



Background

The Common Core State Standards (CCSS) indicate that complex texts should be used in instruction (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010). As a result, students are expected to confront complex texts in the classroom daily, and teachers must take text complexity into account when determining which texts to use for instruction. Students with reading difficulties need additional support with these texts, which intervention can provide. Intervention allows students to practice grappling with advanced texts similar to those they confront in their content area classes with added instructional support to better prepare them for the independent reading required during the school day. Scaffolded instruction in difficult texts results in the greatest learning outcomes (Kuhn et al., 2006; Morgan et al., 2000; O'Connor et al., 2002, 2010; Shanahan, 2020), so complex text may further bolster students' reading and vocabulary achievement. Specifically, intervention using stretch (complex) texts, texts that are one to two grade levels beyond students' instructional reading level, effectively improves students' reading ability when appropriate support is provided (Morgan et al., 2000; Stahl & Heubach, 2005). Therefore, intervention is most effective when it uses complex texts with appropriate scaffolding, rather than instructional level text, which students can read with approximately 95 to 98 percent accuracy (Betts, 1946).

Research Question

What is the effect of assisted complex text reading and explicit academic vocabulary instruction during a multicomponent Tier-2 reading intervention on reading achievement of G3-12 readers reading below grade level, as compared with instructional level text and no explicit academic vocabulary instruction?

Methods

Participants

655 students, from multiple elementary and secondary schools in a western state in the USA, reading below grade level at the beginning of their respective school years.

Treatment group:

- 283 students (grades 4-12)

Comparison group:

- 372 students (grades 3-12)

Methods (continued)

Assessment

At the beginning and end of each school year, trained assessors administered the Reading Level Assessment (RLA; Craig et al., 2009), an informal reading inventory, to participants on an individual basis. The RLA asks students to read passages of increasing difficulty aloud and answer comprehension questions. Assessors record students' rate and accuracy on a 100-word selection from each text, which is used to determine instructional and independent reading levels. Researchers established the concurrent validity of the RLA with the Gray Oral Reading Test-Diagnostic (GORT-D), a widely used measure of oral reading fluency in the United States. A calculation of Spearman's Rho found a .871 correlation between RLA Form A and GORT-D, and a .887 correlation between RLA Form B and GORT-D. RLA Form A and B have a Spearman's Rho correlation of .906 (for all correlations, $p < .01$) These correlations indicate that the RLA, like the GORT-D, is a valid and reliable measure of a student's instructional reading level (Craig et al., 2009).

Instruction

- Treatment group** students received multicomponent Tier 2 intervention (UURC's Higher StepsSM) approximately 2 days a week during the school year in addition to their usual English/Language Arts instruction in a Tier 1 setting. Tier 2 intervention was delivered in either a 1:1 or a small group format (3-5 students) by a trained tutor, providing the following instruction:
 - assisted oral reading of **complex texts** (2 grade levels above students' instructional reading level)
 - syllabication word study (instruction in syllable types, decoding and encoding isolated multisyllabic words)
 - explicit instruction in academic vocabulary
 - timed repeated fluency reads

Intervention duration: average of 42 sessions of 45-minute instruction.

- Comparison group** students received the same multicomponent Tier 2 intervention (UURC's Higher StepsSM) as the treatment group approximately 2 days a week during the school year in either a 1:1 or a small group format in addition to their usual English/Language Arts instruction in a Tier 1 setting, however, the intervention used **instructional level texts** rather than complex texts and did not include explicit academic vocabulary instruction.

Intervention duration: average of 44 sessions of 45-minute instruction.

Design

- Initial** RLA pretest scores & number of sessions were compared with t-tests to identify initial differences. A significant t-test for RLA pretest suggested a confound of treatment condition with each group. RLA pretest was indicated for inclusion in the regression analysis.
- Regression analyses** were used to determine if treatment had a statistically significant effect on RLA instructional reading level gains when controlled for RLA pretest reading level.

Sample Lesson Materials

Multisyllabic word analysis

Academic vocabulary template (treatment group only)

Example planned text for assisted reading

Sample Lesson Materials

The Reading Level Assessment (RLA) is an informal reading inventory that is administered by a trained reading interventionist on an individual basis to establish students' instructional reading level using rate and accuracy.

Results

Average RLA gains were 1.33 years for treatment and 1.07 years for comparison groups. No significant effect was found for session number. Significant treatment effects ($B = .287$, $p < .001$) were identified; $\eta^2 = .023$ for a small treatment effect.

Descriptive Statistics

Treatment Group (Complex Text):

- Average number of sessions: 44
- Average RLA gain, instructional reading level (IRL): 1.33

Comparison Group (Instructional-level Text):

- Average number of sessions: 42
- Average RLA gain, instructional reading level (IRL): 1.07

Statistical Analysis

An ANCOVA compared RLA gain scores using session number, RLA pretest, and treatment condition as covariates.

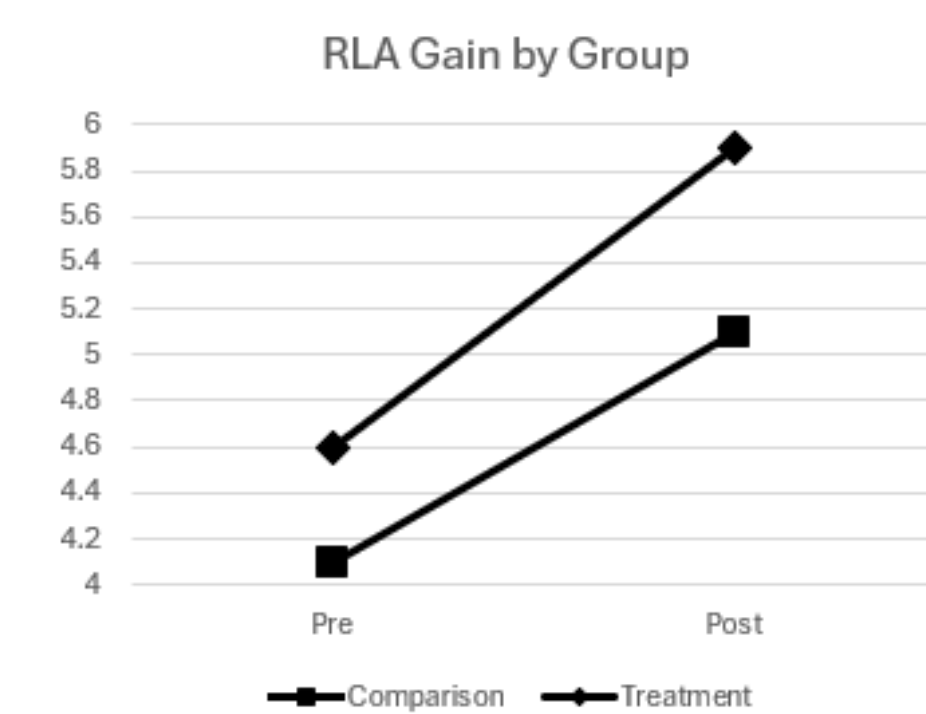
Descriptive Statistics

Group	Grade	Sessions		Pretest		Posttest		Gains	
		M	SD	M	SD	M	SD	M	SD
Comparison (n=372)		6.1	1.8	42.0	15.6	4.1	1.3	5.1	1.1
Treatment (n=283)		7.1	1.5	44.4	10.8	4.6	1.3	5.9	1.0

Regression Results

RLA Gain	B	SE B	t	p
(Intercept)	1.172	0.161	7.29	<0.001
RLA Pre	-0.074	0.027	-2.75	0.006
Number of Sessions	0.005	0.003	1.83	0.067
Group	0.287	0.072	3.93	<0.001

Graph of Gains



Conclusions

Results indicate a significant treatment effect and support for using *complex text* in a multicomponent reading intervention, in lieu of *instructional level text*, as well as including explicit instruction in academic vocabulary, to improve student reading outcomes.

References

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