

The Impact of an Emotional Disorder on Reading Comprehension Performance

Teresa King and Cara Cahalan Laitusis • Educational Testing Service

NARAP Project Goals

- National Accessible Reading Assessment Projects (NARAP) Goals:
 - Goal 1: Formulate a definition of the construct of “reading proficiency”
 - Goal 2: Conduct a program of research on the assessment of reading proficiency
 - Goal 3: Develop research-based principles and guidelines for large-scale accessible reading assessments
 - Goal 4: Develop and field-test instruments or methods for assessing reading proficiency

DARA Project Focus

Designing Accessible Reading Assessments (DARA) is one part of NARAP. DARA’s research focuses on:

- A component approach to assessing reading skills in isolation on large-scale reading assessments including: word recognition, reading fluency, vocabulary knowledge, and comprehension
- Issues that affect the accessibility for students with learning disabilities, including the impact of a ‘read aloud’ accommodation on the validity of reading test score

Differential Boost Study:

- Large-scale, within-subjects experimental design examining the impact of a read aloud accommodation on a measure of reading comprehension for students with reading-based learning disabilities (RLD) and without disabilities (NLD) at grades 4 and 8 (Cahalan Laitusis, Cook, Cline, King, & Sabatini, in press)
 - In grades 4 and 8 RLD and NLD students had higher scores using the read aloud accommodation than they did while taking the standard paper and pencil version.
 - In grades 4 and 8, the score increase from standard to audio test condition was greater for the RLD group than for the NLD group.

Current Research Study

Current Study Focus:

- There was an unintentional collection of data from students with emotional disorders (ED) in addition to having RLD during the differential boost study. This small subset of data was not included in the original study analysis.
- This study is an examination of the impact of an audio accommodation for ED students. It is hypothesized that ED students will perform similarly to their RLD peers.

Research Questions

- Does the read aloud accommodation provide a similar boost to ED students on audio scores as reflected in the RLD population?
- Academically and demographically, how is the ED sample different from the RLD and NLD groups?
- Did the data collected provide evidence to support the use of an audio accommodation for ED students as suggested in prior research? (see Hale, Skinner, Winn, Oliver, & Molloy, 2005; Whedon & Bakken, 2007)

Materials

- Gates-MacGinitie Reading Test (GMRT) 4th edition
 - Norm-referenced, standardized reading assessment; comprehension subtest only; levels 4 and 7/9; two parallel equated forms (Forms S and T)
- Student survey
 - 5-question, multiple-choice survey on students’ testing experiences and preferences

Methods

- GMRT administered to each student under 2 conditions:
 - Standard administration = extra time
 - Audio accommodation administration = extra time + read aloud of the entire test via CD
 - CD included directions, passage, test items and answer options
 - Order of the condition was randomized at the level of the school

Data Collection

Study 1.

- Differential Boost study:
 - 4th Grade
 - 527 RLD students, 654 NLD students
 - 8th Grade
 - 376 RLD students, 471 NLD students

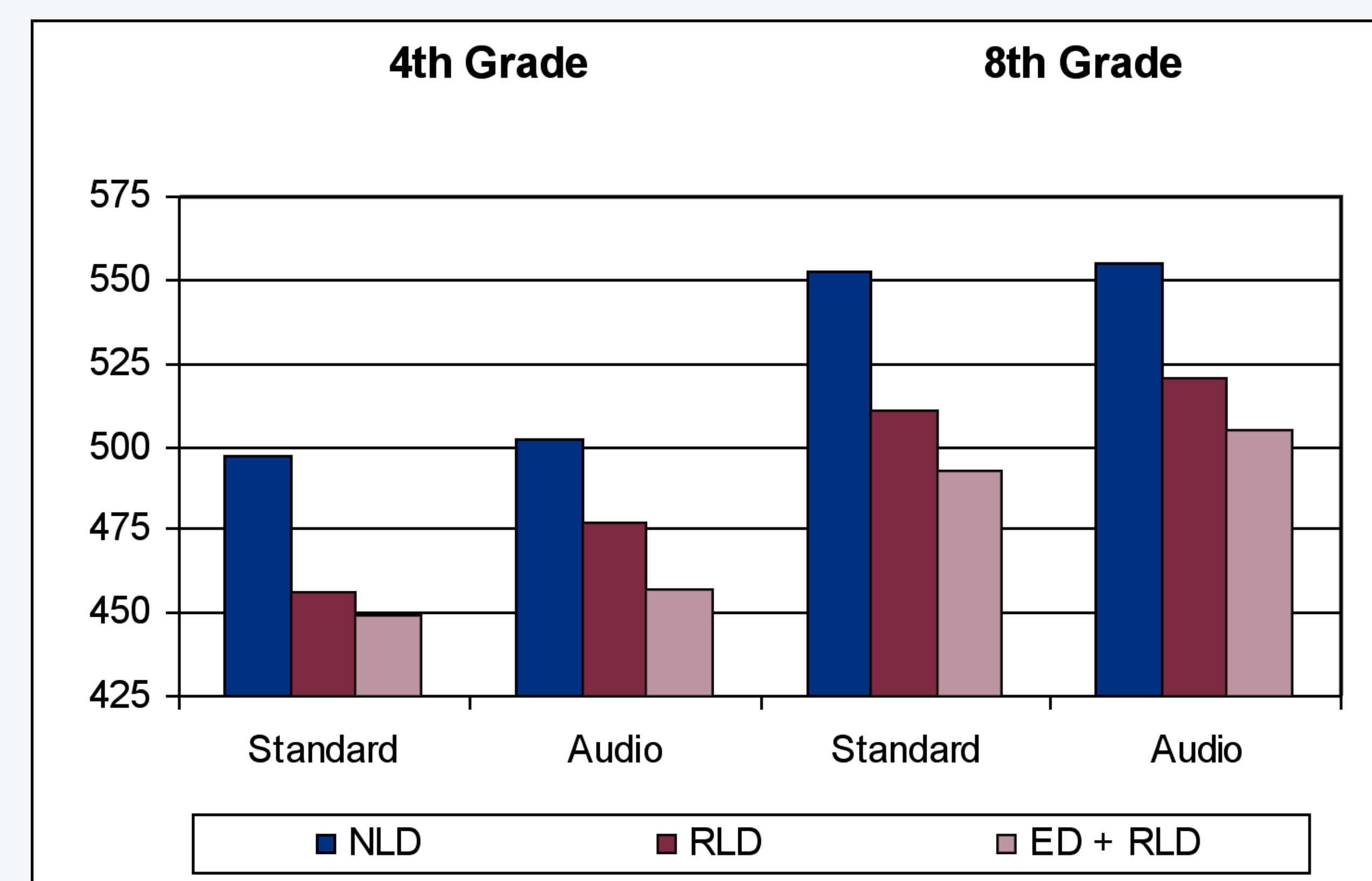
Study 2.

- Current ED study:
 - 10 4th grade ED students + RLD
 - 23 8th grade ED students + RLD

Results

- Students with ED performed similarly to their RLD peers, performing better on the audio than the standard version.
- Significant difference in the boost in scores (standard to audio) for grade 8 ED students.
- No significant difference in the boost in scores across groups, unlike study 1.
- There was a significant difference in the overall ability level for ED students when compared to NLD students.
 - ED students had the lowest scores on the standard and audio versions compared to the NLD and RLD students.

GMRT Scores by Disability Type



Means and Standard Deviations for GMRT Scaled Scores (Standard, Audio and Boost) by Grade and Disability Status

	Grade 4					
	NLD (n=10)		RLD (n=10)		ED + RLD (n=10)	
	M	SD	M	SD	M	SD
Standard	479.1	25.4	454.0	27.4	449.1	42.4
Audio	485.7	27.1	472.5	25.9	457.3	32.5
Boost	6.6	23.9	18.5	11.0	8.2	18.1

	Grade 8					
	NLD (n=23)		RLD (n=23)		ED + RLD (n=23)	
	M	SD	M	SD	M	SD
Standard	551.7	29.4	520.0	27.1	492.5	20.0
Audio	557.0	28.1	531.7	27.1	504.5	28.4
Boost	5.3	19.9	11.7	24.8	12.0	20.8

Note. NLD and RLD are a random sample of the full differential boost data set.

T Test Results

Grade 4				
Source	M	SD	df	Sig
Standard vs. Audio	-8.20	18.07	9	.185

Grade 8				
Source	M	SD	df	Sig
Standard vs. Audio	-12.00	20.82	22	.011*

* p<0.05

ANOVA Results

Grade 4				
Source	df	MS	F	p
RLD status	2	417.10	1.23	.308
Error	27	338.83		

Grade 8				
Source	df	MS	F	p
RLD status	2	331.15	0.69	.507
Error	66	482.84		

* DV=Boost

Implications

- The current findings support prior research
 - Barton & Huynh (2003) found that ED students performed similarly to RLD students on a reading assessment when using an oral accommodation.
 - Hale et al. (2005) concluded that providing an audio accommodation to students with ED would be advantageous due to the varied academic levels of ED and RLD students.
 - Whedon & Bakken (2007) established that ED students would prefer to use an audio accommodation when asked their preference.
- The reactions to the audio accommodation were favorable
 - When asked on the student survey, 78% of the ED students selected taking the test with the CD if they had to take the test again.
 - When asked how much of the test students listened to, 91% of students indicated they listened to all of it.
 - Anecdotal evidence from study test administrators and ED teachers suggests that students were more engaged and motivated while participating during the audio condition.
- It would be worthwhile to further investigate the use of an audio accommodation on measures of reading comprehension for students with ED and RLD by conducting research using a larger sample.
 - The small sample size hindered the level of analysis able to be conducted.
 - The racial background was different proportionally to the larger NLD and RLD samples.
 - Differential boost NLD sample: 62% White, 48% Male
 - Differential boost RLD sample: 61% White, 62% Male
 - ED sample: 12% White, 79% Male

Acknowledgements

This research funded by a grant from the U.S. Department of Education Institute for Educational Science (H324F040001) awarded to PI, Cara Cahalan Laitusis. Copyright © 2007 by Educational Testing Service. All rights reserved. ETS, the ETS logo and LISTENING. LEARNING. LEADING. are registered trademarks of Educational Testing Service (ETS). 7068