Accessing Grade Aligned English/Language Arts

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Emerging Options:
Use Read aloud of adapted text

Research

Example (Harriet Tubman)

Created by Melissa Hudson

- Teachers can learn to follow task analysis to present read aloud of MS novels

  - Browder, Trela, & Jimenez, 2007

- Has also been applied to MS biographies

  - Mims, Hudson, & Browder (2012)

- CTD is an EBP to teach vocabulary and sight words

  - (Browder, Ahlgrim-Delzell, Spooner, Mims, & Baker, 2009)

- System of Least Prompts is and EBP to teach listening comprehension

She asked three of her brothers to go with her.

The brothers followed her beause Harriet knew the woods best. They made a lot of noise, crashing through the underbrush and scaring themselves. She told them to be quiet. They complained it was too dark. She told them with all the stars shining bright, there was plenty of light.

3. Why did the brothers follow Harriet?

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Emerging Options:
Systematic Instruction and Graphic Organizers

Research

- CTD is an EBP to teach vocabulary and sight words
  - (Browder, Ahlgrim-Delzell, Spooner, Mims, & Baker, 2009)
- System of Least Prompts is and EBP to teach listening comprehension
  - (Knight, Mims, Ayres, Sartini, Baxter, & Snyder, in preparation)
- Graphic Organizers have successfully been used to promote comprehension
  - (Knight, Mims, Ayres, Sartini, Baxter, & Snyder, in preparation)

Rules for Answering Questions	
When you hear	Listen for -
What?	a thing
Why?	"because"
Who?	a name
When?	a time or date
Where?	a place

Emerging Option

Writing

- Students composed written opinions by using graphic organizers and response options
  - Trela (2008)

Example

- I think students should wear uniforms
- I think students should NOT wear uniforms
  - Because…
    - They save money
    - You do not have a choice what to wear
   - They are uniforms

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Putting it All Together: A Comprehensive Approach

- Middle School Thematic Units linked to general education

- VOCABULARY: Time delay

- READ ALOUD: Literature- novel adapted as chapters, nonfiction, poem for unit

- COMPREHENSION: Systematic instruction, Direct Instruction

- WRITING (Persuasive and Narrative): Graphic Organizers

- RESEARCH: KWHL chart

Research Studies- Iterative Process

- Paper based comprehensive English Language Arts curriculum randomized control

- Single Subject iPad app with non-fiction (2013)

- Comprehensive iPad app with fiction novels (iterative process)

  - Single Subject Comprehension (Autumn 2014)

  - Single Subject Writing (Spring 2015)

  - Single Subject KWHL (Spring 2015)

- Randomized Control with comprehension, writing, & student led research (KWHL) (2015-16)

Unit 4 – Direct Assessment

Estimated Marginal Means of MEASURE_1
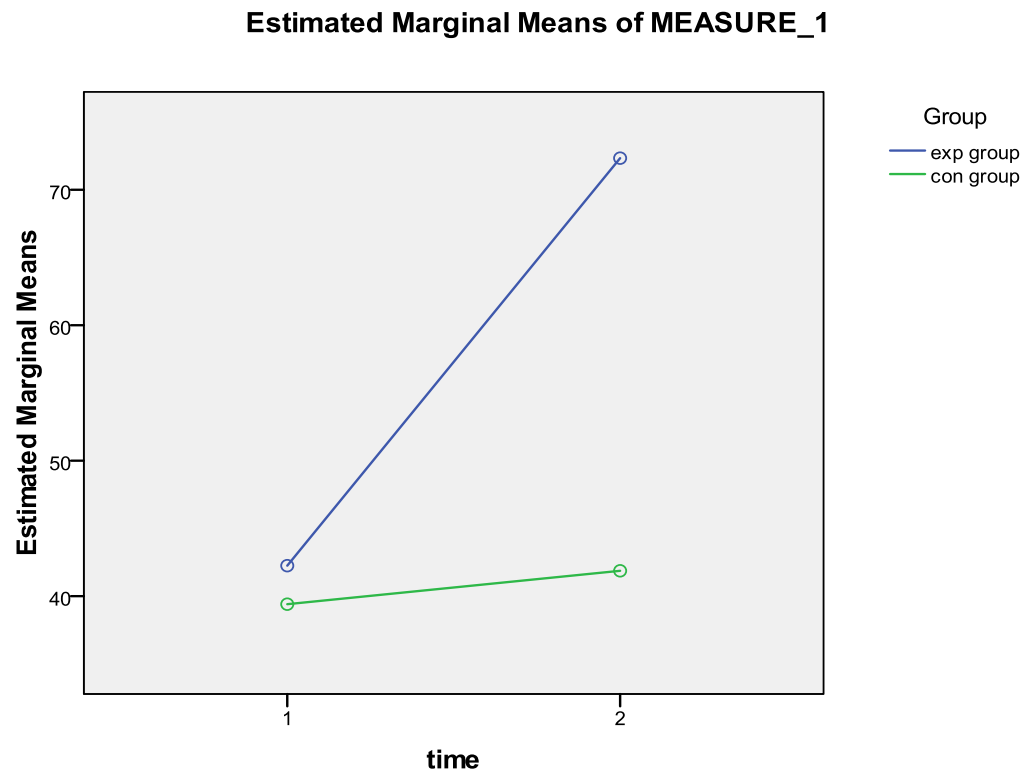
Unit 4- Indirect Assessment

Estimated Marginal Means of MEASURE_1
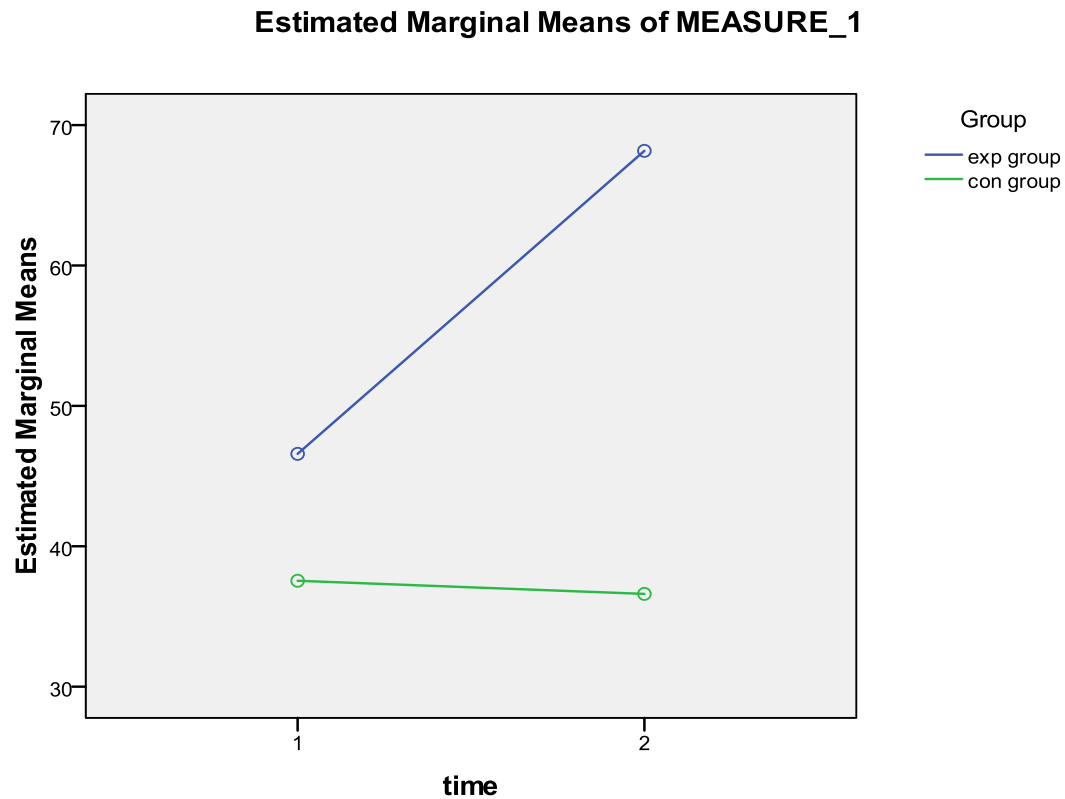
Access: Language Arts App

- Fiction and nonfiction stories (e.g., *Neighbors, Sadako, The Diary of Anne Frank, Outsiders, Holes)*

- Includes symbol support, vocabulary instruction with in-text definitions, and comprehension questions, plus an opportunity for students to establish a written opinion piece.

- CTD and SLP; Error Correction and Reinforcement

- Student sign in and data collection.

Research Questions

1. Does Access: Language Arts operate as intended? (feasibility and usability data)

2. To what extent are students engaged in learning during Access: Language Arts instruction? (engagement data)

3. To what extent do teachers implement Access: Language Arts with fidelity? (fidelity data)

4. What are teachers' opinions of Access: Language Arts? (social validity data)

5. To what extent do students learn ELA aligned skills using Access: Language Arts? (student progress data or outcomes)

Comprehension

- Multiple Probe across Participants
- Outsiders- Adapted Text
  - Chapter pairs were read
- Generalization probe given before moving on to next chapter pair
- Vocab and Questions asked across Blooms Taxonomy
- Systematic instructional strategies
  - CTD
  - SLP
  - Data Collection
  - EC
  - Praise

Vocabulary Word and Meaning
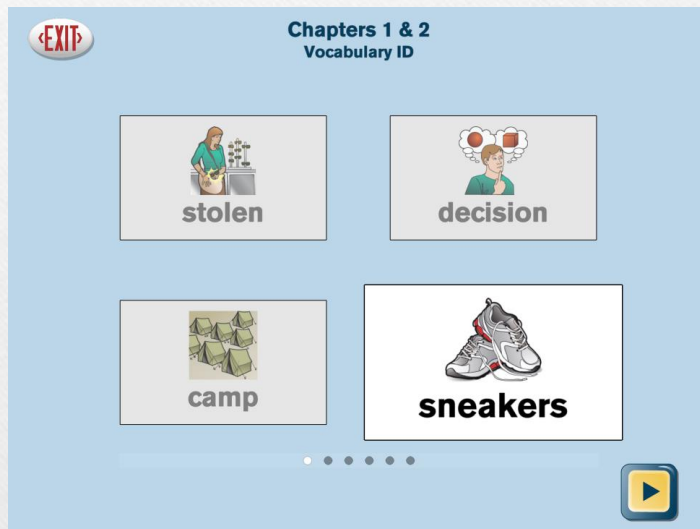
- Zero delay and 5 second time delay

- 2 zero delay rounds and 1 delay round for both word id and meaning are given prior to reading

- After story- word identification and meaning probe are given.

Literal Recall

Problem and Solution

We Beat the Street
Problem

A problem is something to be solved.
What was a **problem** in the story?

Sampson, George, and Rameck were friends.

Sampson hurt his foot.

Sampson loved to play with his friends.

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Hint

We Beat the Street
Solution

A solution is **how** a problem is fixed.
What was a solution to the problem?

Sampson had friends to play with.

Sampson went to the hospital.

Sampson lived in the projects.

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Hint

Vocabulary and Introduction
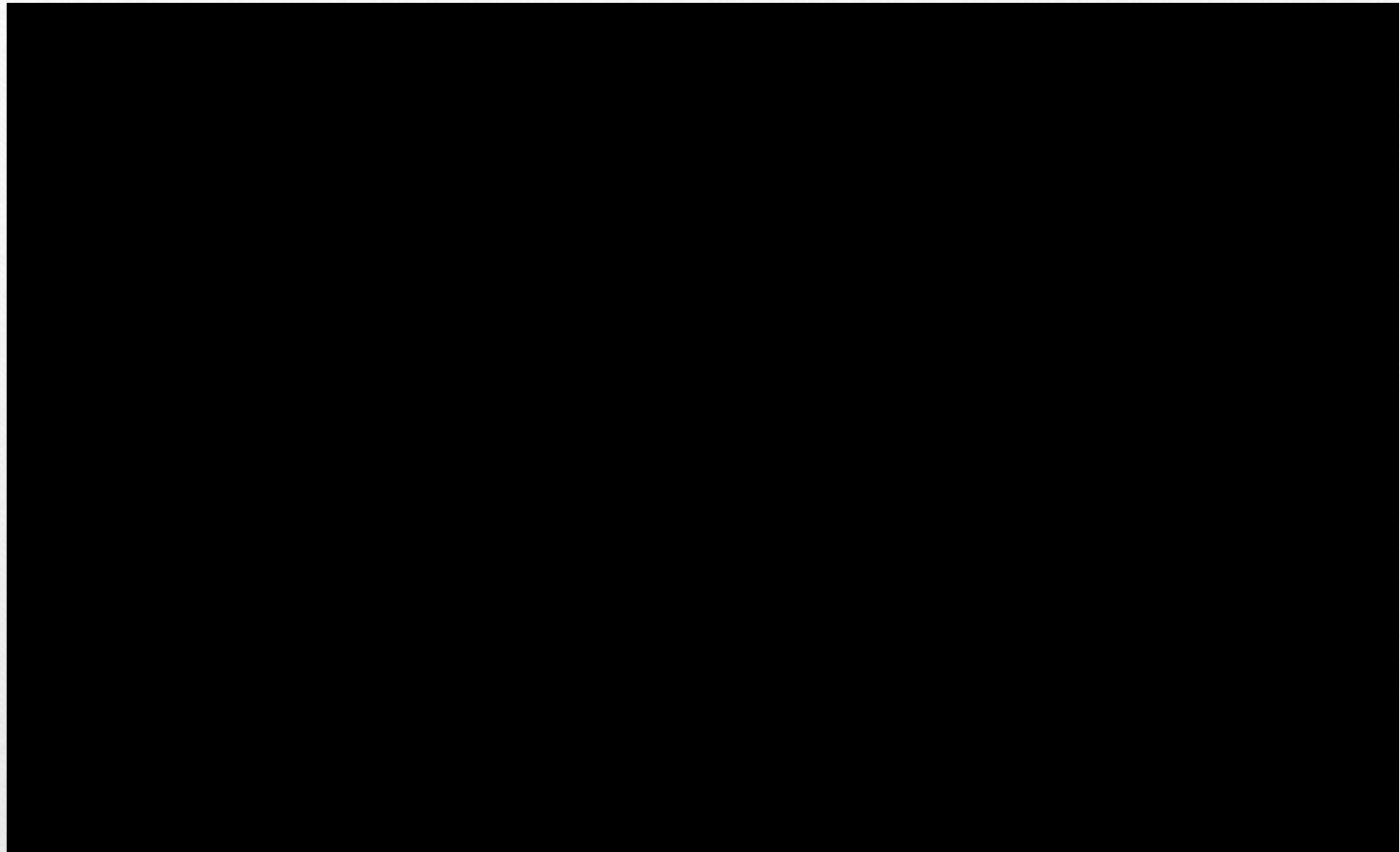
Chapter Questions
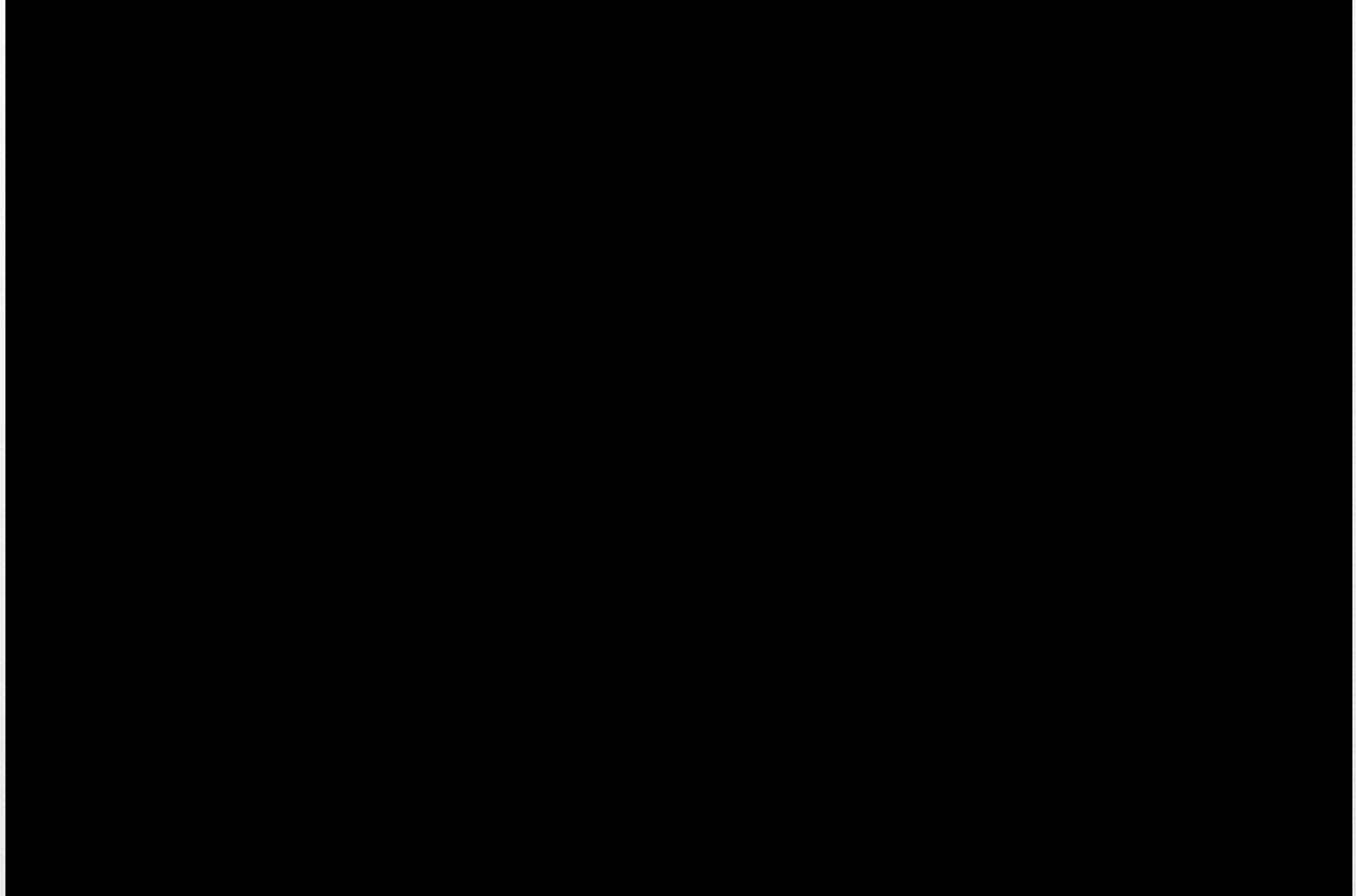
Main Idea
System of Least Prompts – reread and reask

Main Idea
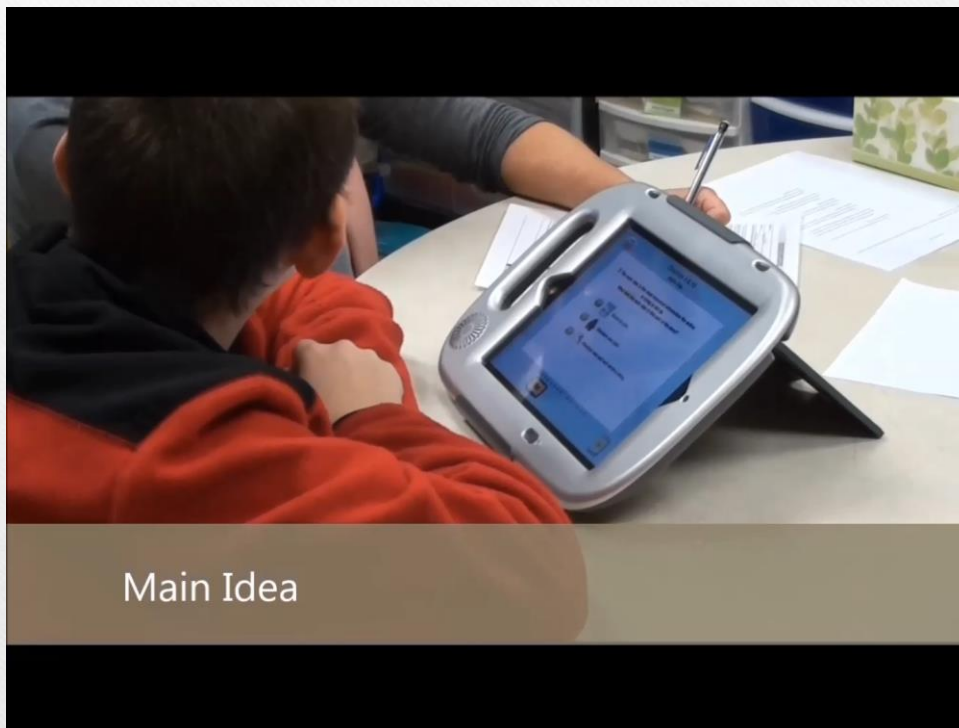
Sequence

Student uses hint button to answer question
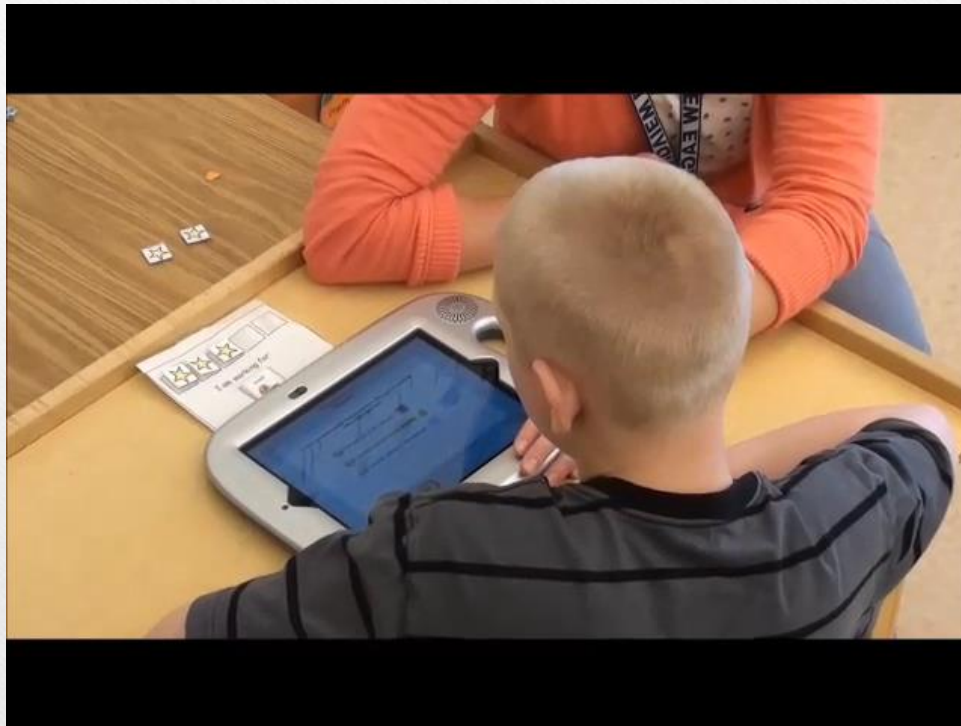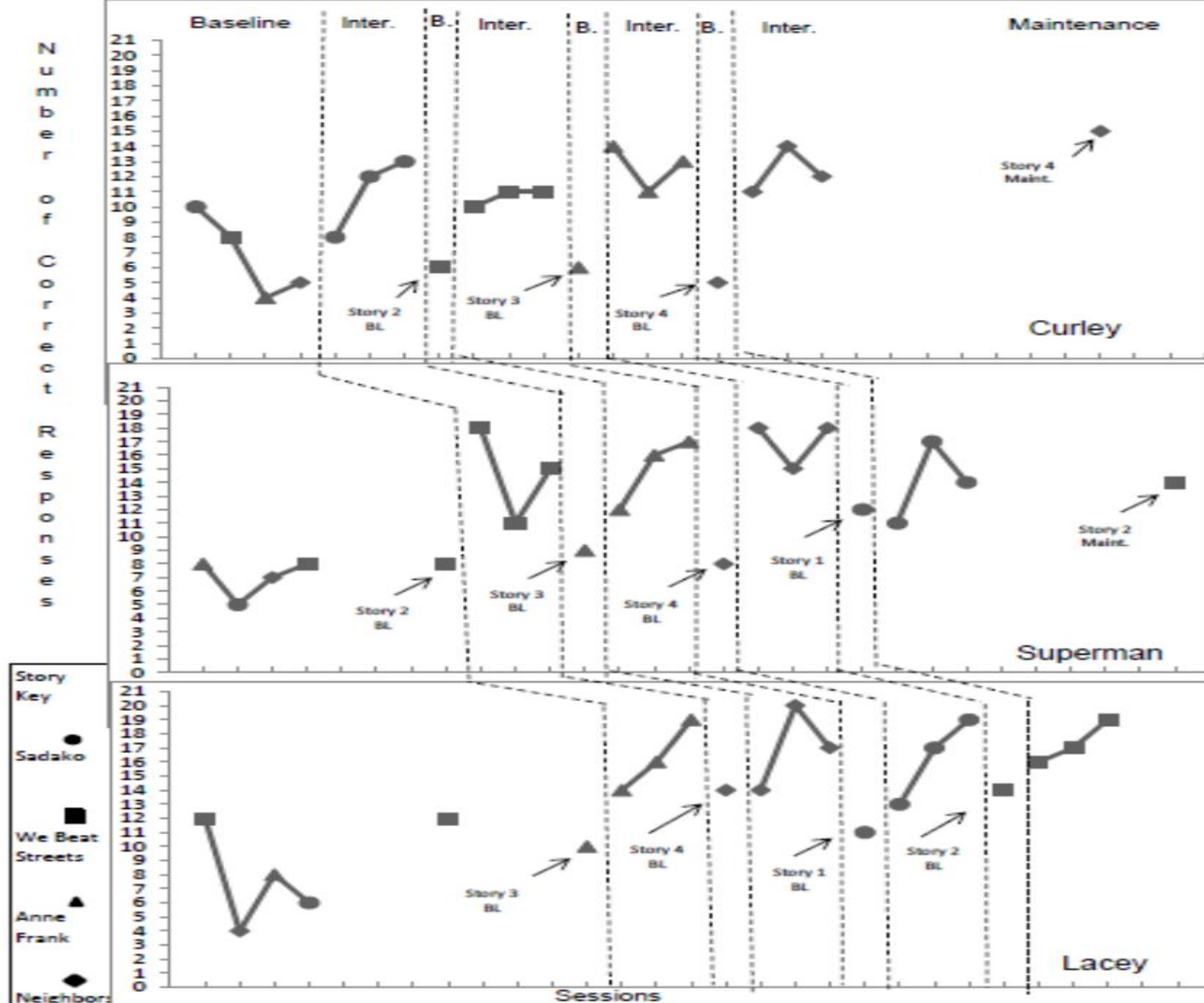
Figure 1. Number of unprompted correct student responses during shared story reading of a story across all study phases. Each data point represents one complete reading of an adapted nonfiction story.
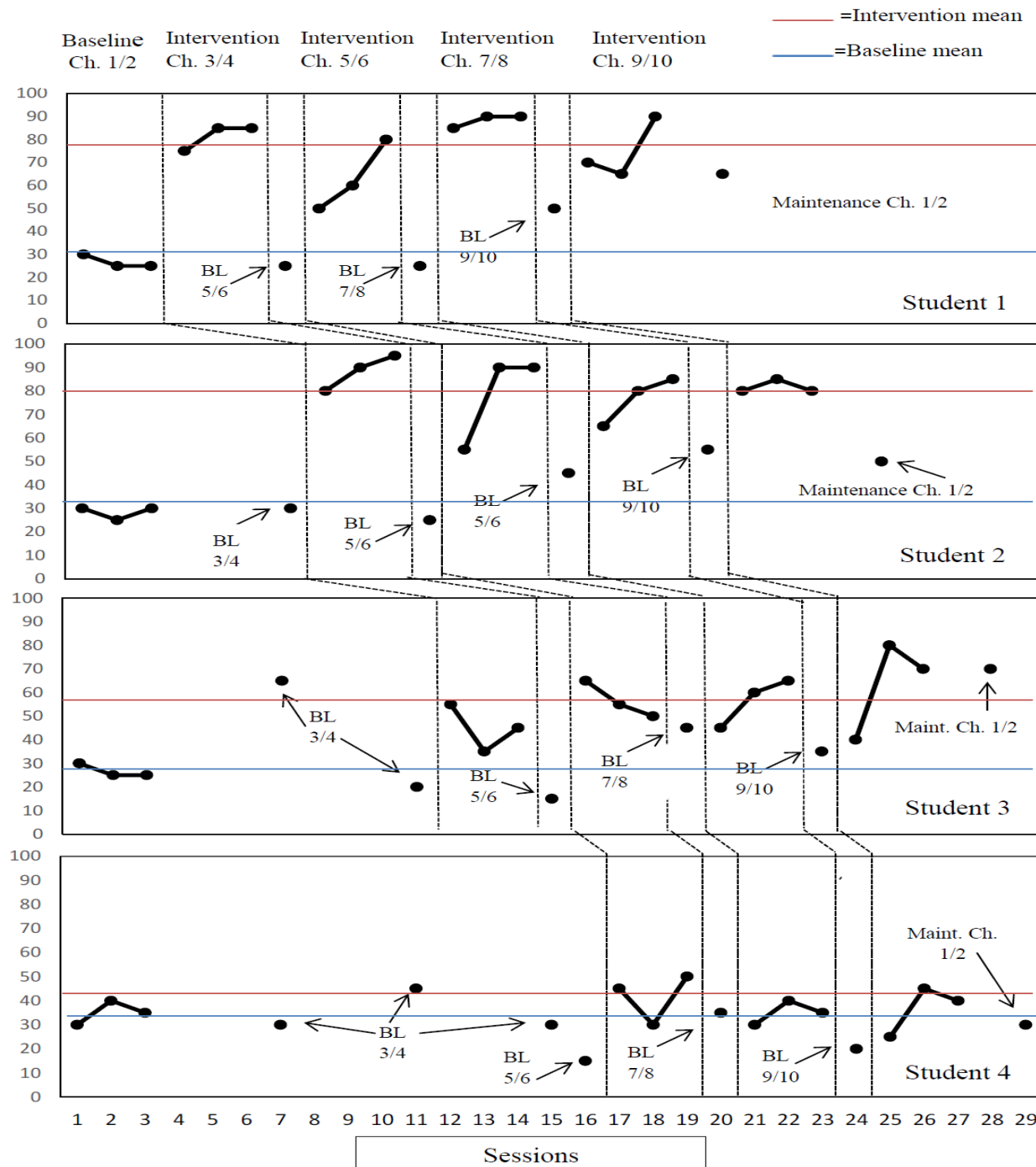
Project Access: Language Arts II

Single Case Multiple Probe

Fall 2014

Results

- Elsa
  - Baseline mean- 30%
  - Intervention mean-76%
- Spongebob
  - Baseline mean- 34%
  - Intervention mean- 79%
- Cookie
  - Baseline mean- 28%
  - Intervention mean- 57%
- Dan
  - Baseline mean- 31%
  - Intervention mean- 41%

Extending the Research to High School

- This study sought to examine the effects of an iPad application containing adapted text of ***To Kill A Mockingbird*** and embedded systematic instruction on listening comprehension for high school students with significant disability.

Methods- Participants

Table 1: Student Demographics

Student	Age/Grade	IQ Comp. Score	Ethnicity	Verbal Ability	Disability	Symbolic Level	Reading Ability
S2	19/12th Grade	40	Caucasian	VCI - 45	ID	Early/ Abstract	3rd % ile
G3	16/10th Grade	40	Caucasian	VCI - 50	ID	Early	1st % ile
H1	19/12th Grade	46	Caucasian	VCI - 58	ID	Early/ Abstract	< 1st % ile

Her summer seemed to keep getting worse. Atticus also had to leave for two weeks. He had to go to the state capital for an important meeting.

The children go to church with Calpurnia.

Inference

Why did people call Atticus bad names?

 Atticus was helping a black man and people didn't think black people were equal

 Atticus wanted to make lots of money so he could buy a big house

 Tom was guilty

Measures- Dependent Variables

- Data were collected on target vocabulary words (both identification and definition)

- Data were collected on comprehension questions across Bloom's Taxonomy, including:

    - (a) prediction; (b) sequence of events; (c) main idea; (d) setting; (e) main character; (f) inference; (g) problem and solution; (h) application; and (i) analysis.

- The data summarized the percent of correct, unprompted responses to comprehension questions during the read-aloud.

- Maintenance data were also collected

- Data were also collected on the overall level of student engagement during the study as well as social validity data.

Results
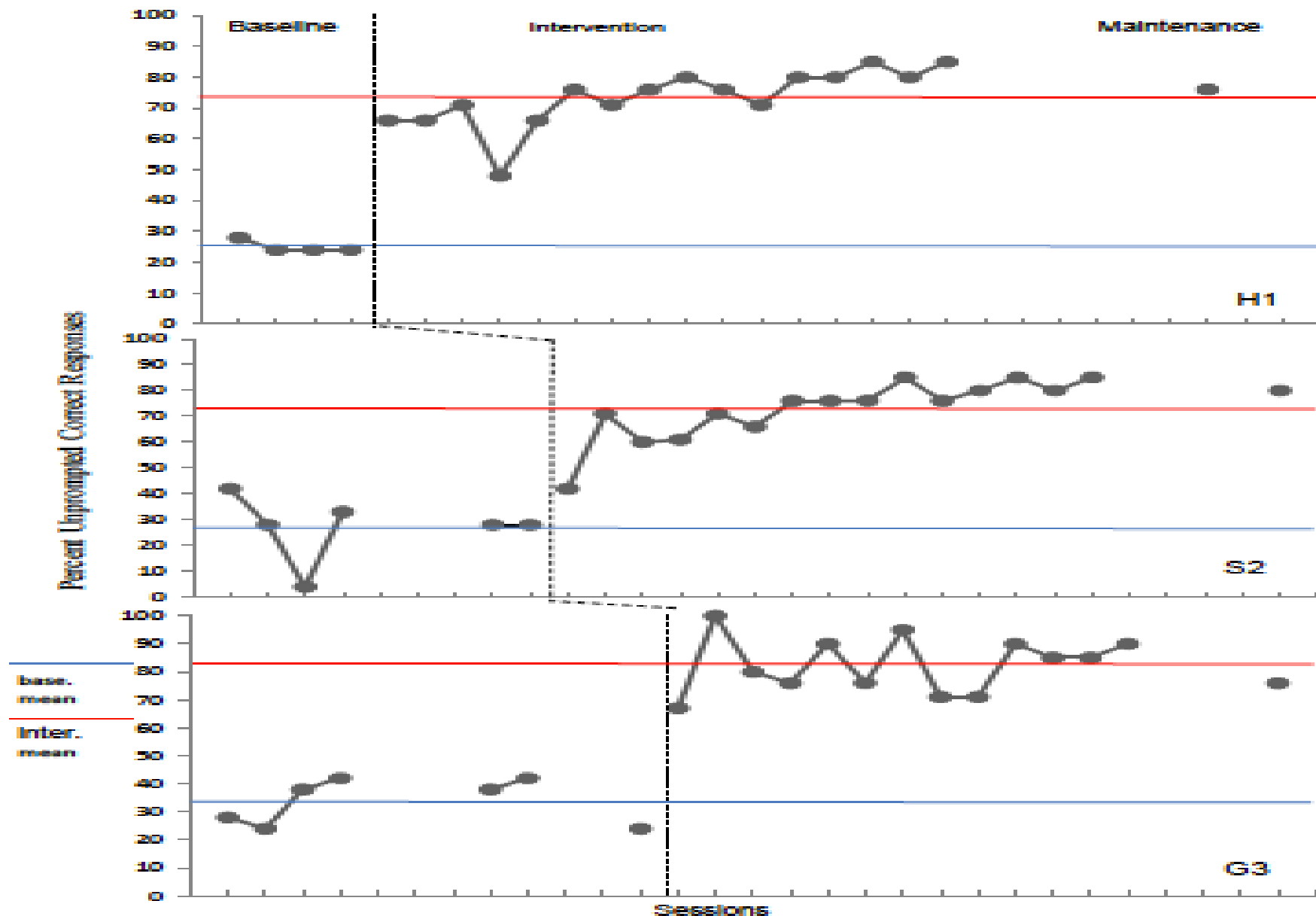
Table 2
Percentage correct on baseline and intervention independent unprompted responses

Question Types	H1		S2		G3	
	Baseline	Intervention	Baseline	Intervention	Baseline	Intervention
Sequence	8%	56%	11%	43%	4%	64%
Literal Recall	0	58%	33%	68%	57%	93%
Main Character	25%	82%	33%	68%	14%	100%
Setting	0	64%	50%	75%	14%	85%
Main Idea	25%	35%	33%	75%	14%	75%
Inference	25%	23%	16%	62%	16%	50%
Problem	0	41%	33%	43%	18%	50%
Solution	25%	76%	16%	75%	57%	78%
Analysis	0	29%	0	41%	14%	64%
Application	25%	76%	16%	75%	14%	85%
Vocabulary	40%	98%	33%	93%	50%	96%

Student Led Research

- Multiple Probe Across Participants

- Conducted in GoBook app

- Task Analysis of steps to progress through a KWHL chart after reading selected text

- System of least prompts

- Error correction

- Reinforcement

KWHL

1. Listen to the grade-aligned non fiction text
2. Open GoBook app
3. Identify "What do I know?" (recall questions from the story) x3
4. Identify "What do I want to know?" (choose 1 plausible research question)
5. Identify "How can I find out?" (which video will most likely give me the answers I need)
6. Copy the web address
7. Open Safari
8. Paste the web address
9. Watch the YouTube video
10. Open GoBook
11. Identify "What did I learn?"
12. Choose opinion about the story
13. Read the story generated in GoBook

Participants

Student	Age/Grade 2014-15	IQ Test Given/ IQ	Ethnicity	Verbal Ability	Disability	Symbolic Level	Reading Ability
Nikki	14/8th	WISC-IV; 40	Caucasian	Verbal	Significant Intellectual Disability	Early Symbolic	1st grade reading ability
Jordan	12/6th	Batell-IQ-50	Caucasian	Verbal/ Partial	Autism/Significant Intellectual Disability	Early Symbolic	Non-Reader
Anna	12/ 7th	WISC-IV; <40	Caucasian	Verbal	Significant Intellectual Disability (Rett Syndrome)	Early Symbolic	Non Reader

KWHL Chart

KWHL Organizer

K What do I KNOW?	
W What do I WANT to know?	
H HOW do I find out?	
L What did I LEARN?	

Now that I have learned more about what it was like to be a young person in Nazi Germany, I would have been _scared_ to live in Nazi Germany.

scared   excited

K What do I KNOW?	During the war, it was dangerous for Jewish people. Anne Frank and her family were Jewish and had to hide, so they did not have to go to a camp. Anne wrote in her diary while she was hiding in the attic.
W What do I WANT to know?	To learn what it was like to be a young person in Nazi Germany.
H HOW do I find out?	I used the internet and watched a video on Nazi Germany: A Child for Hitler.
L What did I LEARN?	Adolph Hitler wanted all the young people, who were not Jewish, to fight for him and Germany. The Nazis did many nice things for the young people to get them to like Hitler and want to fight for him. Some parents were scared for the children to join the Nazi Army because they thought Hitler was evil.

KWHL

Student learns about KWHL chart

KWHL
Student answers 1st of 3 facts about the story

KWHL Research Questions

Left panel

W

What do you **want** to know more about from your 3 facts?

	How to hide in the attic for a month.
	How to make milk taste better.
	What was it like to be a young person living in Nazi Germany.
	What is a canal.
	How to keep a diary.
	How to find a job that pays well.

W

What do I want to KNOW?

1.

Right panel

How do I find out more about what I want to know?

I can use _____ to learn more about what it was like being a young person in Nazi Germany.

	a chair
	a newspaper
	the internet

KWHL

Researching topic

Project Access: Language Arts II

Student Led Research
Single Case Multiple Probe

Spring 2015

Results

- Functional Relation

- Generalization!

- Maintained

- Strong PF and IRR data

- Strong engagement data

- Strong social validity data

Updates and Next Steps

- Update to the GoBook intervention

- Next Steps- Stand alone App

- Features- Systematic Instruction

  - SLP

  - Error Correction

  - Reinforcement

Writing

- Multiple Probe Across Participants

- Conducted in GoBook App

- Focused on teaching Opinion Paragraph structure as well as writing an opinion paragraph based on text read aloud

- Used SLP

- EC

- Specific Praise Statements

Writing Activity

What will you write about?

- a character and setting
- a big idea
- an airplane

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The fact, Greasers look out for each other, supports your opinion that it is good that Pony-boy is a Greaser.

Do you want to:

✔ Continue

➡ Change my opinion of 'Pony-boy is a Greaser' to bad.

Which fact supports your opinion?

I think it is good that Pony-boy is a Greaser because _____.

- Greasers can get jumped by boys who are not Greasers
- Greasers look out for each other
- Pony-boy likes to dance

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Writing Drag and Drop

Write your introduction by filling in the blank.

Pony-boy is a Greaser

👉 A big idea in this chapter is that

_____ .

2

✅

Drag your introduction and opinion sentences into the box to start writing your paragraph.

Introduction:

A big idea in this chapter is that Pony-boy is a Greaser.

Opinion sentence:

I think it is good that Pony-boy is a Greaser.

8

✅

Writing Activity

Let's read your paragraph so far:

A big idea in this chapter is that Pony-boy is a Greaser. I think it is good that Pony-boy is a Greaser. I think it is good because Greasers look out for each other. Another reason I think it is good that Pony-boy is a Greaser is that Greasers are a tight group.

Sentence 1	Introduction	✓
Sentence 2	Opinion	✓
Sentence 3	Fact 1	✓
Sentence 4	Fact 2	✓
Sentence 5	Conclusion	

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Write the conclusion into your paragraph, by dragging it into place.

Pony-boy is lucky he is a Greaser.

A big idea in this chapter is that Pony-boy is a Greaser. I think it is good that Pony-boy is a Greaser. I think it is good because Greasers look out for each other. Another reason I think it is good that Pony-boy is a Greaser is that Greasers are a tight group. In conclusion,
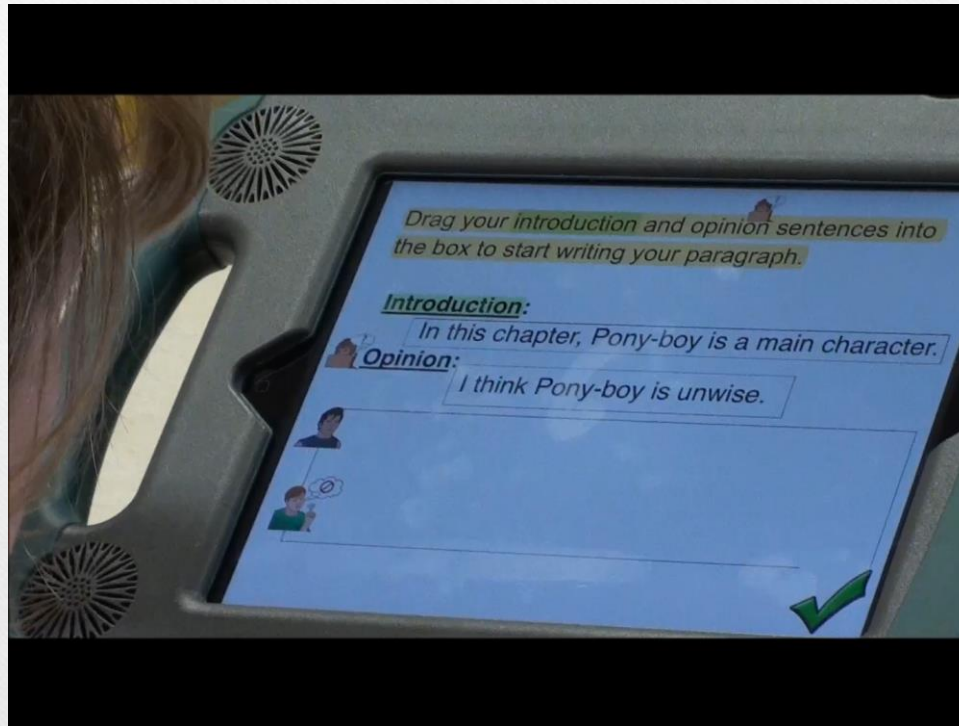
72

Fact
Student picks wrong answer and is provided with an error correction
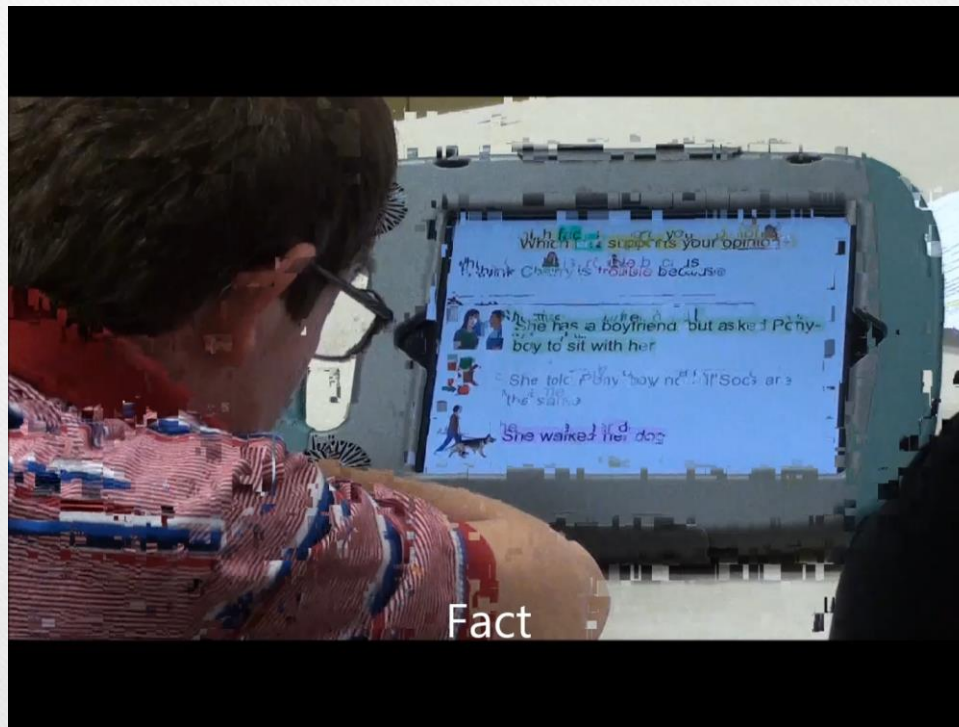
Drag and Drop
Student begins to build paragraph through drag and drop

Participants

Student	Age/Grade 2014-15	IQ Test Given/ IQ	Ethnicity	Verbal Ability	Disability	Symbolic Level	Reading Ability
Frodo	9/ 5th	WISC-IV; 50	Caucasian	Verbal	Significant Intellectual Disability	Early Symbolic	Non-Reader
Jay	14/6	WISC-IV: <50	Caucasian	Verbal	Significant Intellectual Disability	Early Symbolic	Non-Readier
Shrek	14/8	WISC<40	Caucasian	Verbal	Significant Intellectual Disability	Early Symbolic	Non-Reader
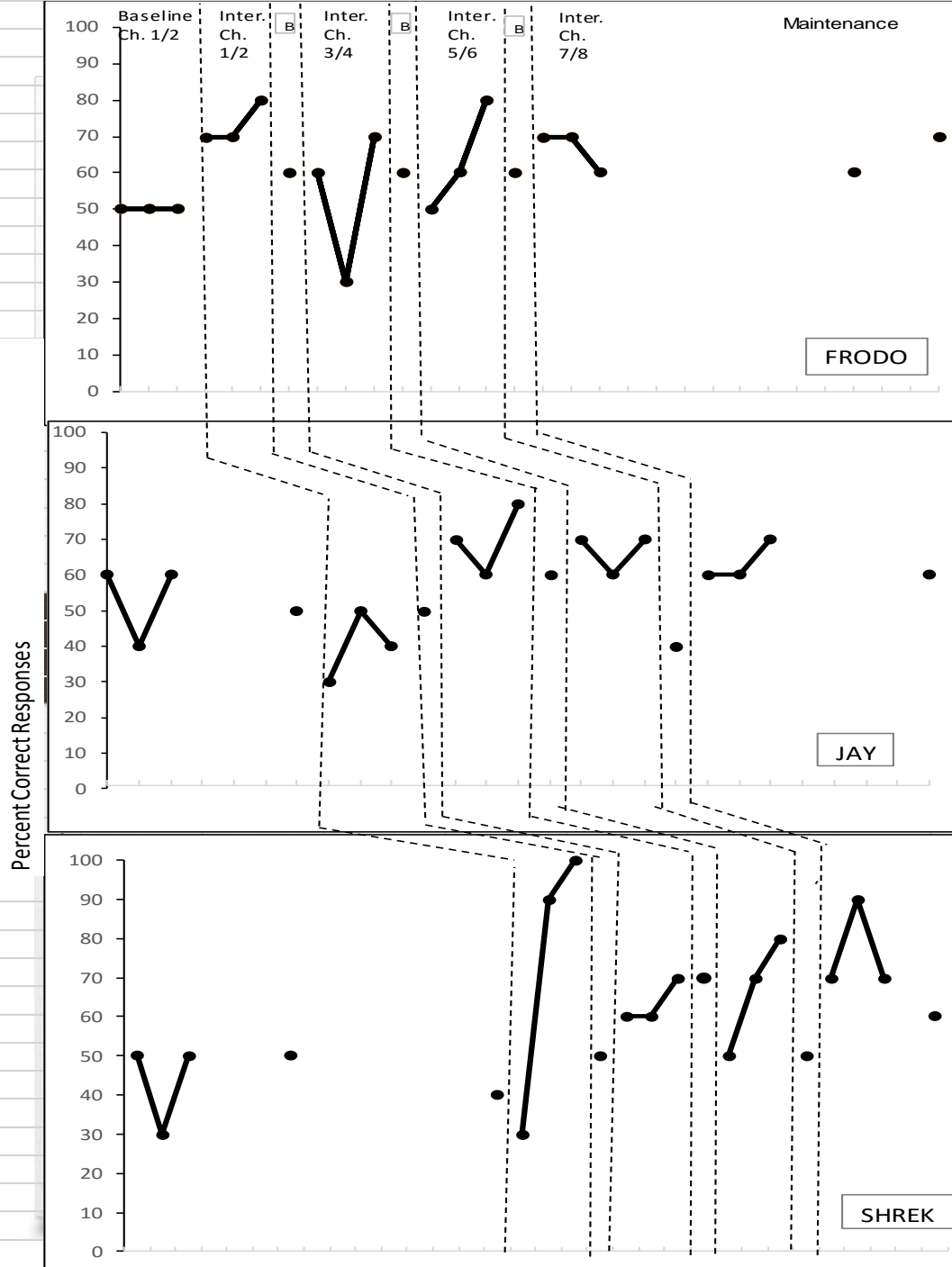
Project Access: Language Arts II

Writing- Single Case Multiple Probe

Spring 2015

Results

- Functional Relation

- Some Generalization

- Maintained

- Strong PF and IRR data

- Strong engagement data

- Strong social validity data

Next Steps for Writing

- New stand alone app
- Focuses on:
    - opinion paragraph structure
    - Sentence type (introduction, opinion, reason, conclusion)
    - Application of the above skills based on a shared reading of grade aligned text
- Features Systematic Instruction
    - SLP
    - CTD
    - MLT
    - Error Correction
    - Reinforcement
    - Data Collection

Writing Demonstration

- ALA Writing

Discussion

- Multiple studies now show that a comprehensive approach to teaching ELA using best practices and grade aligned adapted text has led to increased outcomes on ELA skills such as vocabulary, writing, research, comprehension, story grammar, poetry

- Instruction via an app provides strong engagement of students

- Fidelity of implementation of EBPs is perfect with use of app

- Concerns over data collection during instruction are lessened as app collects and emails data

- Need for increased rigor in instruction on Grade Aligned ELA due to increased accountability- Alternate Assessment

Discussion

- Next Steps- Phase II
  - Year 2 RCT study
  - Stand alone Student led research app
- Need for increased rigor in regard to alignment
- Need for research on the use of the app in inclusive settings

Questions?

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