

# School Counselor Impact on Student Achievement: A Meta-Analysis



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# Problem Addressed

- Need for more research tying school counselors' interventions to improved student achievement
  - ASCA National Model (2005)
  - U.S. Department of Education NCLB (2001)
  - Delphi study (2005)
  - Outcome research reviews (1998-2009)

# School Counseling Outcome Research

- Whiston and Sexton (1998): 50 studies
- Brown and Trusty (2005): 9 studies
- Carey, Dimmitt, and Hatch (2007): 13 studies and 10 reviews of research
- Whiston and Quinby (2009)

# School Counseling Outcome Research

- Studies reviewing effectiveness of Comprehensive School Counseling Programs
  - Sink & Stroh, 2003 = 150 schools
  - Sink, Akos, Turnbull, & Mvududu, 2008 = 149 schools



# School Counseling Outcome Research

- Total research studies using Standardized Tests to measure impact on Student Academic Achievement:
  - Carns and Carns, 1991
  - Brigman and Campbell, 2003
  - Sink and Stroh, 2003
  - Sink et al. 2008

# Measuring Achievement

U.S. DOE, Institute of Education Science– standards:

- Appropriate measures with high reliability and validity
- Random or quasi-experimental designs
- Manualized interventions to insure implementation fidelity
- Replication of interventions in similar populations with consistent results
- Consistent results across diverse public school settings.

# Adequately Yearly Progress

- A single statewide accountability system
- All students will make continuous and substantial growth in academic achievement
- Annual AYP decisions
- Accountable for the achievement of individual subgroups
  - ethnic/racial groups, low SES, LEP, and ESE students
- All decisions are based on the state's academic assessments
- Reporting of graduation and attendance rates
- Each subgroup must meet annual objectives in reading and math
- The state's accountability system must be statistically valid and reliable
- At least 95% of students in each subgroup are tested.



# Student Success Skills:

## A Foundational Learning Skills Approach

- SSS helps students in grades 4-10 improve math and reading through:
  - Cognitive Skills
  - Social Skills
  - Self-Management Skills





# Research Base for Student Success Skills: Five Key Reviews Of Research

Wang, et al. (1994)

Reviewed 50 years of research on “What helps students learn?”

Hattie, et al. (1996)

Reviewed 10 years of research on “The effects of learning skills interventions on student learning.”

Masten & Coatsworth (1998)

Reviewed 25 years of research and identified “The most critical factors associated with academic and social competence.”

Marzano, et al. (2001).

Reviewed 10 years of research on “Classroom instruction and summarized research-based strategies for increasing student achievement.”

Zins, et al. (2004).

Reviewed 10 years of research on “The relationship of social and emotional learning to academic success.”



# Three Keys to Building Resilience and Reducing School Failure



- **Skills:** Cognitive, Social and Self-management
- **Attitudes:** Healthy Optimism, Solution Focused and Kaizen
- **Climate:** Caring, Support, Encouragement

# Student Success Skills: Key Skill Areas

**Goal setting and progress monitoring**

**Creating a caring, supportive and encouraging classrooms**

**Cognitive/Memory skills**

**Performing under pressure:  
Managing test anxiety**

**Building Healthy Optimism**





# Classroom Component

- Five classroom lessons
- Beginning in the fall
- Followed by monthly booster lessons in January leading up to standardized testing dates





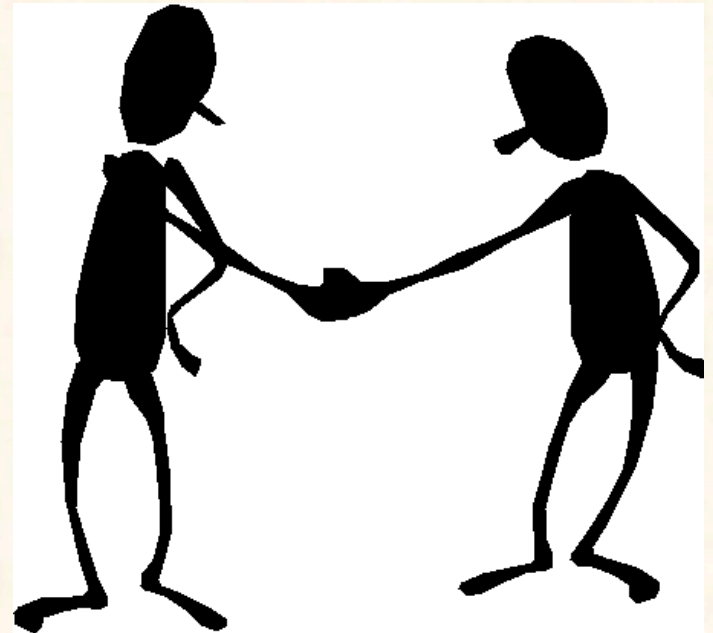
# Group Counseling Component

- Eight sessions
- Groups formed by teacher referral & screening (Oct–Dec)
- Followed by monthly booster sessions in January leading up to standardized testing dates or other data collection points



# Pair Share

- Name and grade level
- Do you currently use SSS in your practice?
- What other evidence-based programs do you use?
- What is your need to show impact on student achievement?



# SSS Meta-Analysis

- Five studies:
  - Brigman and Campbell (2003)
  - Brigman, Webb, and Campbell (2007)
  - Campbell and Brigman (2005)
  - Webb, Brigman and Campbell (2005 )
  - León, Villares, Brigman, Webb, and Peluso (2010)
- Studies may be downloaded at [www.studentsuccessskills.com](http://www.studentsuccessskills.com)

# Sample Population

- Thirty-nine schools in two large school districts located in south Florida.
- Students from rural, suburban, and urban settings.
- Combined total = 1,279 in grades 4, 5, 6, 8, and 9.
- Ethnic composition of the total sample included:
  - White = 718 (56%)
  - African American = 279 (22%)
  - Hispanic = 282 (22%)



# Ethnic Group Compositions

- Treatment (n= 602)
  - White = 344 (57%)
  - African Am. = 143 (24%)
  - Hispanic = 115 (19%)
- Comparison (n= 677)
  - White = 374 (55%)
  - African Am. = 136 (20%)
  - Hispanic = 167 (25%)

# Calculating Effect Sizes

$$d = \frac{\bar{x}_1 - \bar{x}_2}{s}$$

- The research design called for the comparison between pretest and posttest mean scores, we determined the effect size by using a standardized differences index or Cohen's  $d$  (Sink & Stroh, 2006)
- Used the Mean Difference Scores for each group (treatment and comparison) and SDs
- Posttest Mean Difference Score for Treatment Group – Posttest Mean Difference Scores for Comparison Group/the pooled standard deviation = Cohen's  $d$

# Why Use Mean Difference Scores?

- Removed the between-person variability;
- Means and standardized deviations were available for each intervention group;
- Outcomes measures are stable and reliable; and
- Changes from pretest addressed the same underlying intervention effects.

# Results of Meta-Analysis

- Effect Sizes for SSS on Standardized Test Scores
- ES for Math = .41
- ES for Reading = .17
- Overall ES = .29



# The Practical Impact of the SSS Program

On Math and Reading Scores

# What can we expect from interventions aimed at improving math and reading achievement?

- Hill, Bloom, Black & Lipsey (2007)
  - Reviewed dozens of meta-analyses of studies to evaluate a wide range of educational interventions and programs.
  - They estimated overall effect sizes of
    - 0.23 for elementary,
    - 0.27 for middle and
    - 0.24 for high school students.

# Other comparisons of impact of interventions on reading and math scores

- The frequently cited randomized class reduction study in Tennessee found an effect size of .15 to .25 (Krueger, 1999).
- Effect sizes of between .09 and .15 were found in meta-analyses of comprehensive school reform models (Borman et al., 2002).

# Impact of Out of School Programs on reading and math scores

- Effect sizes ranging from

***.06 to .13 for reading***

***.09 to .17 for math***

were found for out of school programs  
(Lauer et al., 2004).



# The Impact of social and emotional learning on Academic Achievement of kindergarten to eight grade students

- Effect size of .28 was found when 29 studies focused on improving academic achievement were examined.
- Payton, J., Weissberg, R., Durlak, J., Dymnicki, A., Taylor, R., Schellinger, K. & Pachan, M. (2008).

# Summary of Effect Size Findings

- When education interventions designed to increase reading and math scores are measured, the effect size range from these recent reviews of research is:

ES = .06 to .28

# New Rubric for Interpreting Effect Size

- Vernez & Zimmer (2007) concluded that:

*Relative to the experience gained so far with education interventions designed to increase student achievement, the interpretation of their effect sizes should be interpreted differently than suggested by Cohen (1988) for the social sciences.*

# Standard ES guide for social science research

- Cohen's benchmarks (1988)
  - .80 large effect
  - .50 medium effect
  - .25 small effect



# New rubric for standardized test scores

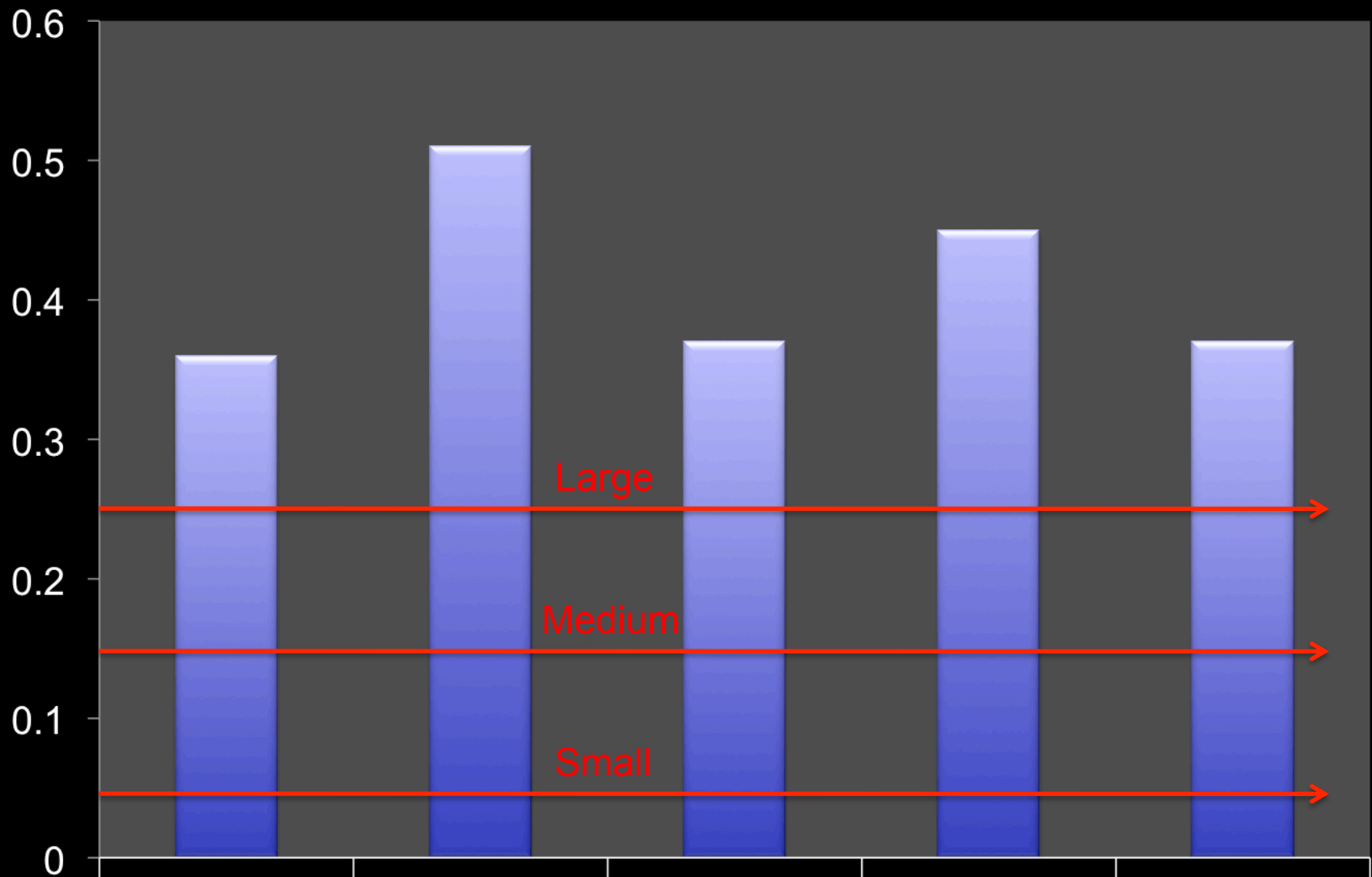
Vernez & Zimmer (2007)

- Large effect = .25
- Medium effect = .15
- Small effect = .05 to .10

# Effect Size of SSS on Math Scores

Study		n	ES
A	Brigman and Campbell, 2003	222	.36
B	Campbell and Brigman, 2005	302	.51
C	Webb, Brigman, and Campbell, 2005	418	.37
D	Brigman, Webb, and Campbell, 2007	220	.45
E	León, Villares, Brigman, Webb, and Peluso. 2010	156	.37
Effect Size for Math			.41

## ES for SSS Math Scores



Math ES

Study A

0.36

Study B

0.51

Study C

0.37

Study D

0.45

Study E

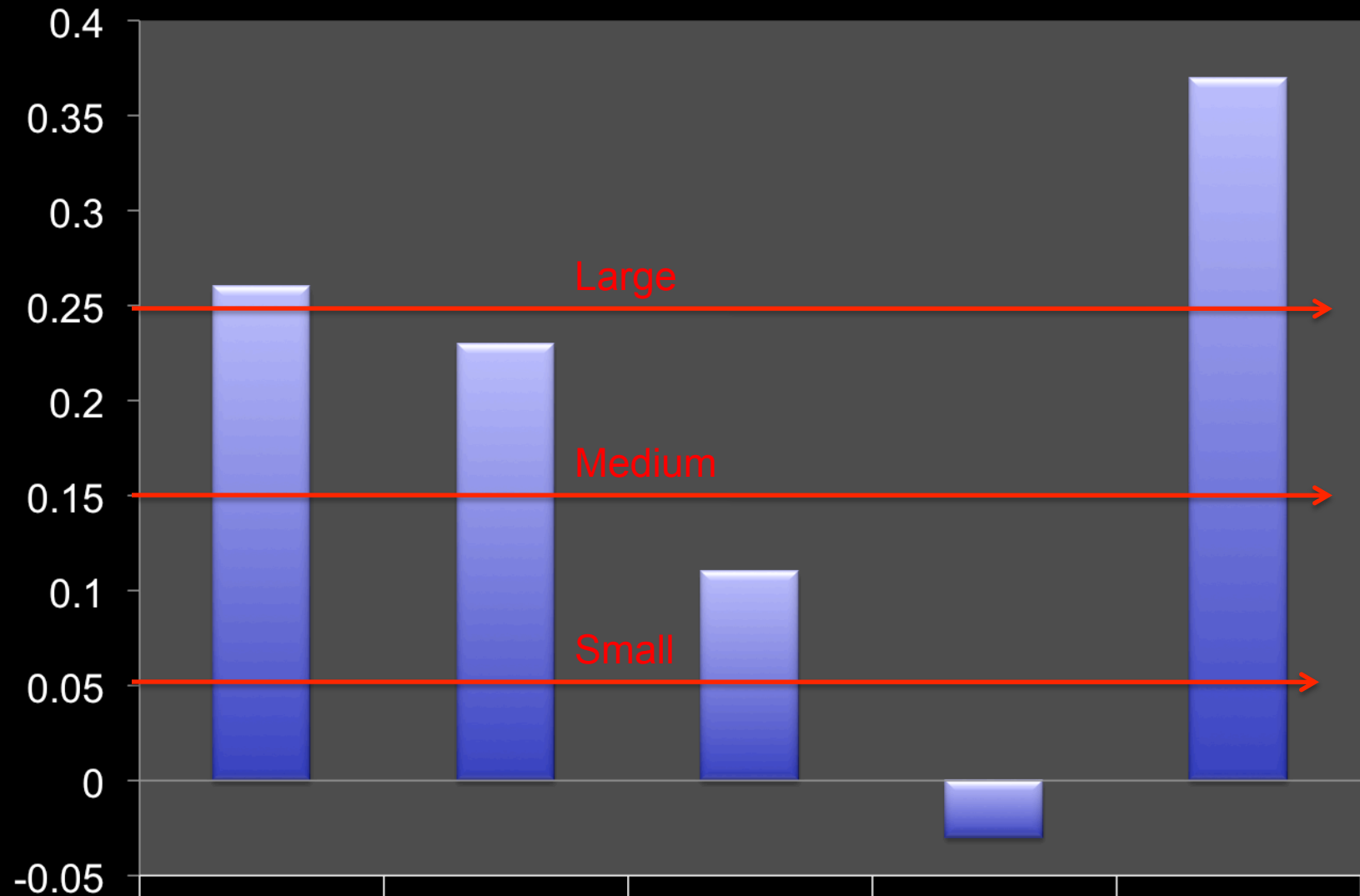
0.37

# ES of SSS on Reading Scores

Study		n	ES
A	Brigman and Campbell, 2003	222	.26
B	Campbell and Brigman, 2005	302	.23
C	Webb, Brigman, and Campbell, 2005	418	.11
D	Brigman, Webb, and Campbell, 2007	220	-.03
E	León, Villares, Brigman, Webb, and Peluso. 2010	156	.37
ES for Reading			.17



## ES of SSS on Reading Scores



Reading ES

Study A

0.26

Study B

0.23

Study C

0.11

Study D

-0.03

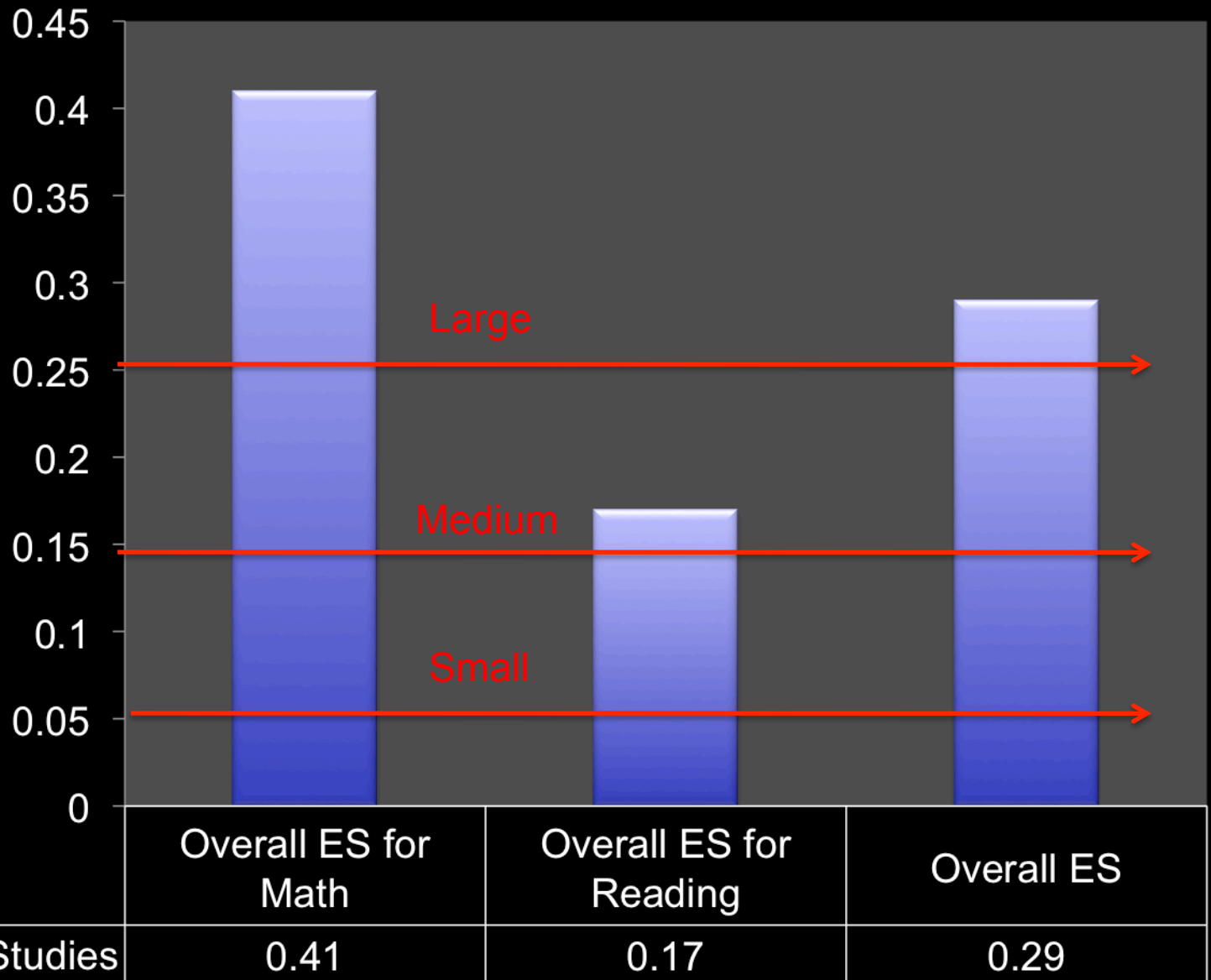
Study E

0.37

# ES for SSS on Math and Reading

- ES for Math = .41
- ES for Reading = .17
- Overall SSS ES = .29
- Compared to most recent reviews of research ES range of **.06 - .28**

## Overall ES for SSS Studies



ES for SSS Studies

0.41

0.17

0.29

# Practical significance of a SSS .41 ES in math

- Grades 4-5      An additional  $\frac{4}{5}$  of a year's growth
- Grades 6-7      An additional 1 year's growth
- Grades 9-10      An additional  $1\frac{2}{3}$  year's growth

Hill, C., Bloom, H., Black, A. & Lipsey, M. (2007)

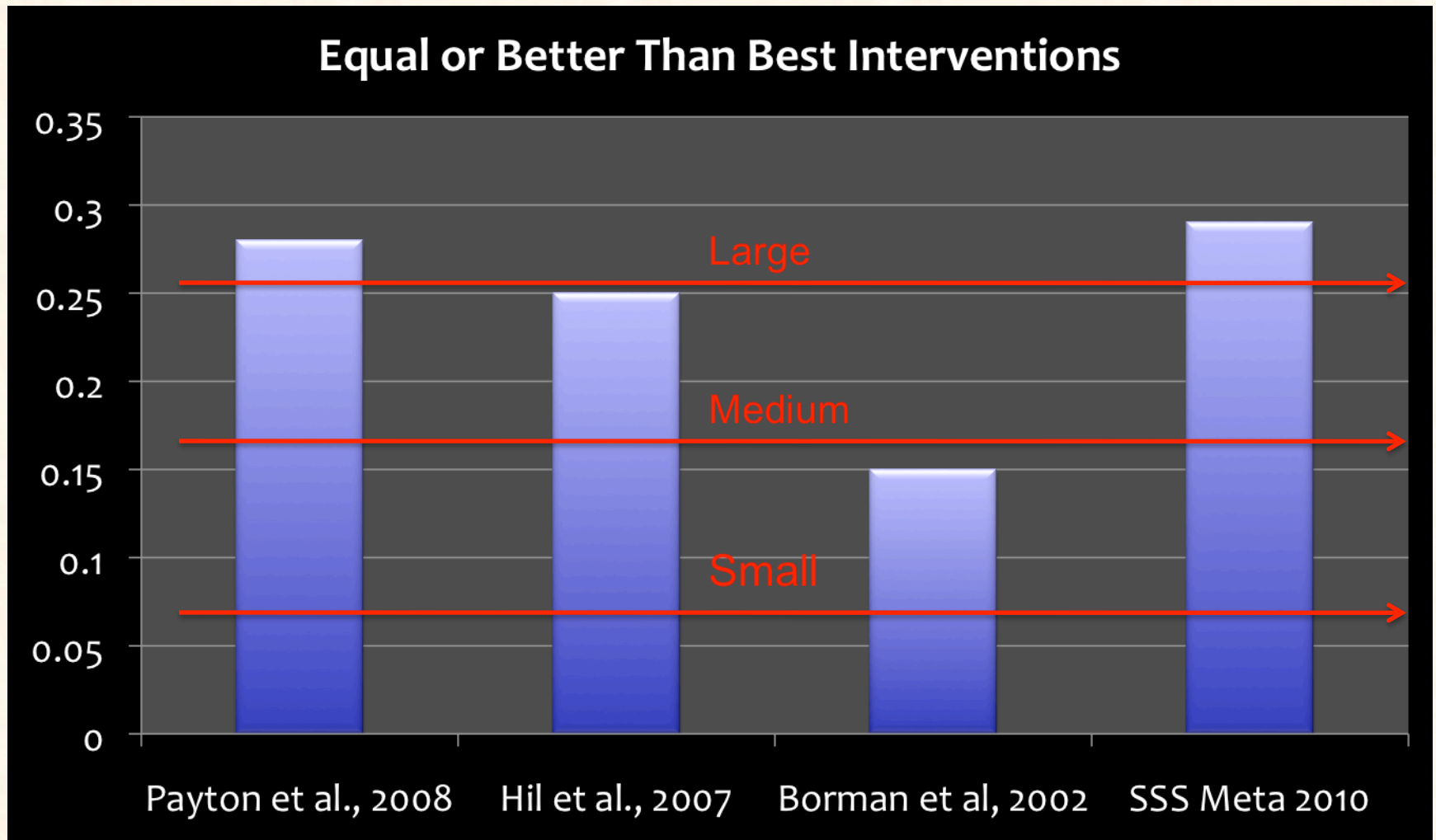


# Practical significance of a SSS .17 ES in Reading

- Grades 4-5      An additional  $\frac{1}{3}$  of a year's growth
- Grades 6-7      An additional  $\frac{1}{2}$  year's growth
- Grades 9-10      An additional 1 year's growth

Hill, C., Bloom, H., Black, A. & Lipsey, M. (2007)

# Impact of School Counselors Using SSS On Standardized Test Scores



# Three Independent Reviews of the SSS program

- **National Center for School Counseling Outcome Research:** The Center for School Counseling Outcome Research (CSCOR) is dedicated to improving the practice of school counseling by developing the research base that ...[www.umass.edu/schoolcounseling/](http://www.umass.edu/schoolcounseling/)
- **Report of the National Panel for Evidence-Based School Counseling:** Carey, Dimmitt, Hatch, Lapan, & Whiston (2008). Professional School Counseling, 11, 197-204.
- **The Best Evidence Encyclopedia:** A free web site created by the Johns Hopkins University School of Education's Center for Data-Driven Reform in Education (CDDRE) under funding from the Institute of Education Sciences, U.S. Department of Education.  
<http://www.bestevidence.org/index.cfm> (2010)

# School Counselors Using SSS

- High Impact on Achievement
- Efficient Use of Funds:
  - \$50 Classroom Manual
  - \$50 Small Group Manual
  - \$100 Training (not required)
- Effective Use of Time:
  - (5) 45 minute Classroom Lessons
  - (8) 45 minute Small Group Sessions



# The SSS Model is K-12

- Student Success Skills
  - Classroom and Group = grades 4-12
  - Spanish Cultural Translation – Classroom = grades 4 – 12
- Ready for Success = grades 2-3
- Ready to Learn = grades K-1
- Parent Success Skills = grades 2 - 12
- For more information and links to research articles go to [www.studentsuccessskills.com](http://www.studentsuccessskills.com)

# Ready to Learn Kindergarten Study (2003)

- Improving prerequisite learning skills in 12 kindergarten classes (260 students) in 3 schools.
- Students who received the RTL intervention scored significantly higher than did comparison students on listening comprehension and behavior.

# Ready to Learn Pre-K Study (1999)

- RTL was evaluated in 10 pre-K classrooms with 145 students.
- Students who received the RTL intervention scored significantly higher than did comparison students on attending, listening and behavior.
- **Overall Effect Size from the 2 RTL studies = .45**

# Ready for Success

- RFS is for Students in Grades 2-3
- Five 45 minute classroom lessons introduce students to the RFS strategies
- Just like SSS and RTL the RFS program embeds foundational learning strategies into the regular school day and helps students master the regular curriculum



# Summary of SSS Research

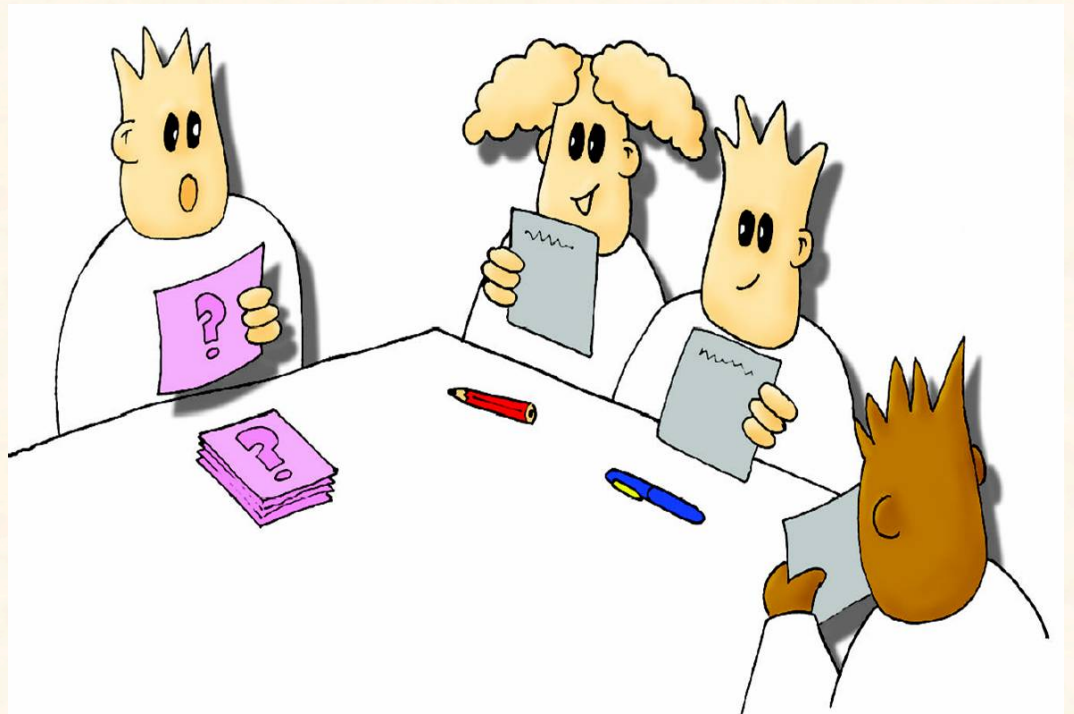
- Five studies with Effect Sizes equal or larger than those reported in three current large reviews of educational research
- Three favorable independent reviews
- Time and cost efficient

# Sample SSS Strategies

- Goal Setting, Progress Monitoring, Success Sharing
- Caring, Supportive, Encouraging Environment
- Memory and Other Cognitive Skills
- Performing Under Pressure
- Healthy Optimism

# Pair Share

- Most important ideas
- Questions



# Goal Setting, Progress Monitoring, Success Sharing

- Looking Good Feeling Good
  - Five Keys to High Energy and Positive Mood



# LOOKING GOOD / FEELING GOOD

## 1. Nutrition

Liquids: ▲ water & milk & juice ▼ sodas  
Solids: ▲ fruits & veggies ▼ sweets & chips

## 2. Fun

Little joys, big fun - it all counts, read, listen to music, play, create, hangout, explore

## 3. Exercise

Walk, run, dance, pedal, move it - 30 minutes or more a day

## 4. Social Support

Hanging out with people you like and who like you. Family and friends you can count on.

## 5. Rest

8-9 hours - naps count.  
Recharge, renew, relax

## 6. Energy

## 7. Mood

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
1	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼
2	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼
3	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼
4	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼
5	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼
6	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼
7	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼

Student Success Life Skills

Making even small improvements in these 5 items lead to higher energy and mood.

Circle the up triangle (▲) if you rate the Life Skill as in a good range or showing improvement for this past week.  
Circle the down triangle (▼) if you rate the Life Skill as not in a good range this past week.

# LOOKING GOOD / FEELING GOOD

## Student Success Life Skills

### 1. Nutrition

Liquids: ▲ water & milk & juice ▼ sodas  
Solids: ▲ fruits & veggies ▼ sweets & chips

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
1	▲ ▼	▲ ▼	▲ ▼	▲ ▼	▲ ▼	▲ ▼	▲ ▼	▲ ▼

**Think about your week.**

**Circle the up triangle if you improved even a little this past week.**

For example: Did you eat even a little more fruit or vegetables?

Did you eat even a little less sweets or chips?

Did you drink even a little more water or a little less soda?

**After students rate the week for nutrition ask a few volunteers:**

“How many circled the up triangle this week?”

“Tell us what you did to improve”

“How many agree that this is a healthy way to improve nutrition?”

# LOOKING GOOD / FEELING GOOD

## Student Success Life Skills

### 2. Fun

Little joys, big fun - it all counts, read, listen to music, play, create, hangout, explore

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
2	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼

**Think about your week.**

**Circle the up triangle if you improved even a little this past week.**

For example: Did you spend even a little more time doing any of the things you enjoy this week?

**After students rate the week for nutrition ask a few volunteers:**

“How many circled the up triangle this week?”

“Tell us what you did to improve”

“How many agree that this is a healthy way to improve nutrition?”

# LOOKING GOOD / FEELING GOOD

## Student Success Life Skills

### 3. Exercise

Walk, run, dance, pedal, move it - 30 minutes or more a day

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
3	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼

**Think about your week.**

**Circle the up triangle if you improved even a little this past week.**

For example: Did you spend even a little more time doing any type of exercise this week?

**After students rate the week for nutrition ask a few volunteers:**

“How many circled the up triangle this week?”

“Tell us what you did to improve”

“How many agree that this is a healthy way to improve nutrition?”



# LOOKING GOOD / FEELING GOOD

## Student Success Life Skills

### 4. Social Support

Hanging out with people you like and who like you. Family and friends you can count on.

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
4	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼

**Think about your week.**

**Circle the up triangle if you improved even a little this past week.**

Did you spend even a little more time being with people that you respect and enjoy and who respect and enjoy you?

**After students rate the week for nutrition ask a few volunteers:**

“How many circled the up triangle this week?”

“Tell us what you did to improve”

“How many agree that this is a healthy way to improve nutrition?”

# LOOKING GOOD / FEELING GOOD

## Student Success Life Skills

### 5. Rest

Liquids: ▲ water & milk & juice ▼ sodas  
Solids: ▲ fruits & veggies ▼ sweets & chips

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
5	▲ ▼	▲ ▼	▲ ▼	▲ ▼	▲ ▼	▲ ▼	▲ ▼	▲ ▼

**Circle the up triangle if you improved even a little this past week.  
Think about your week.**

Did you get even a little closer to the recommended 8-9 hours of sleep this week?

**After students rate the week for nutrition ask a few volunteers:**

“How many circled the up triangle this week?”

“Tell us what you did to improve”

“How many agree that this is a healthy way to improve Rest?”

# LOOKING GOOD / FEELING GOOD

## Student Success Life Skills

		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
<i>Making even small improvements in these 5 items lead to higher energy and mood.</i>									
6. Energy	6	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼
7. Mood	7	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼

**Think about your week.**

**Circle the up triangle if you improved even a little this past week.**

For example: Did you have even a little more energy this week?

Was your mood even a little bit better this week?

**After students rate the week for energy and mood ask them to think about and then share with a partner:**

What connections can you make between how you rated items 6 & 7, energy and mood, with any of the first five items?

After the pair share ask a few volunteers to share their connections with the class.

# Goal Setting for Health & Wellness

Think, Write, Pair Share  
& Volunteer Share



GOAL: To improve what I eat this week.

ACTION PLAN: I am going to cut back to one soda per day and eat a piece of fresh fruit each day.



# Listening with **EYES, EARS & HEARTS**



## **EYES:**



Have good eye contact, look interested, lean forward, make sure your knees face the speaker.

## **EARS:**



Listen carefully so you can give a brief summary, (paraphrase) of what the speaker just said. This is important in communicating that you are really listening.

## **HEART:**



Listen for the feelings behind the words. Empathy means that you can tell how someone is feeling about something, even if they do not tell you in words.

Empathy is putting yourself in another person's shoes and seeing things from their perspective.




Empathy is one of the most important social skills. People who are good at empathy usually have more and deeper friendships and work better with others.

# Caring, Supportive, Encouraging Environment

- Looks Like
- Sounds Like
- Feels Like



Brainstorm at least 5 specific examples of what this class would look like, sound like and feel like if we were successful in creating a caring, supportive and encouraging classroom community.

 <b>LOOKS LIKE</b>	 <b>SOUNDS LIKE</b>	 <b>FEELS LIKE</b>

# Memory and Other Cognitive Skills

- Body Location Memory Pegs



# Body Location Memory Pegs

- Ten top foods for health:
  - Blueberries
  - Nuts
  - Salmon
  - Broccoli
  - Bananas
  - Frozen Yogurt
  - Olive Oil
  - Brown Bread
  - Spinach
  - Tomatoes



# Performing Under Pressure

- Calm Place and
- Breathe, Picture, Focus

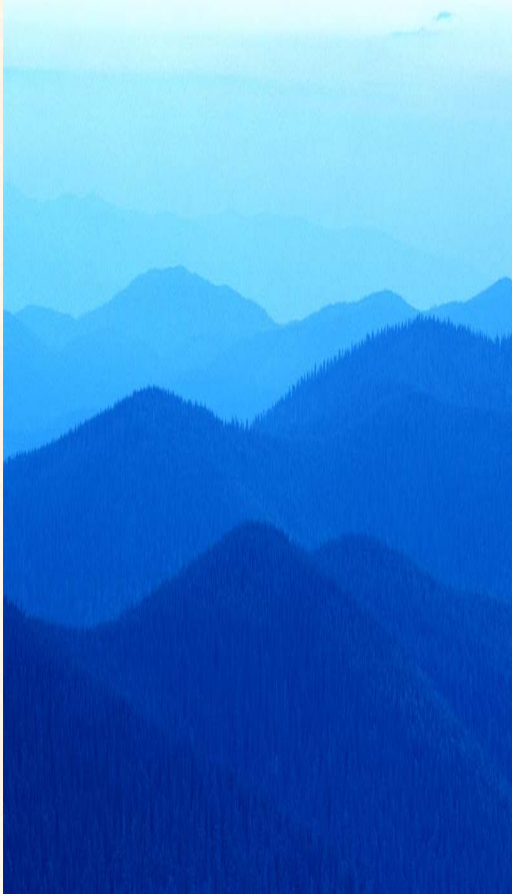
# Calm Place



Use your imagination to  
create a calm place.



# Breathe, Picture, Focus



- **Breathe** in slowly to count of 5, hold for count of 5, exhale to count of 5
- **Picture** yourself in your “Calm place”
- **Focus** on your strategy for the task at hand



# Healthy Optimism

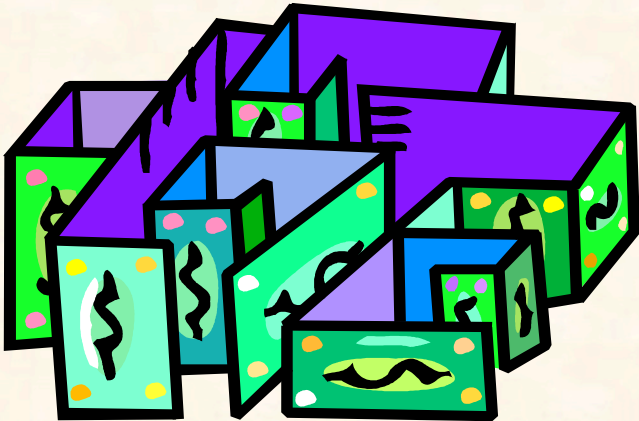
- Don' t Doubt Your Ability
- Try a new Strategy

# Optimism

- Don't doubt your ability
- Doubt your strategy

If what you are doing is not working

- Try Something Different!!!





# Kaizen

Little by little,  
Bit by bit,  
I' m improving,  
Everyday

# Summary of School Counselor Impact on Student Achievement

- School Counselors:
  - Can deliver programs that have equal or greater impact on math and reading as most widely used programs
  - Can use evidence-based programs to insure their place at the table when planning for school improvement and insure access to students
  - Can use evidence-based programs to advocate for all students receiving comprehensive school counseling services



# The New Questions for School Counselors During School Improvement Planning

- Where is the evidence that these interventions/programs work?
- What are the effect sizes and how do they compare to several recent large reviews?
- Why would we not use a school counseling program that has a stronger impact on reading and math?
- How do I insure that the school counselor is written into the plan for improvement?

# New Measures of the Impact of Interventions on Math and Reading Scores

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# Take Aways

- Share with a partner your top 3 take away points from today's presentation







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