

# The Effects of a Self-Management Intervention on Academic Engagement for High School Students With Autism

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## Background

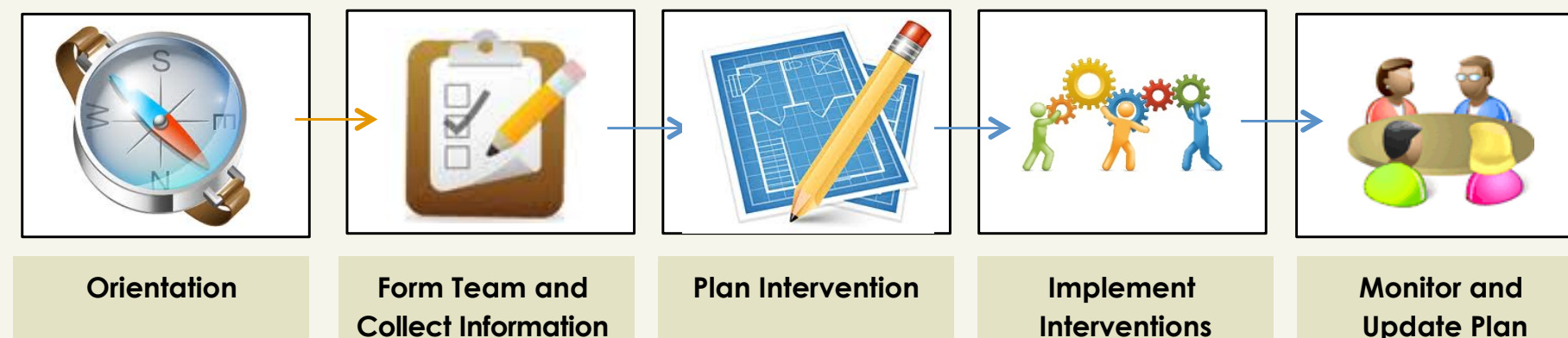
### SPONSORSHIP

The Center on Secondary Education for Students With Autism Spectrum Disorders (CSEA) is funded by the U.S. Department of Education to develop and study a comprehensive high school program for students on the autism spectrum.

CSEA includes the Frank Porter Graham Child Development Institute, The University of North Carolina at Chapel Hill; Waisman Center, University of Wisconsin-Madison; Vanderbilt Kennedy Center, Vanderbilt University; The University of Texas at Austin; The University of North Carolina at Charlotte; San Diego State University; and UC Davis MIND Institute.

### WHAT IS PRISM?

- PRISM stands for **personal responsibility, independence, and self-management**—the behavioral outcomes we all strive for when working with adolescents on the autism spectrum.
- PRISM is a process that supports school staff members in selecting goals and interventions to achieve optimal outcomes for students.



### RATIONALE

- Self-management is considered an emerging and effective evidence-based practice with strong effect sizes (deBruin, Deppeler, Moore, & Diamond, 2013; Odom et al., 2003).
- Self-management has been successfully used to improve independent work skills in inclusive settings (Harrower & Dunlap, 2001).
- Little research has been conducted with adolescents with autism spectrum disorders (ASD; Mesibov & Shea, 2011).
- No study has looked at self-management and academic engaged time in high-school-age students with autism in a public school setting (deBruin et al., 2013; Lee, Simpson, & Shogren, 2007; Southall & Gast, 2011).

### RESEARCH QUESTION

What is the effect of a multicomponent self-management intervention on academic engaged time for two high school students with ASD?

## Participants and Setting

### PARTICIPANT SELECTION

- Met the district criteria for ASD
- Accessed general education academic content throughout the school day
- Participated in a study skill period
- IQ  $\geq$  80
- Had behavioral individualized education program (IEP) goals and were selected by staff as needing behavioral support

### PARTICIPANT CHARACTERISTICS

- Andrew:** 18 years old and in the 12th grade
- Derek:** 17 years old and in the 11th grade

### SETTING

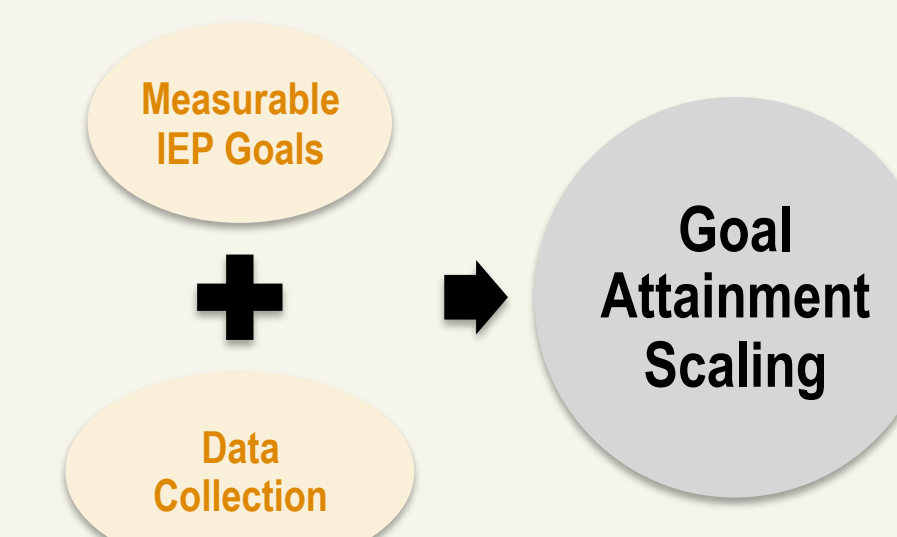
- Rural Central Texas high school approximately 30 miles southeast of Austin
- More than 800 total students
- 65% of students were economically disadvantaged
- Pullout study skills period in the special education setting

## Goal Development

### EVALUATION FORM

Subdomain: Organization	Priority Rating	Subdomain: Personal Presentation	Priority Rating
01. Accesses and follows early schedule	0 1 2	PP1. Selects age & schooljob appropriate clothing and footwear	0 1 2
02. Uses tools to document assigned work and/or scheduling	0 1 2	PP2. Grooming: Demonstrates general cleanliness	0 1 2
03. Uses organizational system to document work completion	0 1 2	PP3. Hygiene: Demonstrates grooming of hair, teeth, nails, and skin (e.g. shaving, brushing teeth)	0 1 2
04. Identifies steps required to complete assigned activities	0 1 2	PP4. Physical Wellness: Demonstrates behavior that supports a healthy lifestyle (e.g. acquiring healthy snack/food, participating in activities during physical)	0 1 2
05. Completes assigned activities within allotted time	0 1 2	PP5. Demonstrates environment appropriate behavior related to personal space	0 1 2
06. Returns materials to correct location at the end of activities	0 1 2	PP6. Demonstrates age & environment appropriate behavior related to bodily functions	0 1 2
07. Arrives at assigned location or activity on time	0 1 2	PP7. Demonstrates appropriate table manners	0 1 2
08. Arrives at assigned location or activity on time	0 1 2	PP8. Washes hands after using restroom and/or before food preparation or consumption	0 1 2
09. Responds to assigned activities within allotted time	0 1 2	PP9. Other:	0 1 2

### GOAL SETTING



PRESENT LEVEL OF PERFORMANCE (BASELINE)	TEACHER'S RATING
0	Given usual prompts, Eric will ask teachers at least 2 on topic questions during the class period across one week of data.
1	Given usual prompts, Eric will ask teachers no more than 10 questions (on or off topic) during a class period across one week of data.
2	Given usual prompts, Eric will ask teachers no more than 5 questions (on or off topic) during a class period across one week of data.
3	Given usual prompts, Eric will ask teachers at least 2 on topic questions and no off-topic questions during the class period across one week of data.
4	Given usual prompts, Eric will ask teachers at least 2 on topic questions and no off-topic questions during the class period across one week of data.

## Research Design

### ABAB WITHDRAWAL DESIGN WITH 2 DAYS OF TRAINING FOLLOWING THE FIRST BASELINE

#### BASELINE AND WITHDRAWAL

- Students completed 30-minute independent "business-as-usual" sessions.
- Students completed unfinished assignments from other classes.
- Redirects were given to students.
- Students could ask for help if needed.

#### Training Day 1

- A trained peer with autism led training.
- Video modeling was used.
- Opportunities to practice, ask questions, and give feedback were provided.

#### Training Day 2

- Adults retaught the rules.
- Students practiced, using the self-management device.

#### SELF-MANAGEMENT INTERVENTION

Same as baseline, except students did the following:

- Completed a "to-do" checklist of work to be done
- Began working on the items on the checklist
- Filled out a self-management form when work was completed
- Checked the accuracy of the work and the self-management sheet with a teacher or paraprofessional
- Earned time for desired activities (e.g., 5 to 10 minutes of movie, phone time) upon accurate completion of work on the checklist

### DEPENDENT VARIABLES

#### Academic Engaged Time

- Included:** Working on an assigned task in seat (i.e., looking at paper, text, or writing), looking away from text for up to 1 second, talking to adult about task
- Did not include:** Asking an off-topic question or engaging in an off-topic conversation, organizing materials, getting out of seat, flipping through pages not as part of an assigned task

#### Social Validity Measures

- Teacher:** Training, coaching, and support; feasibility and acceptability; usefulness and effectiveness
- Student:** Working on independence

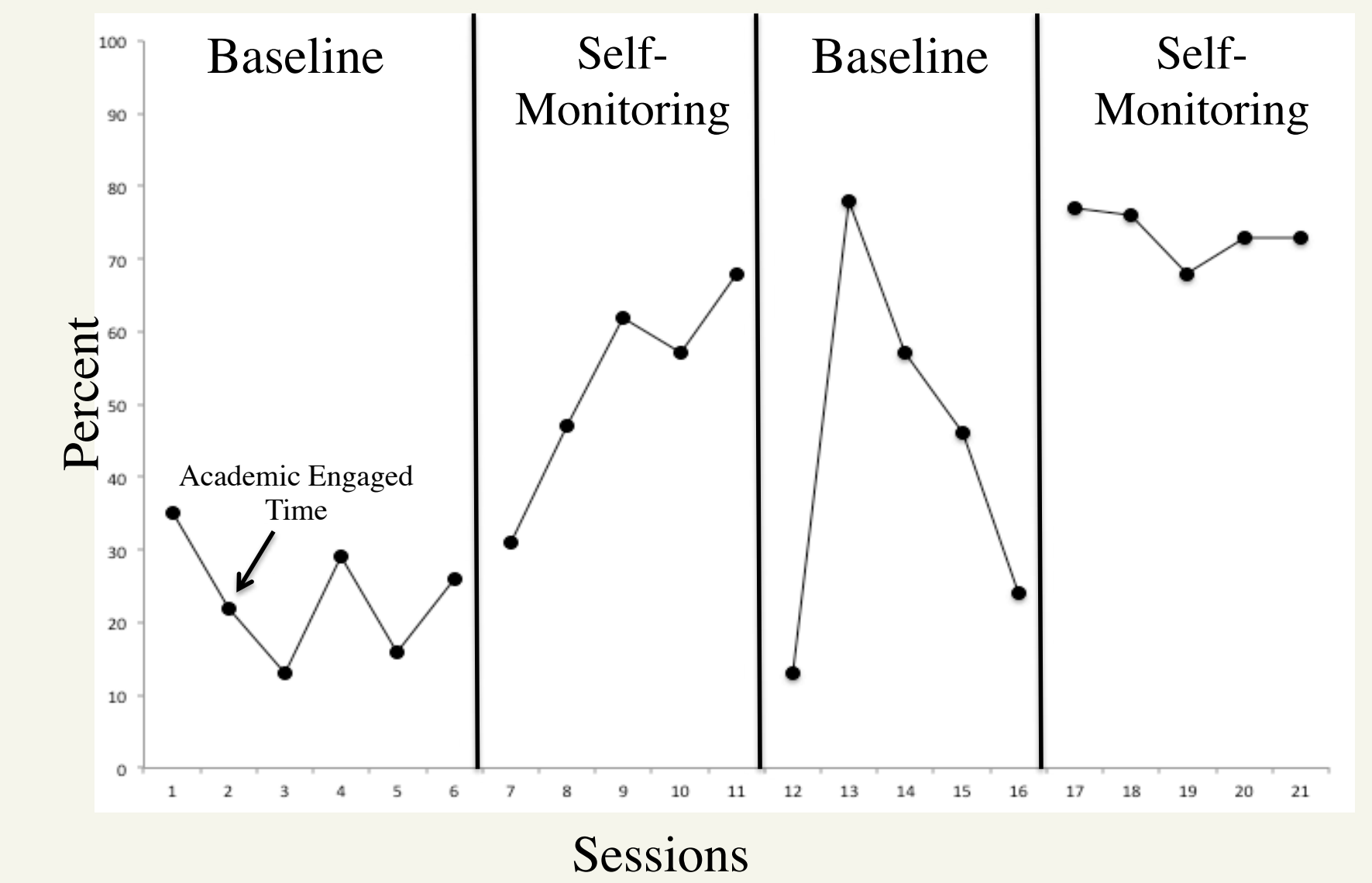
### DATA COLLECTION

- Percent of time academically engaged
- 10-second whole intervals
- Interobserver agreement:
  - 24% of sessions
  - Exact interval agreement
- Teacher and student surveys

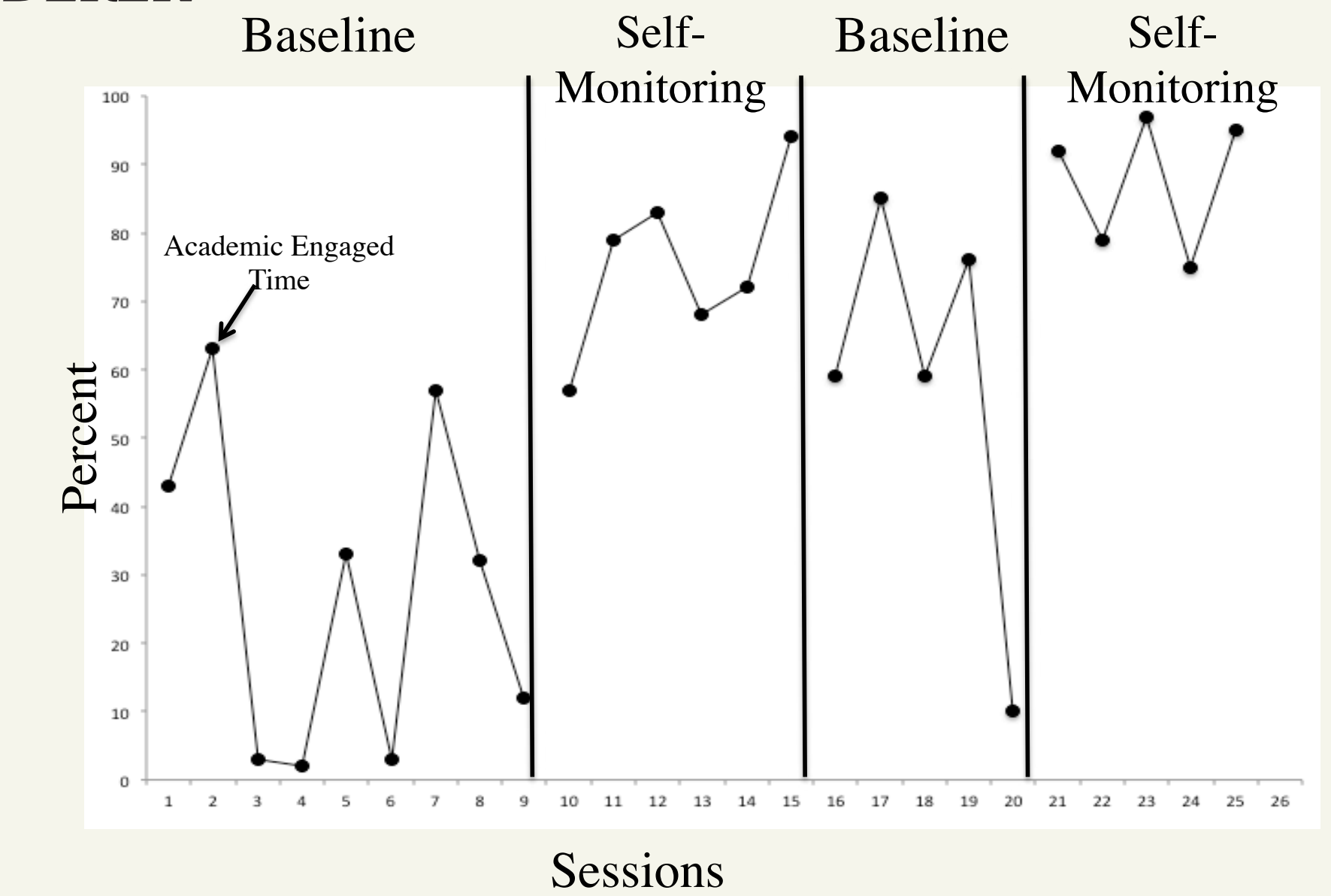
## Results

### PERCENTAGE OF INTERVALS WITH ACADEMIC ENGAGED TIME

#### ANDREW



#### DEREK



### VISUAL ANALYSIS

- Increase in level
- Positive change in slope
- Decrease in variability
- Immediacy of effect

## Discussion

### IMPLICATIONS

- Findings suggest that self-management interventions can improve academic engagement for high school students with autism.
- Multicomponent interventions (e.g., self-management, visual schedules, video modeling) may improve academic engagement for high school students with autism.
- Teacher reports suggest that this multicomponent intervention is feasible and beneficial.

### LIMITATIONS

- Limited number of participants
- Special education setting
- Lack of generalization data

### DIRECTIONS FOR FUTURE RESEARCH

- Future research is warranted to examine the generality of self-management strategies for high school students with autism across settings and content areas.
- Future research can examine the effects of self-management on the academic outcomes of high school students with autism.
- Future research can investigate the effects of each approach employed through component analysis.

## Student Materials

### TO-DO LIST

Name:	Date:

### SELF-MANAGEMENT SHEET

Name:	Mon. Date:	Tues. Date:	Wed. Date:	Thurs. Date:	Fri. Date:
1. I came in and sat down					
2. I quickly began working on my checklist					
3. I tried my best					
Adult agrees? Yes=2 No=0					
Total Points					
Student Prize (6 pts)? Circle one:	Yes No	Yes No	Yes No	Yes No	Yes No

### SAMPLE

Name: Andrew	Mon. Date:	Tues. Date:	Wed. Date:	Thurs. Date:	Fri. Date:
1. I came in and sat down	2	2	2	2	2
2. I quickly began working on my checklist	2	2	2	2	2
3. I tried my best	2	2	1	1	2
Adult agrees? Yes=2 No=0	2	0	2	2	2
Total Points	7	4	7	7	8
Student Prize (6 pts)? Circle one:	Yes No	Yes No	Yes No	Yes No	Yes No