Self-Monitoring Strategies for Improving Classroom Engagement of Secondary Students

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Recommended Citation

Cook, Kathleen B., "Self-Monitoring Strategies for Improving Classroom Engagement of Secondary Students" (2014). *Georgia Association for Positive Behavior Support Conference*. 65.
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2014 GEORGIA ASSOCIATION FOR POSITIVE BEHAVIOR SUPPORT CONFERENCE

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SELF-MONITORING STRATEGIES FOR IMPROVING CLASSROOM ENGAGEMENT OF SECONDARY STUDENTS
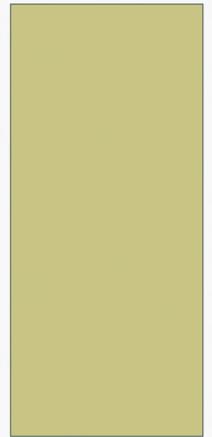
AGENDA

- What the research tells us about
  - Classroom engagement
  - Self-monitoring

- Brief report on a new study

- In your classroom: When would a self-monitoring program be indicated?

- Steps for implementing a self-monitoring program with your students
  - How to set up
  - Materials and tools
  - How to teach
  - How to monitor progress

WHAT IS SELF-MONITORING?

- **Self-management:** "the personal application of behavior change tactics that produces a desired change in behavior"

(Cooper, Heron, & Heward, 2007, p. 578)

- **Self-monitoring:** the fundamental element of self-management interventions
  - self-observation
  - self-recording

(Briesch & Chafouleas, 2009)

WHAT IS SELF-MONITORING?

- **Benefit of S-M**: agent of behavior change is shifted from teacher to student

  - Example: S-M Attention
    - Student's self-question ("Am I on-task?") replaces the teacher's call for attention ("Are you paying attention?")
    - The *controlling* response (S-M) leads to *the controlled* response (increased attention to the task at-hand)

RESEARCH ON SELF-MONITORING

- Self-monitoring of attention (SMA) has been demonstrated as **effective in increasing student on-task** behaviors in classrooms

- SMA procedures are **time-efficient** and **easy** for classroom teachers to implement

- However, most research has been done using audio-tone prompts (invasive for general education classrooms)
  - Some recent studies have used a tactile vibrating device (e.g., MotivAider®**)** which is a less conspicuous prompt

- There is a paucity of SMA research
  - …with high school students with disabilities in general education
  - …that evaluate the effects of self-graphing with SMA
  - …that include generalization and maintenance

RESEARCH ON CLASSROOM ENGAGEMENT

- Notably, only two studies on self-monitoring of attention with a total of three participants in high school general education settings have been reported in the research literature (Dalton et al., 1999; McDougall et al., 2012).

- However, classroom engagement—including on-task behavior—has been shown to steadily decline as the grade level increases, with lowest levels of student engagement in high school years (Marks, 2000; Wang & Holcombe, 2010; Wang & Eccles, 2011).

A NEW STUDY

- **Participants:** Students with disabilities in general education inclusion classes

- **Setting**: High school in rural county

- **Intervention:** Self-monitoring of attention

- **What was measured**: Time on-task

- **Self-Monitoring Tools:** Self-recording form, prompting device

A NEW STUDY

How I defined **on-task** (in math classes)

- Gaze oriented toward teacher during lectures
- Gaze oriented toward work area or assignment source when individual work is assigned
- Using the calculator or writing
- Not talking unless interacting with teachers or interacting with students with teacher permission (e.g., asking the teacher a question, answering a teacher-initiated question, talking with students during a group assignment)
- Remaining seated unless otherwise instructed by the teacher
- Moving to another area when directed, without stopping or talking
- Complying with teacher directive

A NEW STUDY

How I defined **off-task** (in math classes)

- Talking to other students at the same time the teacher is talking
- Poking, prodding, or tapping another student with a finger or object (e.g., pencil)
- Throwing objects
- Looking at or typing on a cell phone or looking at other irrelevant material
- Getting out of seat without a teacher directive
- Looking away from the work area or assignment source

A NEW STUDY

- How I measured on-task behavior

  - **Momentary Time Sampling (MTS)**
    - Use of a timing device (Motivaider® iPhone app; @$2.99)
    - 20-s fixed time intervals
    - 30-minute observation sessions
    - Smart Phone data recording app (ABC Data Pro—currently not available for purchase)

A NEW STUDY

How I taught students to self-monitor:

- Prompt to self-monitor on-task behavior
  - Motivaider® iPhone app
    - Set to vibrate at 3-minute random intervals
    - Placed in student's pocket

- Self-recording form
  - 2" x 3" sticky note

- Self-graphing form
  - Introduced as a second condition or phase of the intervention

LET'S TRY IT!

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A NEW STUDY

- The Conditions (or Phases) of the Study
  - **Baseline** –the percentage of on-task behavior of the student prior to self-monitoring
  - **Intervention** – the student self-monitors after learning how to use the materials
  - **Return to Baseline** – verify that the increased on-task percentages are result of intervention
  - **Re-introduce Intervention**
  - **Fading the Prompts** – systematic reduction of the use of the self-monitoring materials to facilitate maintenance of on-task skills
  - **Maintenance** – Is the increased on-task behavior maintained after the self-monitoring materials are no longer being used?
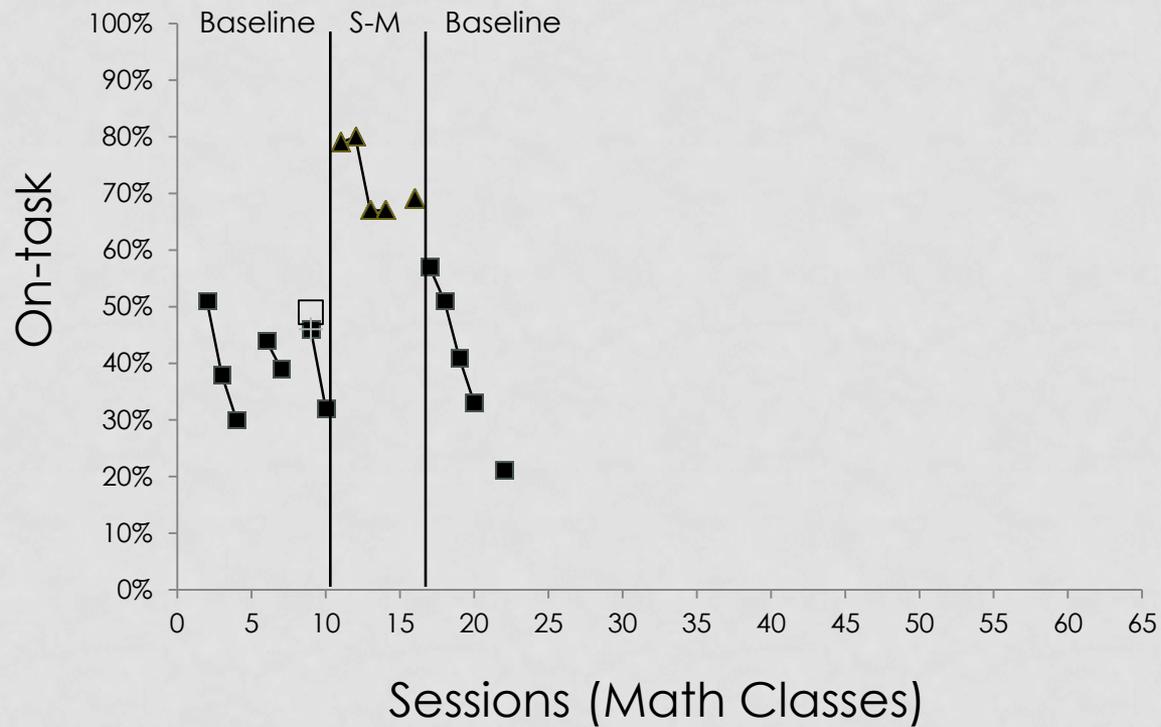
A NEW STUDY
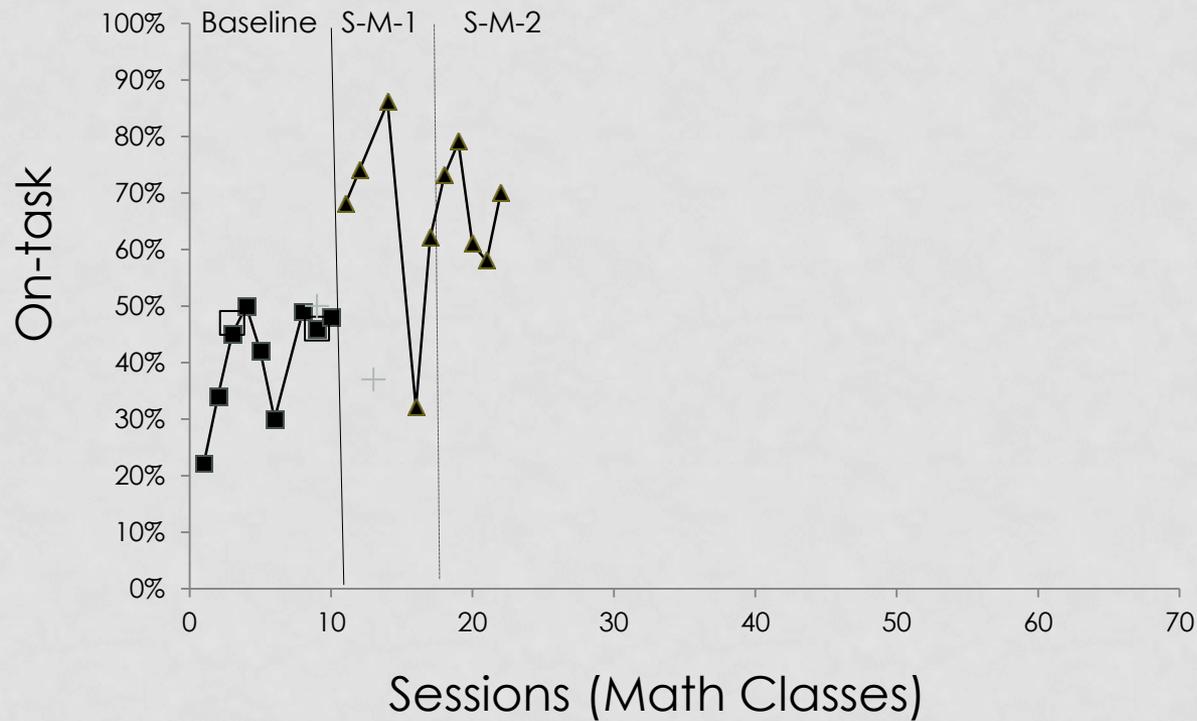
- Preliminary Results—Participant 1
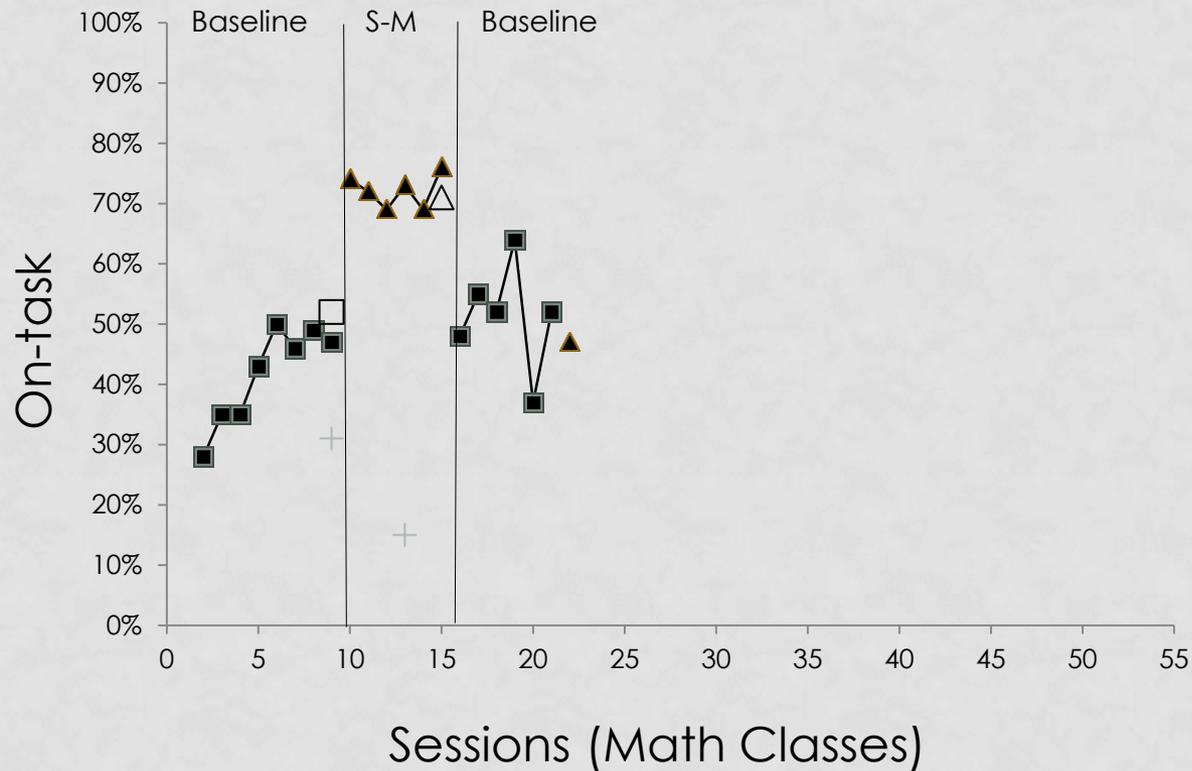
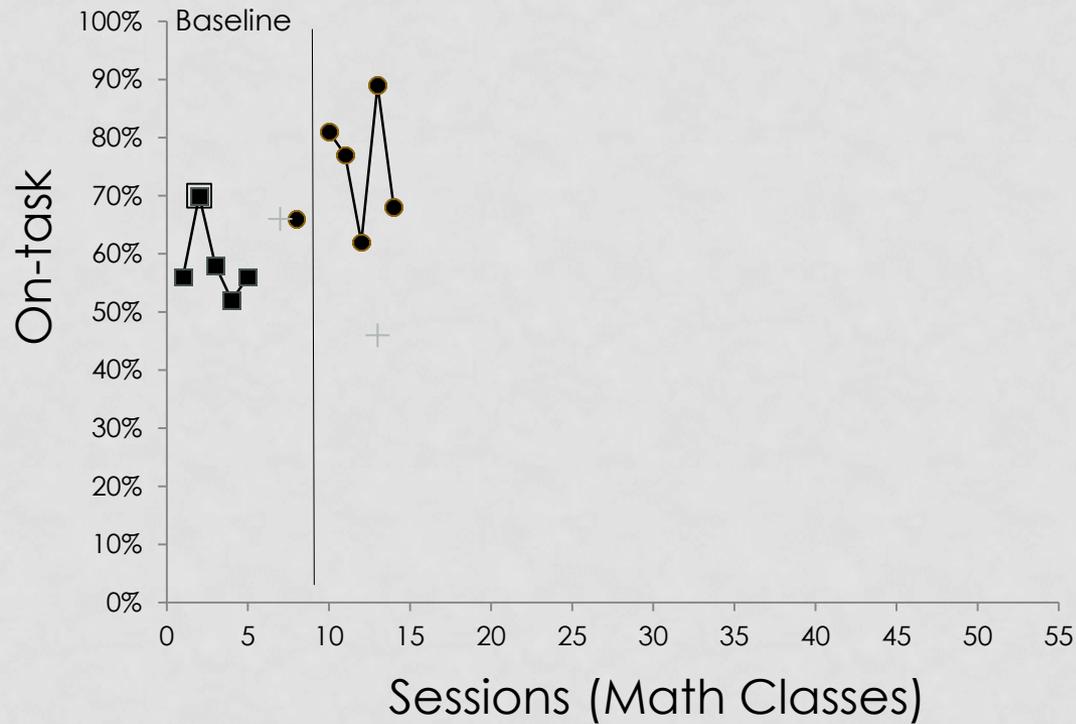# A NEW STUDY

- Preliminary Results—Participant 2

A NEW STUDY

- Preliminary Results—Participant 3

A NEW STUDY

- Preliminary Results—Participant 4

A NEW STUDY

- Promoting Generalization of Skills
  - Measure on-task behaviors in other classes across the conditions (baseline and intervention)
    - Reinforce increased on-task behaviors in other classes
  - If generalization is not evident
    - Teach student to use the self-monitoring strategy in one additional class at a time
    - Reinforce increased on-task behaviors in other classes

IN YOUR CLASSROOM

- When would a self-monitoring program be indicated for your student(s)?
  - Students with disabilities
  - At-risk of failure/dropping out
  - Off-task 50% or more of class time
  - Positive Behavior Intervention and Supports (PBIS) – Part of Tier 2-3

- Note: Easiest to implement in co-teaching general education classes or special education classes (with two adults in the room)

STEPS TO IMPLEMENTING A SELF-MONITORING PROGRAM

1. Decide which students might benefit
2. Gather S-M tools
3. Collect baseline data
4. Teach students
5. Collect intervention data
6. Promote generalization to other classes
7. Fade the prompt
8. Collect maintenance data
9. Re-implement program, if necessary

MATERIALS & TOOLS

- Teacher Prompting Device (to measure on-task behavior of students)

- Teacher Recording Device (to record on-task behavior of students)

- Student Prompting Device (to self-record on-task behavior)

- Self-recording sheet
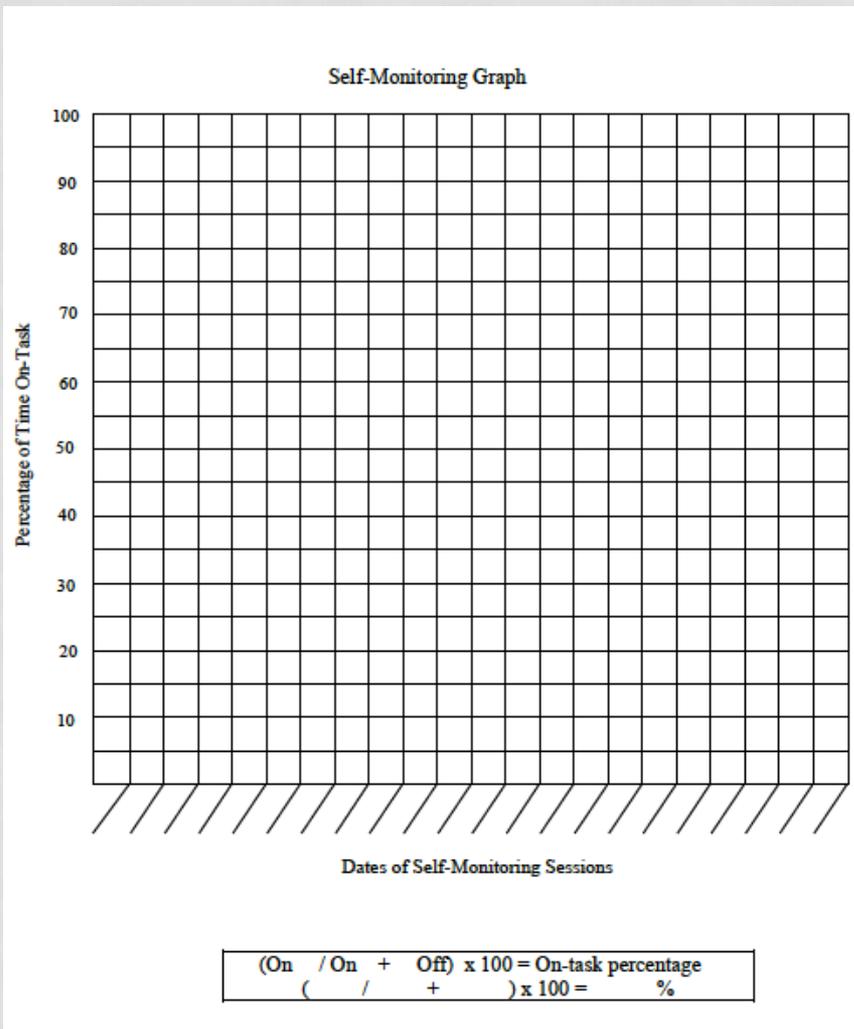
- Self-graphing sheet (optional)

MATERIALS & TOOLS

- Prompting Devices
  - Motivaider® ($47.50)
  - Smart Phone with Motivaider® App ($2.99)
  - Other apps similar to Motivaider® (interval timer apps)
  - Other types of prompts
    - Auditory tones through headphones or ear buds
    - Wristwatch alarms
- Recording Devices
  - Clicker counter (for teacher; $3–10)
    - iPhone/iPad app: Behavior Tracker Pro ($29.99)
  - Sticky note (for student)
    - Custom printed Post-It® Notes from http://www.thediscountprinter.com/post-itnotes.htm

MOTIVAIDER®

RECORDING

Teacher

Student

SELF-GRAPHING

Self-Monitoring Graph

TIPS

- **Involve student** in planning the intervention
- **Be clear** about what on-task and off-task looks like
- **More detailed** baseline data will allow you to help student decide which classroom engagement behavior needs to be changed:
  - Off-task passive: change to on-task active or passive
  - Off-task verbal: change to on-task active or passive
  - Off-task motor: change to on-task active or passive
- **Keep the intervention simple**—only introduce additional components (e.g., self-graphing, self-reinforcement) if on-task behavior is not improving
- **Brief check in** with student weekly

QUESTIONS?
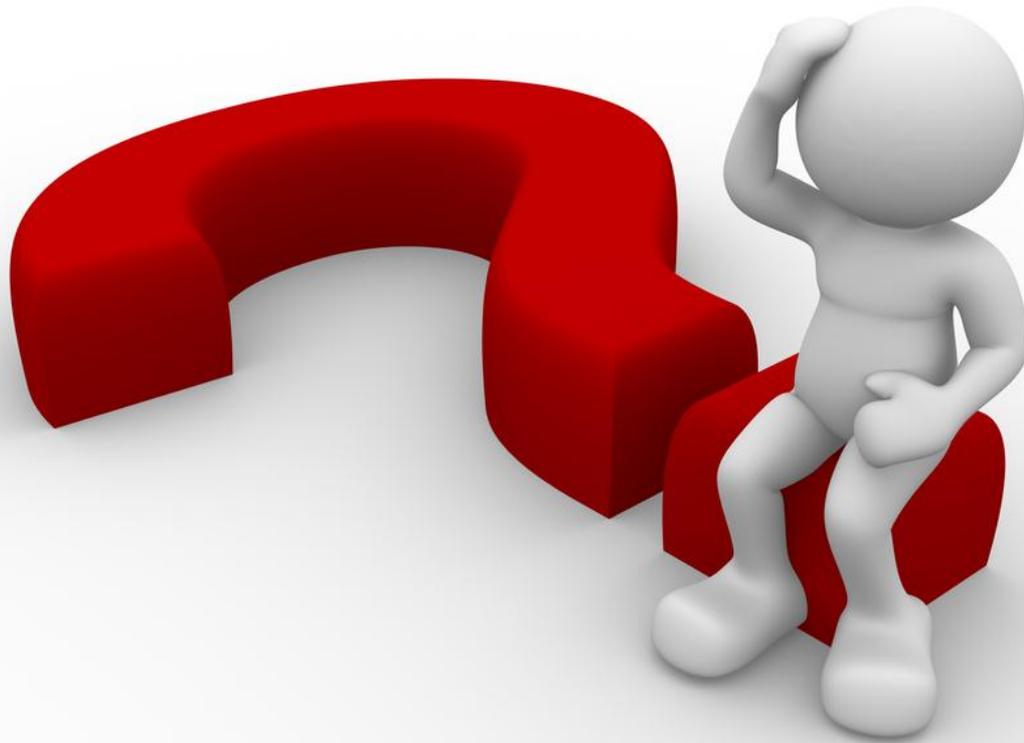
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