



# Contributions of Reading and Oral Language Ability on the Quality of Writing in Children with and without Language Learning Disabilities



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## Introduction

## Sample

## Procedures

## Discussion

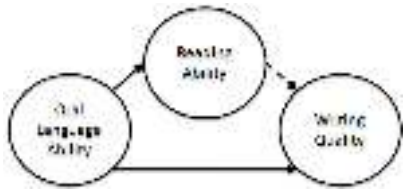
N = 50	TD (n = 25)	LLD (n = 25)
Age in Months*	123.80 (6.80)	129.52 (8.20)
Mother's Ed.	14.12 (1.39)	14.08 (1.84)
Girls : Boys	16 : 9	10 : 15
4 <sup>th</sup> : 5 <sup>th</sup>	16 : 9	7 : 18
Time to Write (in minutes)		
Narrative	17.67 (15.57)	11.13 (7.33)
Expository	12.17 (6.93)	9.87 (5.47)
Dependent Variables		
CELF-4, Core Language Score *	106.60 (10.59)	80.52 (16.32)
AIMS, Reading Standard Score *	506.96 (36.72)	421.28 (34.06)
Independent Variables		
STWR, Narrative *	25.20 (5.64)	15.88 (5.45)
STWR, Expository *	22.72 (5.39)	14.60 (4.89)

\* p < .05

- National Center for Educational Statistics (NCES; 2002) data demonstrates that 72% of fourth graders, 69% of eighth graders, and 77% of twelfth graders write at unacceptable levels; with minimal increases in 2007 (Persky, et al., 2003; Salahu-Din, et al., 2008).
- Children with Language-Learning Disabilities (LLD) perform poorer than their peers with typical development (TD) on written language tasks in the areas of: Productivity; Lexical diversity; Sentence complexity; Grammaticality; Spelling and Quality (Apel & Masterson, 2004; Apel, et al., 2004; Dockrell, et al., 2007; Fey, et al., 2004; Gillam & Johnston, 1992; Koutsoftas & Gray, 2008; Masterson & Crede, 1999; Mackie & Dockrell, 1992; McFadden & Gillam, 1996; Nelson & Van Meter, 2007; Scott & Windsor, 2000; Windsor, et al., 2000).
- Oral language (OL) ability has shared and unique variance with both reading ability (RA) and writing ability. Additionally, reading and writing have both shared and unique variance (Berninger & Abbott, 2010).
- Further research is required to understand these complex relationships. This study is exploratory in nature and assesses the relationships between OL, RA and writing quality; specifically, the contributions of OL and RA toward measures of writing quality.

- The data presented here are a subset of data from a larger study examining reading efficiency and written discourse in children with and without LLD (Koutsoftas & Gray, 2008).
- Oral Language was measured using the Clinical Evaluation of Language Fundamentals – Fourth Edition (CELF-4; Semel, et al., 2003); which includes the subtests: (a) Concepts & Following Directions; (b) Recalling Sentences; (c) Formulated Sentences; and (d) Word Classes.
- Reading ability was quantified using the state-mandated reading assessment scores from the student's prior school year (Arizona's Instrument to Measure the Standards, ADE, 2006a).
- Writing quality was measured using the Six-traits Writing Rubric (STWR; Education Northwest, 2006; ADE, 2006b) on narrative and expository samples.
  - Trained scorers worked in pairs to score writing samples.
  - Reliability: Narrative = 89%; Expository = 84%

- This exploratory study identified differing contributions of oral language and reading ability toward writing quality for children with and without LLD.
- For children with TD:
  - Neither OL nor RA predicted their narrative writing quality suggesting that narrative writing skill is unique from these other forms of language.
  - RA accounted for 12% of the variance in expository writing quality suggesting that there is both shared and unique variance for expository writing in TD children.
- For children with LLD:
  - OL ability was a significant predictor for both narrative and expository writing accounting for 17% and 28% of the variance, respectively, and suggests that in children with LLD writing has shared variance with OL ability.
- A pattern emerged that children with TD employ their reading skills and children with LLD employ their oral language skills while writing. This suggests that children with LLD have not yet developed connections between reading and writing systems; rather, they write like they speak.



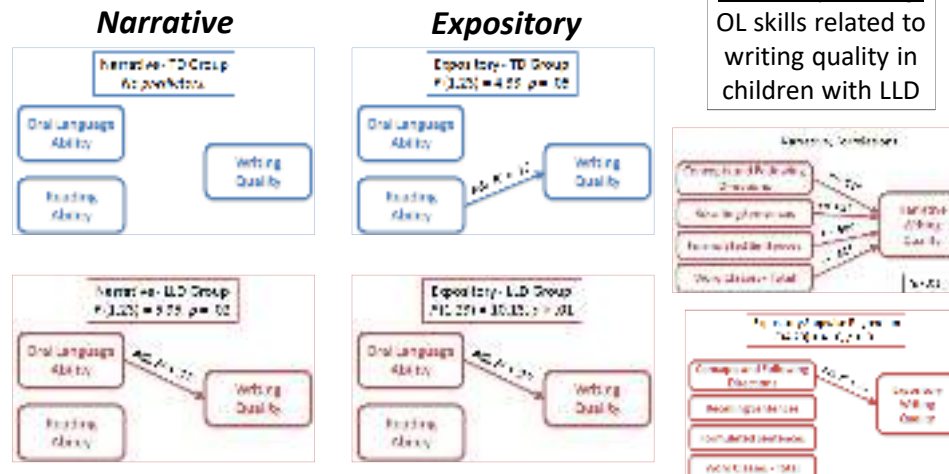
- Our hypothesis is that both OL and RA will contribute significant amounts of variance towards writing, but that this will differ by group (LLD, TD), and genre (Narrative, Expository).

## Research Questions

- Do measures of OL and RA contribute significant amounts of variance toward a measures in writing quality?
- How do these contributions vary by group and by genre?
- What OL measures account for writing quality in children with LLD?

## Results

### Four Separate Stepwise Multiple Regressions



- By the end of elementary school it is expected that children write in more literate ways (i.e., write like they read) this may not be the case for children with LLD; a consideration for clinical interventions.

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