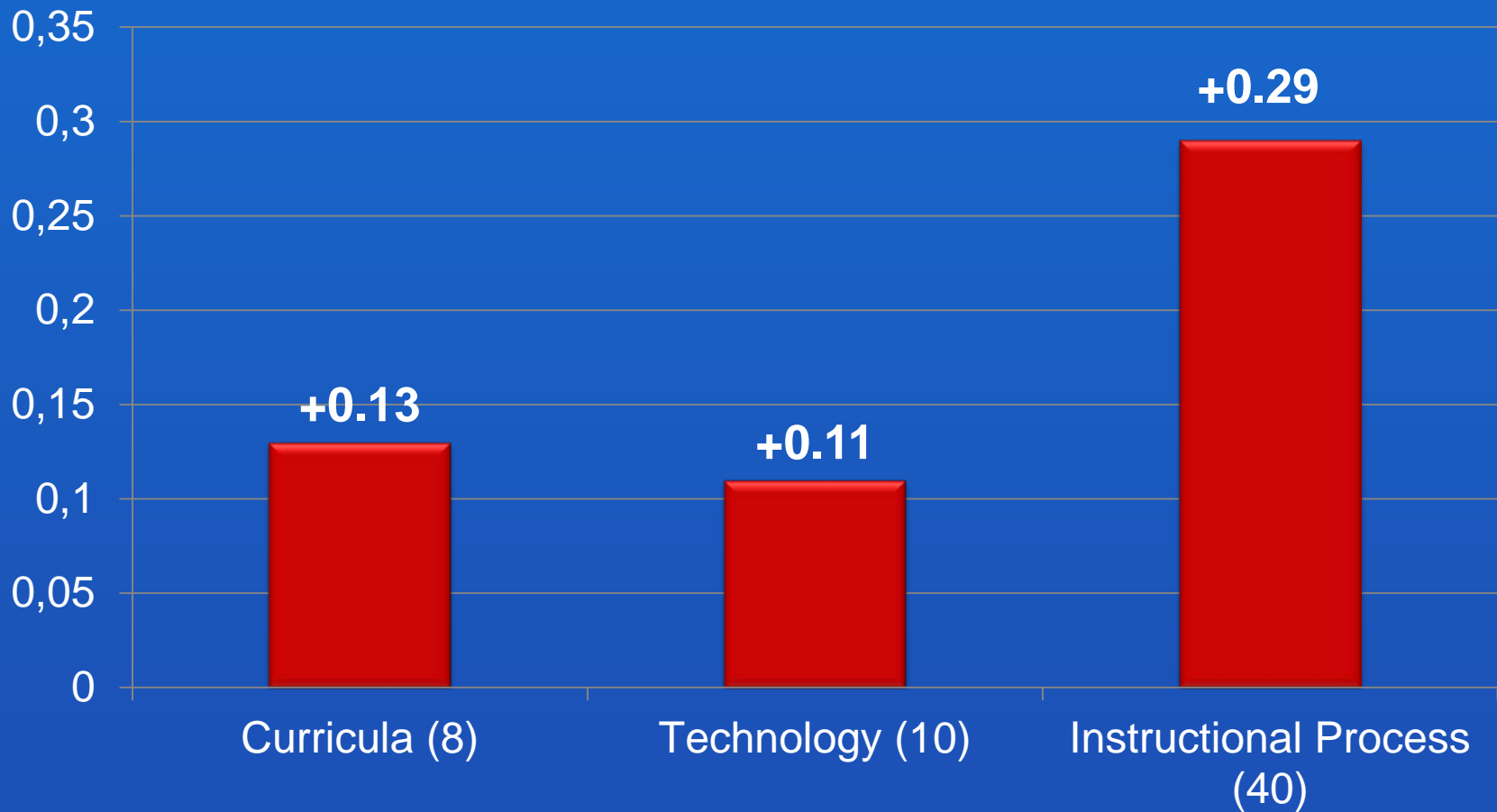


[Our new review](#) summarizes the evidence on four types of programs designed to improve the science achievement of students in grades 6-12.

# Elementary Mathematics Program Ratings

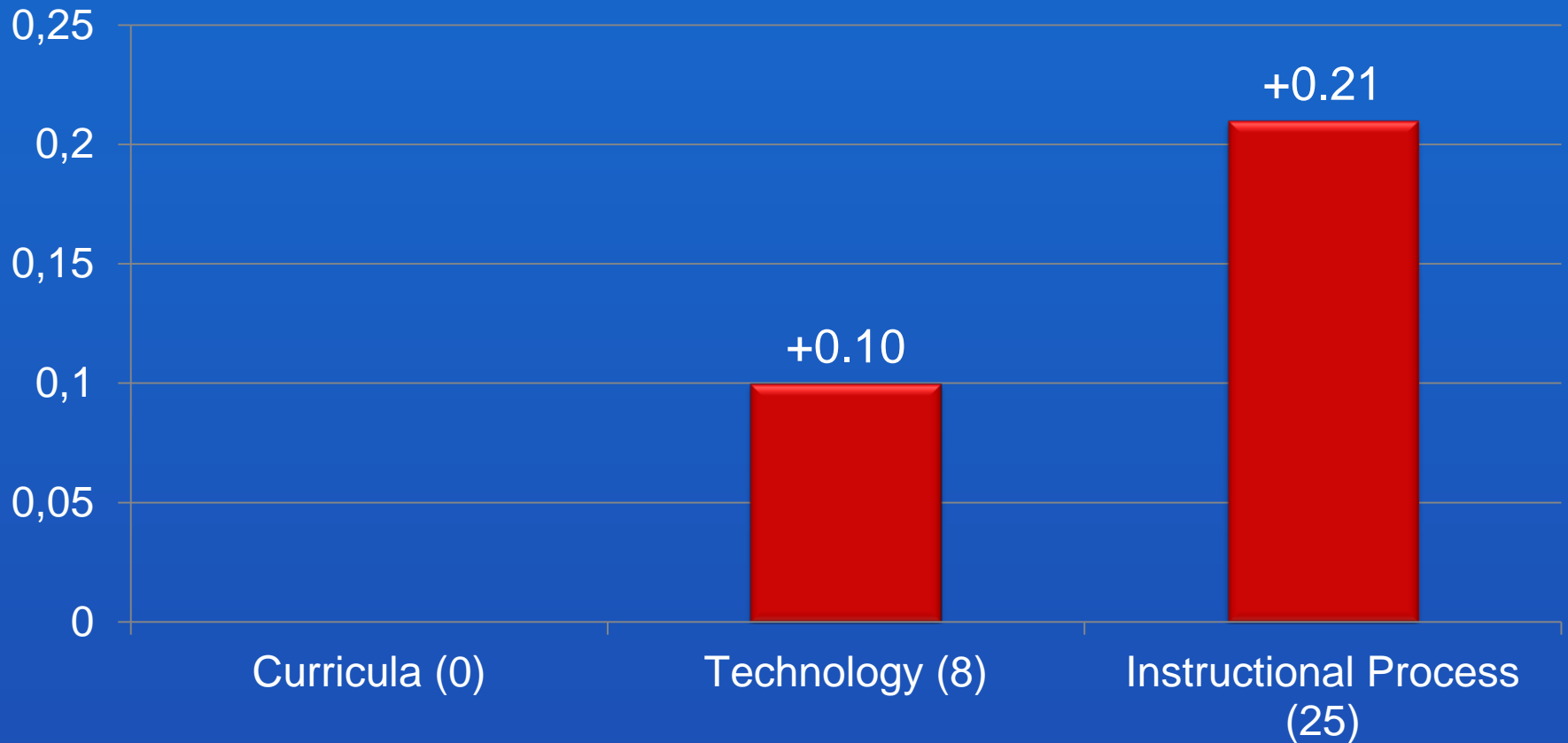
Program Ratings				
Strong Evidence of Effectiveness				
Rating	Program	Type	Description	Contact / Website
	Classwide Peer Tutoring	IP	Pair learning approach in which children take turns as teacher and learner.	Contact Charles Greenwood at <a href="mailto:greenwood@ku.edu">greenwood@ku.edu</a> .
	Missouri Mathematics Program	IP	Program focusing on active teaching, classroom management, motivation.	Contact Thomas Good, University of Arizona, at <a href="mailto:good@u.arizona.edu">good@u.arizona.edu</a>
	Peer Assisted Learning Strategies (PALS)	IP	Structured pair learning strategy in which children take turns as teachers and learners.	Website: <a href="http://www.kc.vanderbilt.edu/pals">www.kc.vanderbilt.edu/pals</a>
	Student Teams-Achievement Divisions	IP	Structured cooperative learning program in which students work in 4-member teams.	Contact Nancy Madden, Johns Hopkins University, at <a href="mailto:nmadden@jhu.edu">nmadden@jhu.edu</a> .
	TAJ Math	IP/MC	Structured cooperative learning program in which students work on individualized materials in 4-member teams.	Contact Brent Farmer, Charlesbridge Publishing, 800-225-3214, or <a href="mailto:bfarmer@charlesbridge.com">bfarmer@charlesbridge.com</a>
Moderate Evidence of Effectiveness				
Rating	Program	Type	Description	Contact / Website
	Classworks	CAI	Supplementary integrated learning system.	Website: <a href="http://www.curriculumadvantage.com">www.curriculumadvantage.com</a>
	Cognitively Guided Instruction	IP	Program that provides teachers with workshops in math strategies.	Contact Linda Levi, Teachers Development Group, at <a href="mailto:lindalevi@teachersdg.org">lindalevi@teachersdg.org</a>
	Connecting Math Concepts IP/MC	IP	Structured approach to math with grouping by performance.	Website: <a href="http://www.sraonline.com/math">www.sraonline.com/math</a>
	Consistency Management & Cooperative Discipline	IP	Program that emphasizes classroom management, student engagement.	Contact Jerome Freiberg, University of Houston, at <a href="mailto:cmcd@uh.edu">cmcd@uh.edu</a> .
	Project SEED	IP	Supplementary program that has mathematicians teach advanced topics in math to supplement regular instruction.	Website: <a href="http://www.projectseed.org">www.projectseed.org</a>
	Small-Group Tutoring	IP	Provides tutoring in small groups for struggling first graders.	Contact Lynn Fuchs, Vanderbilt University, at <a href="mailto:lynn.fuchs@vanderbilt.edu">lynn.fuchs@vanderbilt.edu</a>

# What Works in Elementary Reading?

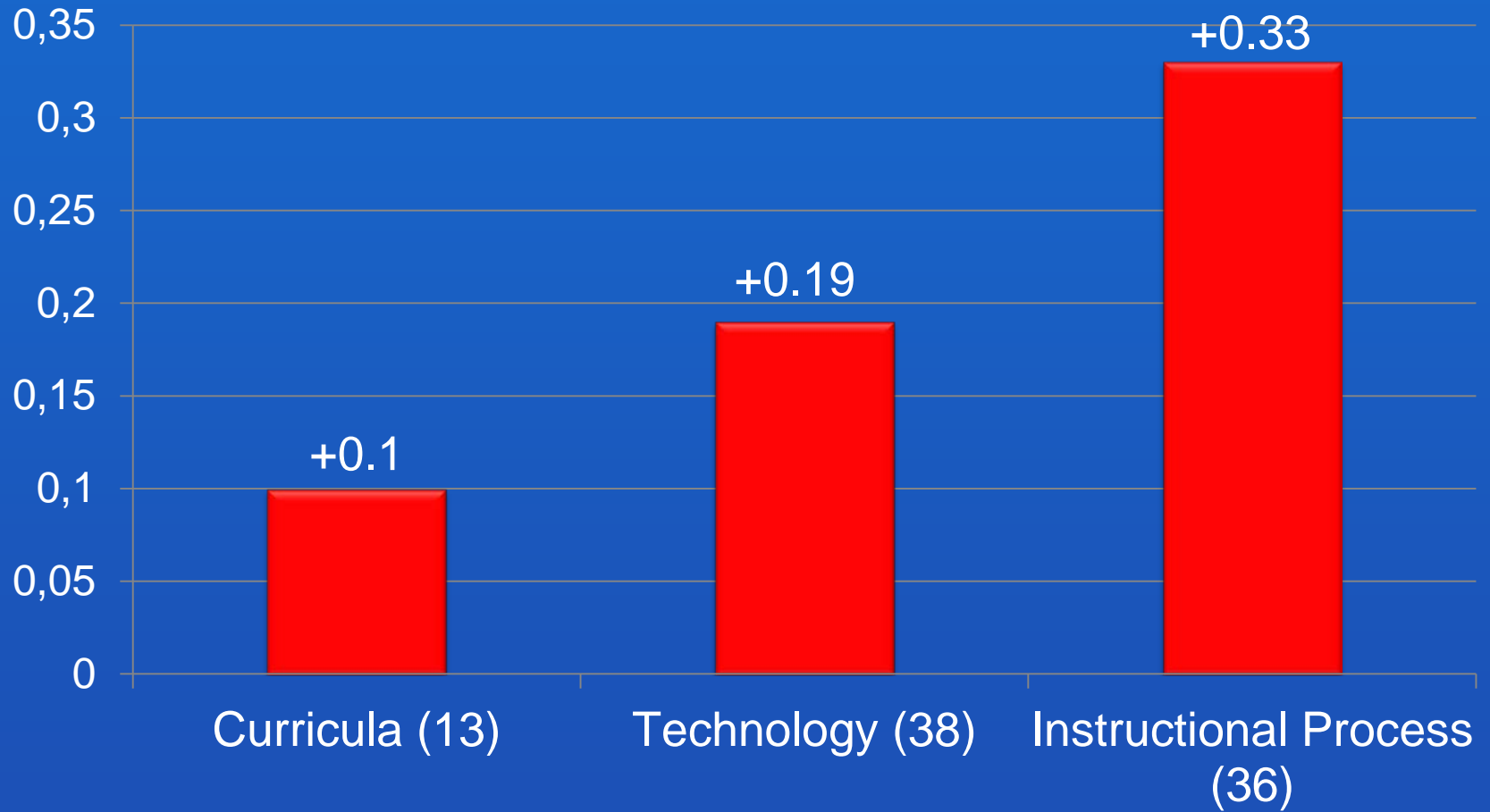




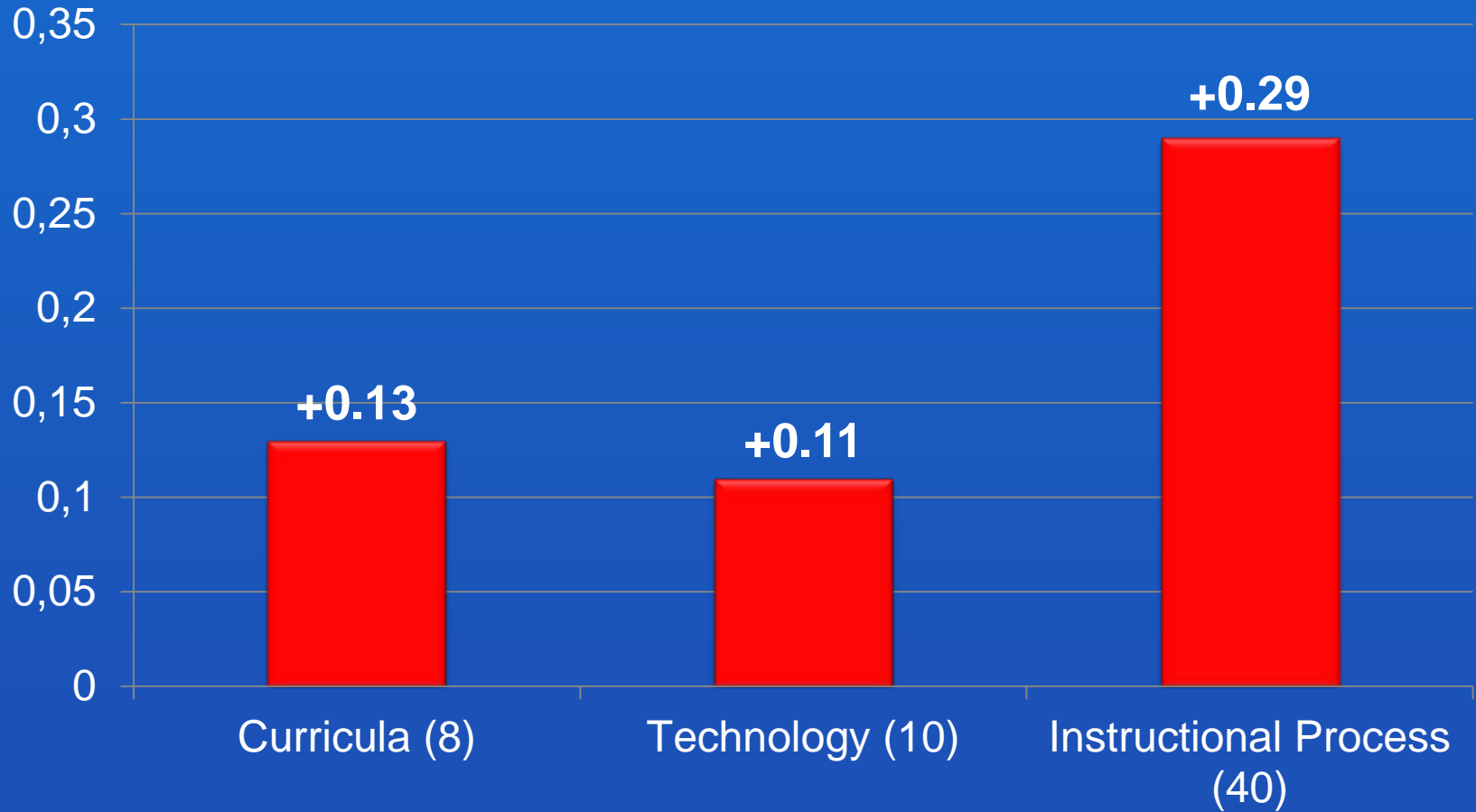
# What Works in Secondary Reading?



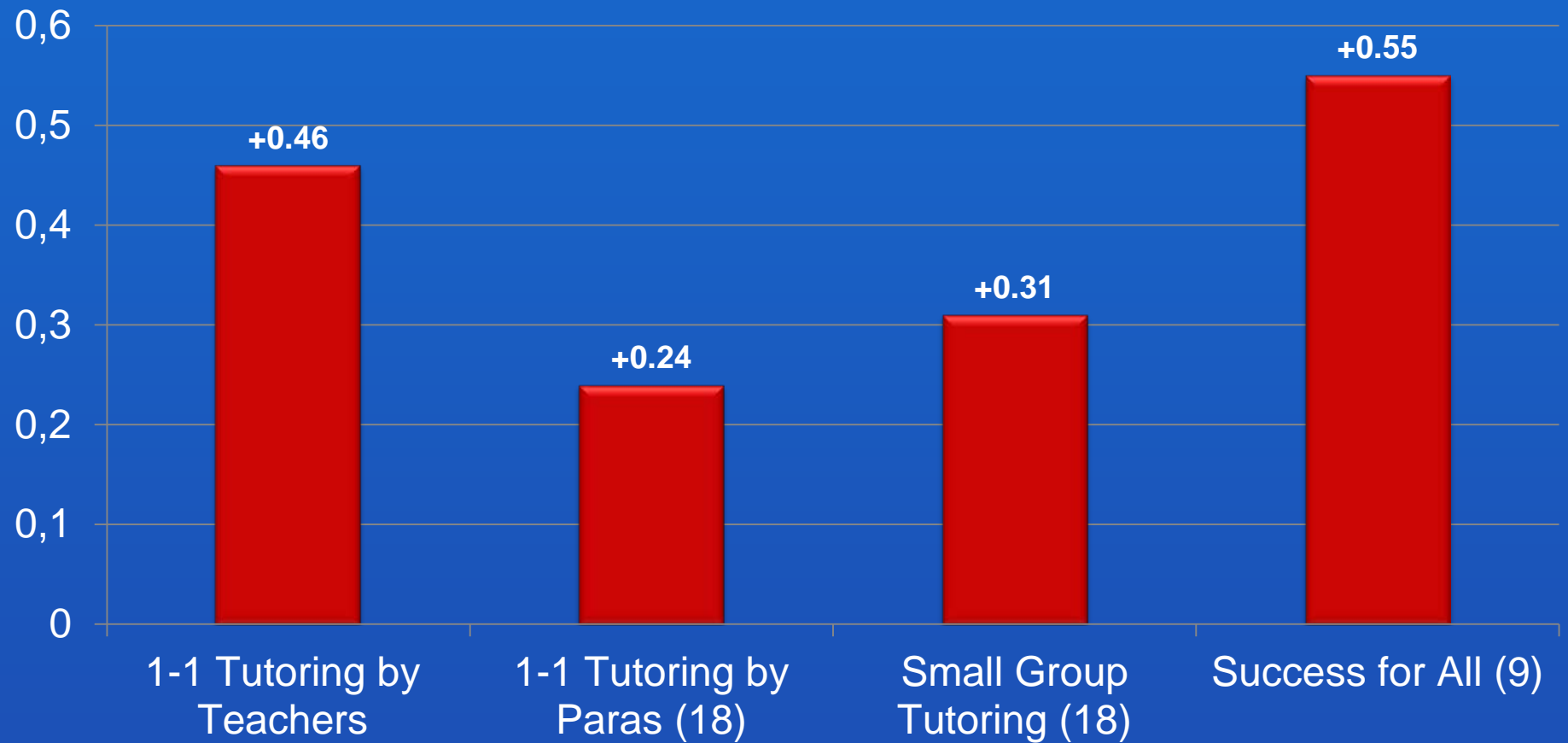
# What Works in Elementary Math?



# What Works in Secondary Math?



# What Works for Struggling Elementary Readers?



# Characteristics of Effective Programs

- Lots of professional development
- Focus on classroom practice
- Clear idea of what effective practice looks like
- Constant monitoring of student achievement
- Leadership support for use of proven practices

# Proven Programs → School Change

- Schoolwide commitment
- Fidelity of implementation
- Coaching
- Data-informed support
- Constant improvement

# Lessons From Scaling Up Proven Programs

- Leadership matters.
- Whole school change is essential.
- Professional development and coaching are essential.
- On-site facilitators are essential.
- Use what works!

# Adding Evidence

- Development, evaluation of practical programs
- Investing in Innovation (i3) (US)
- Education Endowment Foundation (EEF) (UK)



# A Vision of the Future

- Teachers and administrators choosing among proven programs and practices
- Robust research and development enterprise to create, evaluate, and disseminate new programs
- Networks of schools supporting each other in using and refining proven programs
- Funding from government focused on proven programs

# For More Information

[www.bestevidence.org](http://www.bestevidence.org)

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