



# CSESA

The Center on Secondary Education for  
Students with Autism Spectrum Disorders

## Literacy Instruction for High School Students with ASD

STRAND: Educational Strategies and Interventions for High  
School Students with Autism Spectrum Disorders

**Note:** This research was supported by grant R324C120006 from the Institute of Education Sciences, U.S. Department of Education. The content is solely the responsibility of the authors and does not necessarily represent the official views of the Institute of Education Sciences or the U.S. Department of Education

# About CSESA

- \* Research & Development Center
- \* Funded by the Department of Education (IES)
- \* Purpose: To conduct a program of research to develop & evaluate a comprehensive, school-based intervention program for secondary students with ASD. The ultimate objective of the Center is to improve the cognitive, communicative, academic, social, behavioral, functional, or transition outcomes of secondary students with ASD.”

**FOR YOUR SUBJECTS  
WHEN THEY GRADUATE:**

- 1) SOMETHING TO DO**
- 2) SOMEWHERE TO BE**
- 3) SOMEONE TO LOVE.**

**GOOD LUCK!!**

# CSESA Sites



SAN DIEGO STATE  
UNIVERSITY



UNC  
FRANK PORTER GRAHAM  
CHILD DEVELOPMENT INSTITUTE

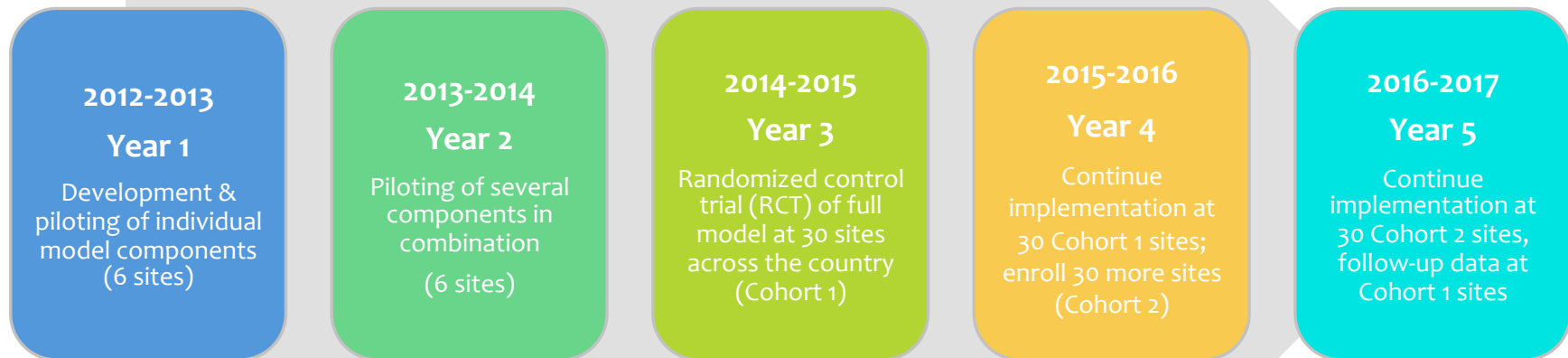
**UCDAVIS**  
MIND INSTITUTE

THE UNIVERSITY OF  
**TEXAS**  
AT AUSTIN





# The Big Picture



You are here



# CSESA Process

PROFESSIONAL DEVELOPMENT

Training and Coaching

ASSESSMENT

School & Student

PLANNING

Building a Team & Selecting Goals/Interventions

IMPLEMENTATION

CSESA Interventions

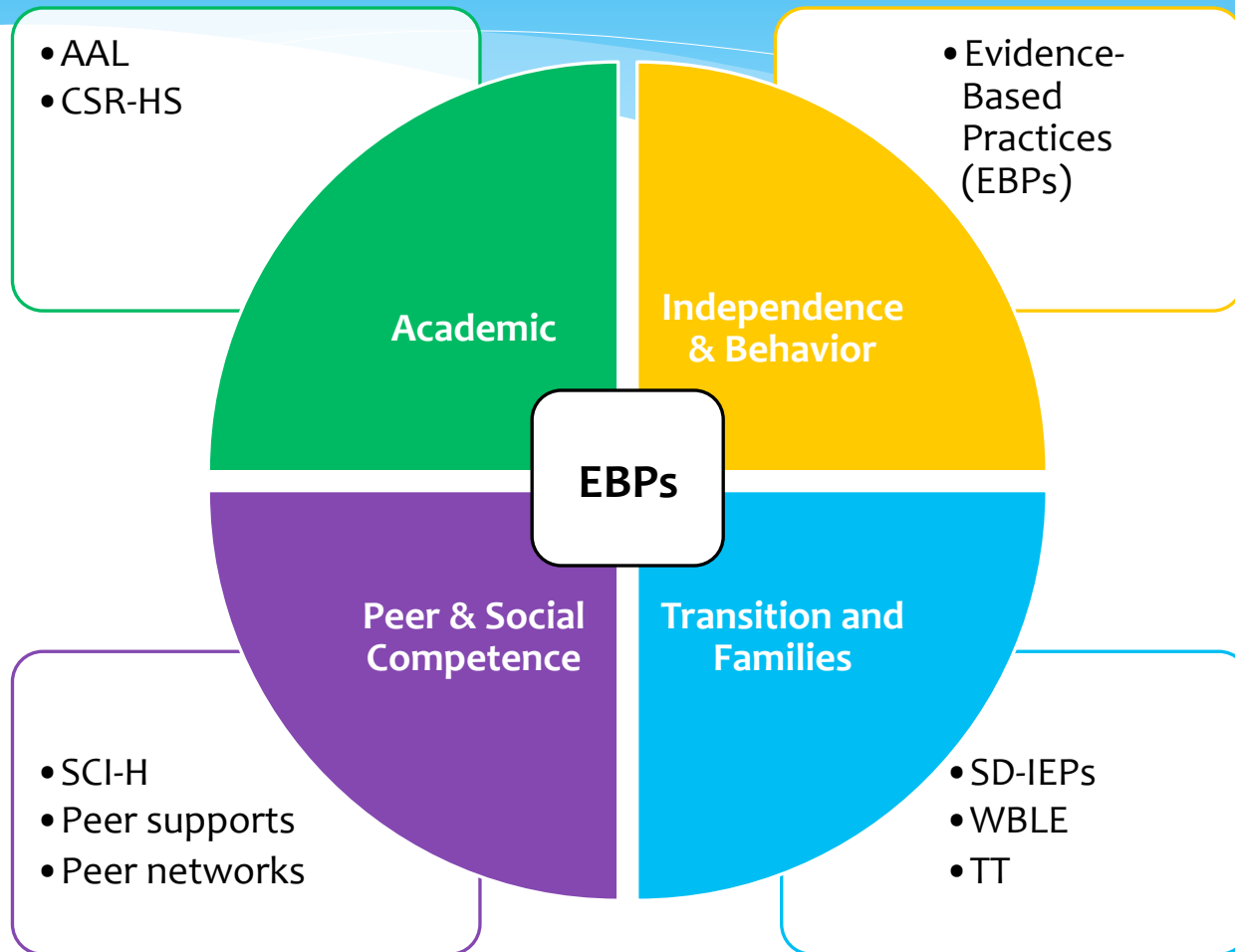
OUTCOMES

Improved School and Student Outcomes

# CSESA Domains



# CSESA Interventions





# Alternate Achievement Literacy

Resources developed by Diane  
Browder, Julie Thompson, Kathy  
Fallin, & Caryn Allison

University of North Carolina at Charlotte

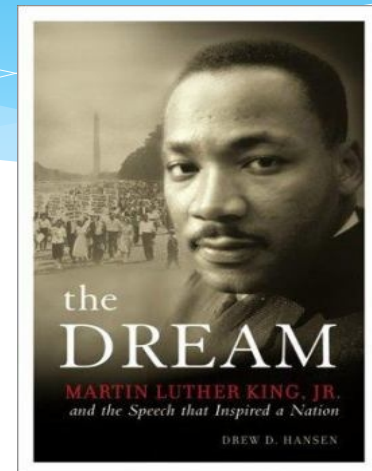
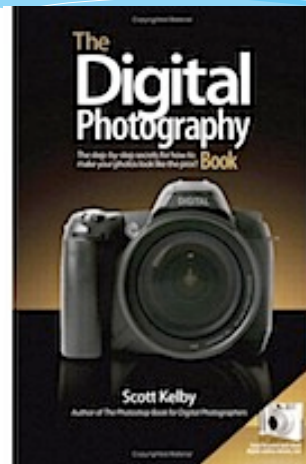
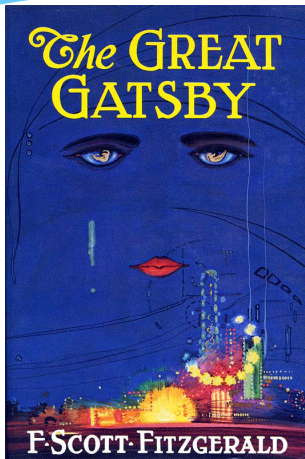
Presented by Caryn Allison

# What is Alternate Achievement Literacy?

- \* The ability to access and comprehend text that is chronologically age appropriate by using adaptations, modifications, and technology.



# Choose the Text



Literature from  
Grade Level  
English Language  
Arts

Text Related to  
Student Interests

Text Related to  
Transition Goals

Literature from  
Content Areas-  
e.g., Science,  
Social Studies

# Select Key Vocabulary

## Tier 1

- Everyday speech and functional words found in the literature
- Examples: man, son, mother, dream, sad, football

## Tier 2

- Academic words found primarily in written texts
- Examples: act, scene, stage, tragedy, setting, tone

## Tier 3

- Words related to the topic of the text; may be the academic concepts in content area
- Examples: simonize, philandering, condensation, democracy



# Select Method to Teach Vocabulary: e.g., Constant Time Delay

Materials	Teacher Says/Does	Student Response	Teacher Feedback
<b>Zero Delay Round (Complete multiple trials/days as needed at the zero delay round)</b>			
<i>*Note: distracters can be made very different in the beginning (e.g., a blank card or a card with a picture of an unrelated item), but eventually should be similar items, such as cards other targeted symbols (e.g., cat, dog, or hat).</i> <i>**Note: Shuffle cards and distracters between every trial.</i>			
Card with the word cat on it and two distracters: ↓ <div>cat   dog   hat</div>	Point to word cat and say "Touch cat."	Student touches word cat.	"Good, that says cat."
Card with the word dog on it and two distracters: ↓ <div>hat   dog   cat</div>	Point to word dog and say "Touch dog."	Student touches the word dog.	"Good, that says dog."
Card with the word hat on it and two distracters: ↓ <div>hat   dog   cat</div>	Point to word hat and say "Touch hat."	Student touches the word hat.	"Good, that says hat."
<b>4 Second Delay Round</b>			
Card with the word cat on it and two distracters: <div>dog   hat   cat</div>	"Touch cat." Wait 4 seconds.	Student touches cat before additional prompting.	"Good! You got it! That says cat."
		Student responds incorrectly before additional prompting.	Point to the word cat. Say: "This is cat. If you don't know the answer, wait and I'll help you."
		Student waits (does not respond within 4 seconds).	Point to the word cat. Say: "This is cat." After they point say "Good."
Card with the word dog on it and two distracters: <div>dog   cat   hat</div>	"Touch dog." Wait 4 seconds.	Student touches dog before additional prompting.	"Good! You got it! That says dog."
		Student responds incorrectly before additional prompting.	Point to the word dog. Say: "This is dog. If you don't know the answer, wait and I'll help you."

# Choose Common Core State Standard from Grade Level

- \* Common Core 9-12  
Reading: Literature

- \* RL 11-12.1 *Cite strong and textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text including determining where the text leaves matters uncertain.*

- \* Possible Alternate Achievement Goal

- \* *Given a question, indicate answer in text, make a “good guess” supported with text, or indicate “no answer”*

# Develop Goals Related to Text, Vocabulary, and Common Core



<b>0</b>	<b>Present level of performance</b> <i>(Baseline)</i>	When Roger is given an adapted text with picture references, he is able to independently define tier one vocabulary (everyday speech) 70% of the time, tier 2 vocabulary (words found in written text rather than oral speech) 50% of the time with 3 choice prompts and tier 3 vocabulary words (words that are specific to individual topics) with 60% accuracy with three choice prompts.
<b>1</b>	<b>Initial objective</b>	Given an adapted text and picture references, Roger will independently define tier 1 vocabulary (everyday speech) within the text with 80% accuracy.
<b>2</b>	<b>Secondary objective</b>	Given an adapted text and picture references, Roger will independently define tier 2 vocabulary (words found in written text rather than oral speech; doze instead of sleep) within the text with 80% accuracy.
<b>3</b>	<b>Annual goal</b>	Given an adapted text and picture references, Roger will independently define tier 3 vocabulary (words that are specific to individual topics [i.e., seedling]) with 80% accuracy.
<b>4</b>	<b>Exceeds annual goal</b>	Given an unadapted text and picture references, Roger will independently define tier 3 vocabulary (words that are specific to individual topics [i.e., seedling]) with 80% accuracy.



<b>0</b>	<b>Present level of performance</b> <i>(Baseline)</i>	Based on classroom data, Sheera can identify the title, author characters, and settings in an adapted chapter book. She can answer inferential questions, sequence up to 5 events, application and analysis questions with prompts and visually supported response options. Sheera does not summarize the information she has learned in an adapted book.
<b>1</b>	<b>Initial objective</b>	Given an adapted selection, Sheera will answer a variety of reading comprehension questions (i.e. sequencing picture cards to summarize story, completing fill in the blank review sheet summarizing salient details in story) with 60% accuracy on three consecutive days.
<b>2</b>	<b>Secondary objective</b>	Given an adapted selection, Sheera will answer a variety of reading comprehension questions (i.e. sequencing picture cards to summarize story, completing fill in the blank review sheet summarizing salient details in story) with 75% accuracy on three consecutive days.
<b>3</b>	<b>Annual goal</b>	Given an adapted selection, Sheera will answer a variety of reading comprehension questions (i.e. sequencing picture cards to summarize story, completing fill in the blank review sheet summarizing salient details in story) with 90% accuracy on three consecutive days.
<b>4</b>	<b>Exceeds annual goal</b>	Given an adapted selection, Sheera will answer a variety of reading comprehension questions (i.e. sequencing picture cards to summarize story, completing fill in the blank review sheet summarizing salient details in story) with 100% accuracy on three consecutive days.

# Determine How Student Will Access Text: Adapt the Text?

## Grade Level Nonadapted

### \* Original (Lexile 1100)

\*

\*

“Not all that Mrs. Bennett, however, with the assistance of her five daughters, could ask on the subject, was sufficient to draw from her husband any satisfactory description of Mr. Bingley. They attacked him in various ways; with barefaced questions, ingenious suppositions, and distant surmises; but he eluded the skill of them all; and they were at last obliged to accept the second-hand intelligence of their neighbor, Lady Lucas. Her report was highly favorable. Sir William had been delighted with him. He was quite young, wonderfully handsome, extremely agreeable, and, to crown the whole, he meant to be at the next assembly with a large party. Nothing could be more delightful! To be fond of dancing was a certain step towards falling in love; and very lively hopes of Mr. Bingley’s heart were entertained.

\* ‘If I can but see one of my daughters happily settled at Netherfield,’ said Mrs. Bennett to her husband, ‘and all the others equally well married, I shall have nothing to wish for.’

\* In a few days Mr. Bingley returned Mr. Bennett’s visit, and sat about ten minutes with him in his library. He had entertained hopes of being admitted to a sight of the young ladies, of whose beauty he had heard much; but he saw only the father. The ladies were somewhat more fortunate, for they had the advantage of ascertaining, from an upper window, that he wore a blue coat and rode a black horse.”

\*

\* Excerpt from *Pride and Prejudice* by Jane Austen (Out of Copyright)

## Summarized and Reduced Reading Lexile Level

### \* Adapted to 1<sup>st</sup> grade level (Lexile 170)

\*

\*

Mrs. Bennett and her daughters tried to find out about Mr. Bingley. Mr. Bennett would not answer. They asked Lady Lucas. She said he was young. He was handsome. He was friendly. He was coming to the party! How exciting! He likes to dance. Maybe he will fall in love. The daughters want him to fall in love with them.

\*

“I want a daughter to marry Mr. Bingley,” said Mrs. Bennett. “I want all my daughters to marry a man like Mr. Bingley.”

\*

Mr. Bingley came to visit Mr. Bennett. He stayed for ten minutes. He wanted to see the daughters. He heard they were beautiful. He only saw the father. The daughters saw him. He wore a blue coat. He rode a black horse.

\*

Adapted Excerpt from *Pride and Prejudice* by Jane Austen (Out of Copyright)

\*

# If Adapted Text is Needed...

- \* Determine level of reading or listening level student will require
  - \* Rule of thumb: research studies have used about 3<sup>rd</sup> grade lexile level for read aloud
- \* Summarize the text chapter by chapter (may collapse chapters together to abbreviate)
- \* Double check summary with Lexile Analyzer
- \* Validate with general education teacher that key points have not been lost

1

## Chapter One

Basketball is my thing. I can hoop. Case closed. That's the word and I know it the same way I know my nickname, Slam. Yeah, that's it. Slam.

.....

I am brave when I am playing basketball, but you can get to me off the court.

Mr. Tate got to me. He is the principal at my school. He had a meeting with me and my moms in his office.<sup>1</sup> He said my grades are not good.

.....

# Options for “Reading” the Text

- \* Use student’s own reading skills
  - \* May need to reduce Lexile level of original
- \* Read-aloud by teacher, para, or peer
- \* Text-to-speech technology



# Comprehension: Develop the Questions

- \* Develop comprehension questions at different levels of complexity
  - \* Here are some examples based on *To Kill a Mockingbird*
- \* Also consider the target CCSS selected to write questions
  - \* Knowledge
    - \* How old was Miss Caroline?
  - \* Comprehension
    - \* Why did the class murmur when Miss Caroline said she was from Winston County? What happened first, second, last?
  - \* Application
    - \* Miss Caroline was 21. What will happen to you when you are 21?
  - \* Analysis
    - \* Why was Jem in a haze?
  - \* Synthesis
    - \* What is the theme of this story?
  - \* Evaluation
    - \* What is the author's tone in this passage? The author's purpose?

# Comprehension Might Be an Activity: e.g., Graphic Organizer

First

Character

Setting

Next





Problem

Resolution

Last

Main Idea

# Use Systematic Instruction to Teach Comprehension

Type of question	Rule	Visual Example
<b>Who?</b>	Who is a person	
<b>What?</b>	What is a thing.	
<b>When?</b>	When is a time or date.	
<b>Where?</b>	Where is a place.	
<b>Why?</b>	Why is a reason.	Because












Review the “wh” rules chart (e.g., “why” asks for a reason)



# How Will Student Answer?

## Response board option

- \* Provides a visual aid
- \* Simplifies responding by offering options
- \* Only use for students who cannot compose answer using speech


 help	 Who tells about a person.	Chapters 1-9
 Mtisha	 Mr. Tate	 Grandma
 Jimmy	 Goldy	 Ice
 Derek	 Coach	 Ducky



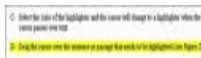


# Use Text Rereads to Locate Answer: Modified Least Intrusive Prompts


Modified from Mims, Hudson, Browder, 2012






Figure 1. Prompt Card

**START** →

 The answer is on the page.

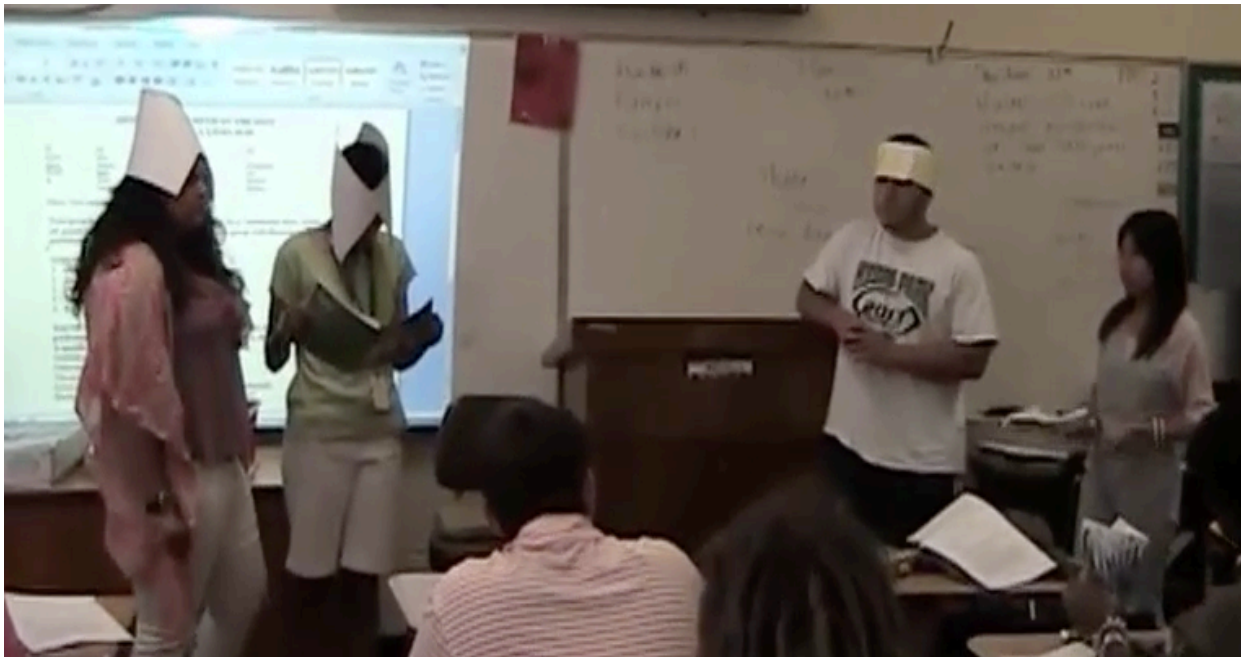
Independent	Reread paragraph	Reread sentence with answer	Tell answer and point to answer on page	Point to answer on response board
 <b>THUMBS UP!</b>				
5	4	3	2	1

 The answer is from your head.

Independent	Reread paragraph	Relate to student- How do you feel when . . . ? Why would you . . . ?	Model how you would relate- I would [answer] when a . . .	Point to answer on response board
 <b>THUMBS UP!</b>				
5	4	3	2	1

# Plan Additional Activities

- \* Acting out story
- \* Writing activities
- \* Applications to real life
- \* E.g., news stories that show theme of courage

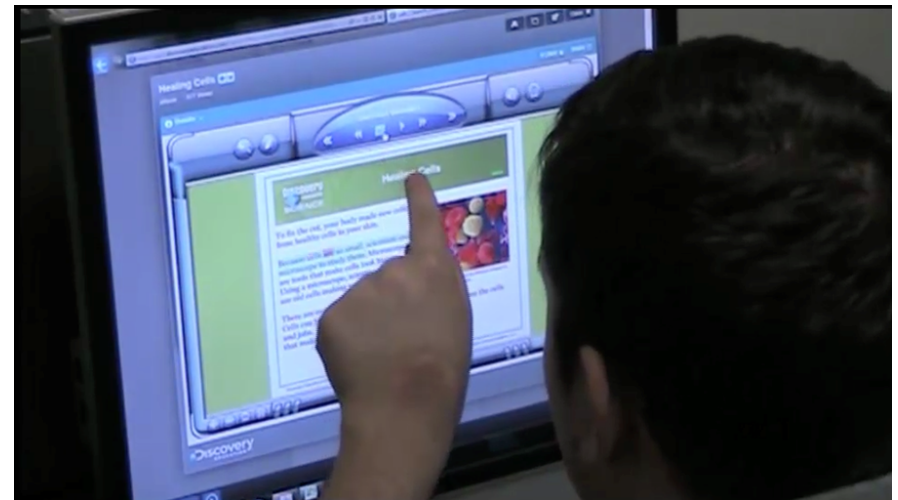


# When the Internet Is the Text

- \* Create a flipbook for student to use pictorial self-instruction
- \* Students can access text through text-to-speech technology



12. Click on search field



# Promoting Learning in General Education

- \* Preteaching adapted text by peer or special education teacher can follow lesson
- \* Training peers to teach vocabulary and comprehension
- \* Planning with general education teacher for student to access daily activities

# Preteaching the Literature

- \* Just prior to beginning the book or chapter in general education class, it may be beneficial for students to receive instruction in adapted text.
- \* Also helps determine what response options are needed if using a response board



# Training Peers

- \* Peers who are nondisabled can learn to use constant time delay for vocabulary and to use the modified least prompts for comprehension



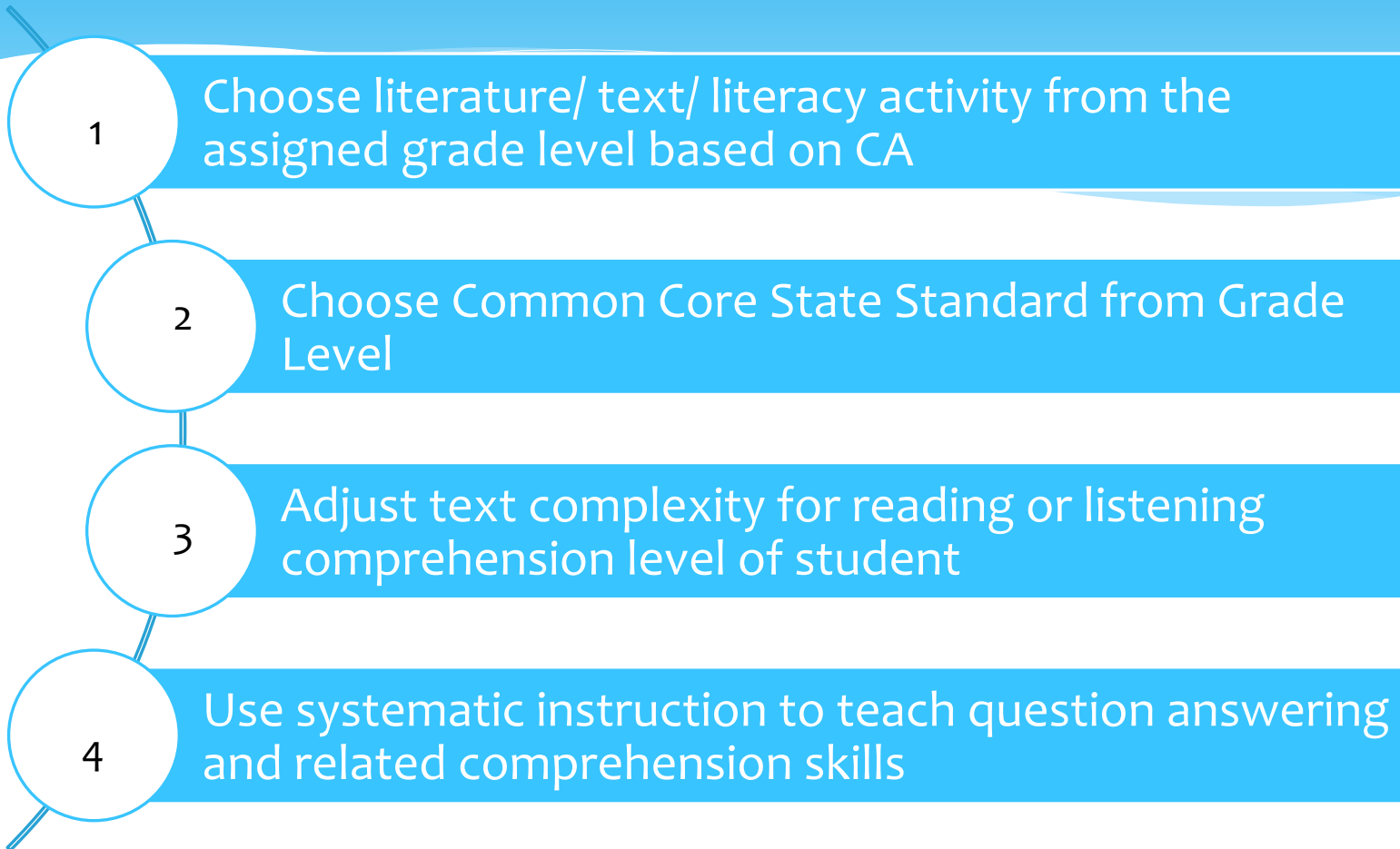


# Plan with the General Education Teacher

- \* Confer with the general education teacher to determine how the student with ASD will participate in daily activities



# Review: Planning for AAL



# Collaborative Strategic Reading–HS

Intervention studies by Colleen Reutebuch, Sharon Vaughn, Farah El Zein, Min Kim, & Aron Weinberg

The University of Texas at Austin

Presented by Colleen Reutebuch & Sharon Vaughn



# CSR–HS Pilot Studies

- \* Reutebuch, El Zein, Kim, Weinberg, & Vaughn (2015). Investigating a comprehension intervention for high school students with autism spectrum disorder: A pilot study. *Research in Autism Spectrum Disorders*, 9, 96-11.
- \* El Zein, F. (2014). An examination of collaborative strategic reading-high school (CSR-HS) intervention in students with ASD (doctoral dissertation). The University of Texas at Austin, Austin, TX. Retrieved from: <http://repositories.lib.utexas.edu/handle/2152/27169?show=full>

# Collaborative Strategic Reading–HS

- ✓ Targets improved reading comprehension
- ✓ Teaches use of before, during, and after reading strategies
- ✓ Combines reading strategies with aspects of cooperative learning
- ✓ Adapted for use with high school students with and without ASD

# CSR–HS

## **BEFORE** reading (2–3 minutes)

1. LOOK AT:
  - Title
  - Key words
  - Pictures
2. VISUALIZE:
  - Pictures
  - Demonstrations
  - Short video clips

## **DURING** reading (10–12 minutes)

1. LOOK FOR:  
Words or sentences that don't make sense
2. READ:  
Answer questions about the topic

## **AFTER** reading (10–12 minutes)

1. WRITE AND ANSWER QUESTIONS:
  - Why or how
  - What, where, or who
2. SUMMARIZE:
  - Use graphic organizer
  - Tell what text was mostly about (person, place, thing, or idea)
3. WRAP UP LESSON

Teacher  
Introduction  
(2–3 minutes)

1. Steps
2. Expectations

Reading Strategy Components

# Collaborative

# Strategic

# Reading

# High

# School



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## CSR–HS STRATEGIES GUIDE

### Rationale

Develop skills for enhancing comprehension of informational text by using strategies before, during, and after reading

### Standards

- Know and use various text features to locate key facts or information in a text.
- Ask and answer questions about key details in a text.
- Identify the main topic and retell key details of a text.
- Ask and answer questions to determine or clarify the meaning of words and phrases in a text.

### Preparation

Before introducing any Collaborative Strategic Reading – High School (CSR–HS) lesson, establish pairs and set expectations:

- Pair students with heterogeneous skills and abilities.
- Establish expectations for paired work, so that all

students contribute and work cooperatively with one another; set expectations for reading; and set expectations for student engagement.

- Invite students to contribute examples and nonexamples of expected behavior during CSR–HS work groups.

### Student Materials

- One per student:
  - Text with key words
  - Learning log
  - Writing utensil
- One per pair:
  - Checklist with discussion prompts
  - CSR–HS graphic
  - Question stems

### Teacher Materials

- Lesson plan
- Illustration
- Timer
- Learning log evaluation rubric

### Teacher Introduction 2 to 3 minutes

The following activities are recommended during this phase:

- Have materials ready and organized.
- Ensure pairs are in place and prepared for CSR–HS.
- Communicate expectations by providing clear, explicit indications of goals for assignments and activities.
- Provide explicit instruction for the assignment and activities.

### Before Reading 2 to 3 minutes

To prepare students for reading, the following activities are recommended:

- Introduce the topic.
- Preteach key words and/or proper nouns.
- Build background knowledge or connect to students' prior knowledge (e.g., through pictures, videos, demonstrations).
- Set the purpose for reading.
- Have students write key words in their learning logs.



# Learning Log

Title of Text: \_\_\_\_\_

## Before Reading

The key words are:

I have looked at the:

☐ Title

☐ Key words

☐ Pictures

I have visualized the:

☐ Pictures

☐ Demonstrations

☐ Video clips

## During Reading

### Fix Up Meanings

This does not make sense to me.

Now I get it!

# CSR-HS Checklist

Before Reading	During Reading	After Reading
<ul style="list-style-type: none"> <li><input type="checkbox"/> <b>Read</b> the title.</li> <li><input type="checkbox"/> <b>Looked</b> at the pictures or other visuals.</li> <li><input type="checkbox"/> <b>Visualized</b> about the topic.</li> <li><input type="checkbox"/> <b>Wrote</b> key words.</li> <li><input type="checkbox"/> <b>Checked</b> with partner for help if needed.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> <b>Read</b> the text or followed along.</li> <li><input type="checkbox"/> <b>Wrote</b> parts of the text that did not make sense.</li> <li><input type="checkbox"/> <b>Worked</b> with partner to fix text that did not make sense.</li> <li><input type="checkbox"/> <b>Worked</b> with partner to complete true/false activity.</li> <li><input type="checkbox"/> <b>Checked</b> with partner for help if needed.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> <b>Created</b> one "how" or "why" question and one "what," "where," or "who" question with the answer.</li> <li><input type="checkbox"/> <b>Wrote</b> questions and answers.</li> <li><input type="checkbox"/> <b>Asked</b> questions with partner.</li> <li><input type="checkbox"/> <b>Completed</b> graphic organizer.</li> <li><input type="checkbox"/> <b>Wrote</b> summary.</li> <li><input type="checkbox"/> <b>Checked</b> with partner for help if needed.</li> </ul>
<p><b>Things to do:</b> Make connections with the topic.</p>	<p><b>Things to say if you are stuck:</b></p> <ul style="list-style-type: none"> <li>• Can you help me figure this out?</li> <li>• I don't know what this means.</li> <li>• Do you agree or disagree? Why?</li> <li>• I agree/disagree, and this is why...</li> </ul>	<p><b>Things to say if you are stuck:</b></p> <ul style="list-style-type: none"> <li>• Can you answer this question?</li> <li>• What do you think is the most important "who" or "what"? Why?</li> <li>• What is an important thing about the "who" or "what"?</li> </ul>

# Question Stems

Why	How	What	Where	Who
Why are... Why did... Why is... Why was...	How are... How did... How much... How many...	What is... What are... What do you think will happen if... What is the reason that... What is the difference between... What do you think caused... What would you do if... What is one...	Where are... Where did... Where is...	Who is... Who are... Who did...

# Implementation Year 1-2

## Targeted participants with ASD

3 high school students with ASD were targeted for reading comprehension improvement

- \* Low to medium support needs
- \* IQ scores 80-100
- \* Read and comprehend at a minimum grade 2 level
- \* Majority of the day spent in general education settings
- \* Could communicate and work with others
- \* Volunteered to participate

## Peer partners

3 typically developing peers were matched to work with targeted students on reading comprehension

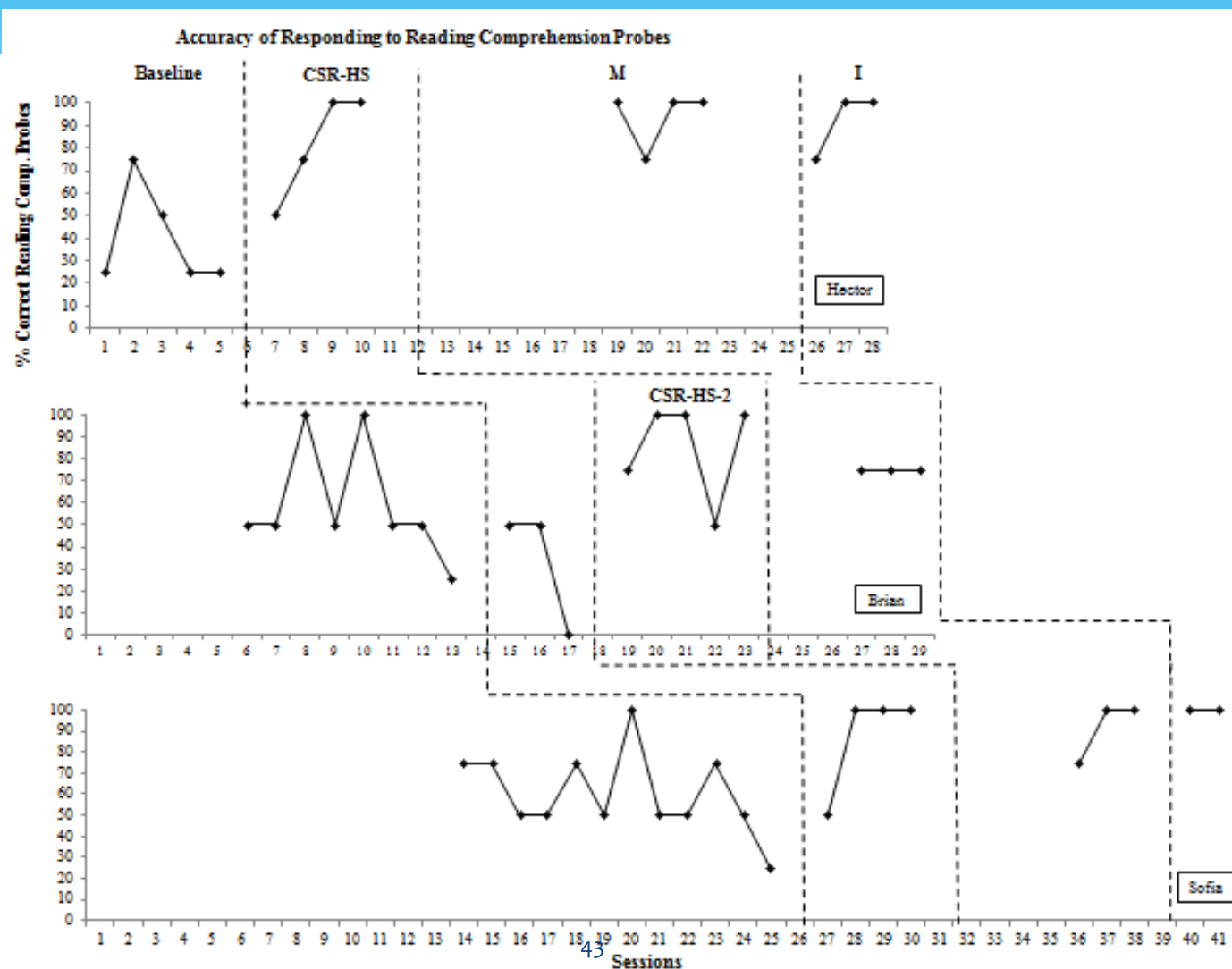
- \* High achieving students
- \* Had established relationship with targeted students outside of intervention
- \* Volunteered to participate

# CSR–HS Intervention

- \* Delivered 2-3 times per week for 16 weeks
- \* Delivered by research staff as a pull-out  
(additional reading instruction provided during advisory period)
- \* 1 lesson completed in 30 minutes, plus comprehension quiz

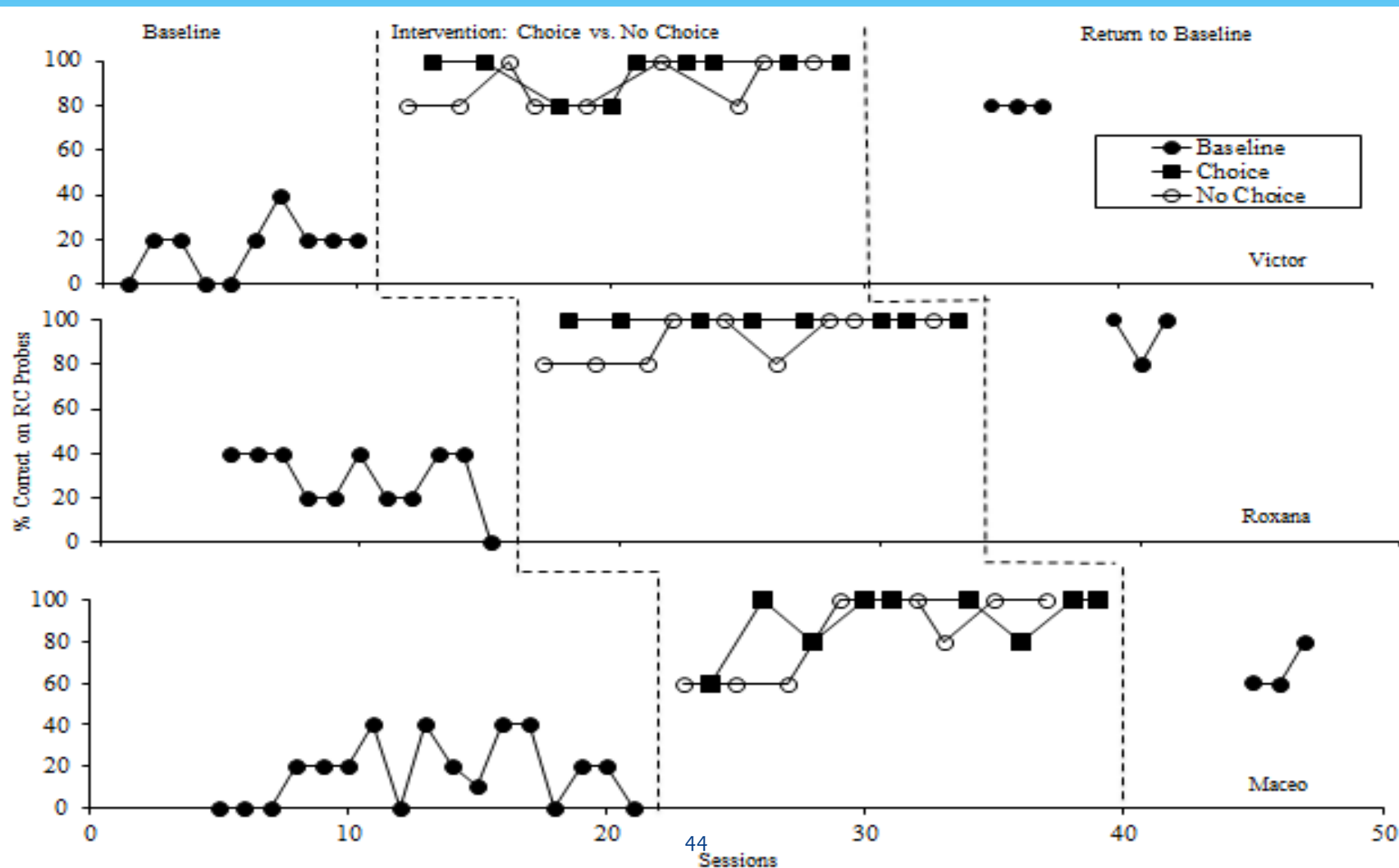
# Pilot Year 1 Results (Texas)

## Accuracy of Responding on Reading Comprehension Probes



# Pilot Year 2 Results (Texas)

## Accuracy of Responding on Reading Comprehension Probes





# There is more to the story than improved RC outcomes

1. Social interactions increased.
2. Challenging behaviors decreased.
3. Peer-relationships continued outside of intervention.
4. Content area teachers reported improvements in target students willingness to participate, work with others, read aloud.

# For more information

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