EAPRIL 2014 Conference
Guided Notes for the presentation
"Developing the right connections:
Helping at-risk second graders improve their fluency and comprehension skills"
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✪=Main Idea/Quiz Item   ✎ = In-Class activity   ↜= FYI   🗁=Instructional Tool

Reflect

Objectives
- ✪ Reading and its components
- ✪Students with reading difficulties
- ✪ Research-based strategies on fluency and comprehension
- ✪ Research focus on fluency and comprehension
    - Methodology and outcomes

Introduction

✪ Reading is an _____ for successful school and postschool

outcomes in an increasingly information-driven society

✪ A complex and multi-component process that requires acquisition and mastery of:

- Phonological awareness

- Alphabetic principle

- Reading fluency   _____

- Vocabulary knowledge

- Comprehension/ metacognition   _____

(Chard, Vaughn, & Tyler, 2002; NRP, 2000; Therrien, Gormley, & Kubina, 2006)

✪ Struggling readers often present difficulties in one or more reading components

✪ Research and school emphasis on improving learners' early literacy skills while fluency

and comprehension difficulties _____(Coyne et al., 2004; Therrien,

2004)

✪ Shift in _____ of fluency and comprehension skills as

early as possible (Fuchs et al., 2001)

Reading Fluency and Comprehension

✪ _____ is the ability to read accurately and quickly with prosody a passage (NRP, 2000)

- _____ a promising fluency-building strategy, but has yet to be established as an evidence-based practice (Chard et al., 2009)

- RRs is based on the automaticity theory (LaBerge & Samuels, 1974)

✪ _____ is the ability to develop mental text representations by activating prerequisite knowledge while connecting passage information

- _____ has shown positive effects on inferential questioning (McMaster et al., 2012)

- Emphasis on identifying causal connections in narratives (van den Broek et al., 2001)

Research Significance

✪ Few intervention studies have focused on teaching directly fluency *and* text processing skills (Therrien & Hughes, 2008)

✪ A follow-up study of Papanicolaou & Kourea (2010) with emphasis on:

- Transferring RRs outcomes in untaught passages

- Teaching directly and explicitly comprehension skills with narrative passages

Research questions

1. What are the effects of repeated readings on student reading fluency and comprehension (inferential and literal questioning) during instructional and generalization passages?

2. What are the combined effects of repeated readings *and* text processing strategy on student reading fluency and comprehension levels during instructional and generalization passages?

3. What are the participants' views on the social significance of intervention goals, procedures, and outcomes?

Methods

✪ _____

- 2 females, 4 males in Grade 2 (ages 6:10 – 7:8)

- Selection criteria

    1. <25th percentile on standardized Early Reading Skills Assessment (Papadopoulos & Spanoudis, 2007)

    2. <25th percentile on standardized reading fluency test (Georgiou et al., 2008)

    3. Below average on standardized Curriculum-Based Measurement Maze (Kendeou & Papadopoulos, 2012)

    4. Below average on experimenter-constructed listening comprehension test

    5. Parental consent

✪ _____

- Number of correct words read per minute

- Number of miscues made per minute

    Reading Fluency

- Number of inferential questions answered correctly(out of 3)

    1. Why?

- Number of literal questions answered correctly (out of 3)

    1. What/Where/Who…?

    Reading Comprehension

✪ _____

- Fluency-based strategy: Repeated readings (LaBerge & Samuels, 1974)

- Text processing strategy (van den Broek et al., 2001)

✪ **Reliability & treatment fidelity**

- Interobserver agreement reliability checks (> 30% of sessions, range 93.7% - 100%)
- Procedural integrity checks for IV conducted by a second observer (>30% of sessions, range 97.1% - 100%)

✪ _____

- Quantitative experimental single-subject research
  - A combined multiple-baseline design with an ABC design across participants (Baer et al., 1968; Cooper et al., 2007)

Research Procedures

✪ **Experimental phase A (baseline) – "_____"**

- 8-minute silent reading on independent/instructional narratives (<150 words)
- Experimenter provided 3 prompts as needed
- One-minute timing on reading aloud; 6 comprehension questions answered

✪ **Experimental phase B (intervention) – "_____"**

- Three 25-minute explicit training sessions (good reader's behaviors, timing, recording and self-graphing)
- 32-35 repeated reading sessions

Research Procedures – Repeated Readings

✪ _____

1. *Warm-up time*
   - ✓ Open reading folder and review student performance and reading behaviors
   - ✓ Preview 5 targeted multi-syllabic words
2. *Practice time (8min)*
   - ✓ Turn taking on reading aloud practice passage (5min)
   - ✓ Corrective feedback during reading
   - ✓ Corrective feedback on 5 frequent missed words at the end of practice time
   - ✓ Generalized reinforcers delivered upon good reading behaviors
3. *Testing, recording, and self-graphing time*
   - ✓ Three one-minute timings

✓ Recording and graphing three fluency scores

4. *Comprehension testing*

✪ **Experimental phase C (intervention) – "Repeated readings and text processing"**

✓ Two 30-minute _____ (causal connections)

✓ Exit criterion 100% in 3 consecutive trials

✓ 7 – 22 intervention sessions

✪ **Research procedures - Repeated readings & text processing**

_____

1. Follow RR steps

2. Present same passage with **STOP** sign included in sentences

3. Start group reading

4. At the **STOP** sign, student answers two oral questions:

✓ *"Tell me what happened so far."*

✓ *"Connect with previous by asking why."*

✓ Student identified < 2 causal connections

5. Comprehension testing

Social Validity Outcomes

✪ Student social validity was assessed by semi-structured interviews conducted by an independent observer

✪ Teacher social validity was assessed by an 8-item questionnaire on 6-point Likert scale

✪ All but one students favored the study's procedures (especially reading timings, self-graphing, corrective feedback, recalling, and making causal connections)

• *"I really liked the game with the STOP signs!"*

• *"I liked the reading game!"*

✪ All classroom teachers viewed positively the study's goals, procedures and outcomes

• Teachers expressed interest in incorporating intervention into their lessons

• Teachers were willing to recommend this program to other colleagues

Conclusions

✪ Strong functional relationship between RR/RR+C and fluency variables (cwpm, miscues) on practice passages

✪ Moderate functional relationship between RR/RR+C and fluency variables (cwpm, miscues) on generalization passages

✪ Stronger functional relationship for most students between RR+C and comprehension (inferential, literal questioning) than RR and comprehension on practice passages

✪ Moderate functional relationship between RR/RR+C and comprehension variables on generalization passages

✪ Large effect sizes for all students on narrative passages

✪ Positive participant views on study goals, intervention and outcomes for all students

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Take-home message

Student fluency and comprehension (inferential questioning) skills can be improved with

_____

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