



Written Discourse Cohesion in Children with Language Learning Disabilities

Victoria Petersen and Anthony D. Koutsoftas
Seton Hall University



Introduction

- Cohesion is defined as the linguistic elements of a text that contribute to its continuity and is achieved through the use of cohesive devices (Halliday & Hasan, 1976).
- Halliday and Hasan (1976) identified 5 categories of cohesive devices: reference, conjunction, lexical, substitution and ellipsis; of which, elementary school children predominately use (e.g., Bae, 2001; Fitzgerald & Spiegel, 1986):
 - Referential ties**, which are generally pronouns.
 - Conjunctive ties**, which specify relations between different units such as phrases, clauses, utterances, or sentences.
- Studies examining cohesion in elementary school children's discourse mostly focus on spoken language sample. An empirical question is how do elementary school children use cohesion in writing and does this differ by genre?

Children with Language-Learning Disabilities (LLD) are children whose language difficulties negatively impact academic function, specifically with reading and writing. Studies comparing cohesion between children with LLD and children with typical development (TD) are limited to the spoken modality and have suggested between-group differences (Finestack et al., 2006; Liles, 1987; Liles 1985; Merritt & Liles, 1987; Ripich & Griffith, 1988).

The purpose of the present investigation is to better understand how children with and without LLD use cohesion in their writing and how cohesion is affected by genre and related to writing quality; in doing so we pose the following **research questions**:

- Do children with LLD produce fewer referential and conjunctive cohesive ties as compared to peers with TD? If so, does this differ by genre?
- Do children with LLD demonstrate lower proportions of completed referential and conjunctive ties compared to peers with TD? If so, does this differ by genre?
- Are there significant relationships between measures of cohesion (frequency, completeness) and writing quality? Does this differ by genre?

Sample

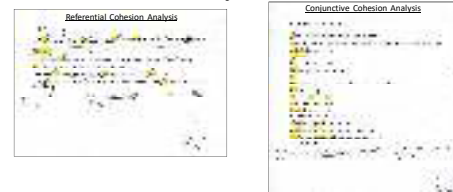
N = 50	TD (n = 25)	LLD (n = 25)
Age in Years*	10.32 (.57)	10.79 (.68)
Mother's Ed.	14.12 (1.39)	14.08 (1.84)
Girls : Boys	16 : 9	10 : 15
4 th : 5 th	16 : 9	7 : 18
CELF-4 ^a , Core Language Score*	106.60 (10.59)	80.52 (16.32)
Six Traits Writing Rubric (Total Rubric Score) <small>(Education Northwest, 2006)</small>		
Narrative*	25.20 (5.64)	15.88 (5.45)
Expository*	22.72 (5.39)	14.60 (4.89)
Length of Story in Words		
Narrative*	190.96 (122.43)	106.88 (65.32)
Expository*	130.44 (62.39)	84.48 (37.48)

a. CELF-4 (Semel et al., 2003)

* $p < .05$

Procedures

- Writing samples were obtained as part of a four day research protocol. Children responded to writing prompts counterbalanced across days (Koutsoftas & Gray, 2012).
- Writing samples were:
 - segmented into minimal terminable units (T-Units; Hunt, 1970);
 - scored using the six-traits writing rubric; and,
 - coded using a combined computer/person system that identified and categorized referential and conjunctive cohesive ties.



Discussion

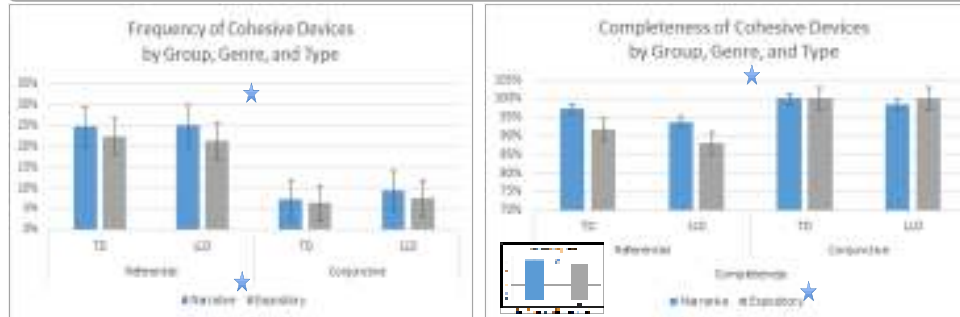
- This study examined cohesion in the writing samples of 4th and 5th grade elementary school children with and without language learning disabilities.
- In general there were no between group differences in the frequency or completeness of cohesive tie usage. Notably, the dependent measures were adjusted for length of story which was significantly different between groups.
- Type of cohesive device accounted for the largest amount of variance in both frequency (95%) and completeness (78%). Children in this study clearly used more referential than conjunctive cohesive ties in both narrative and expository samples.
- Genre differences were observed for both frequency and completeness; specifically, children used more referential ties in narrative and expository samples but had higher completion rates for conjunctive ties (likely because so few were used).

There was a significant and moderate positive relationship between referential completeness and narrative quality suggesting a relationship between completed ties and writing quality. Good writers complete ties something that children with LLD have difficulty with.

These findings veer from the literature on cohesion in the spoken modality specifically in that there were no between group differences. It may be the case that writing lends itself to more efficient and accurate use of cohesive devices. For example, it is easier for a child to include an appropriate amount of cohesive devices and insure they are all complete when writing as opposed to speaking.

These findings support the importance of integrated spoken and written language when providing language services to school-age children.

Results

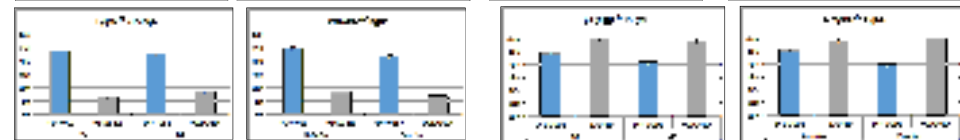


Simple Effects
Genre: $F(1, 48) = 22.78, p < .001, \text{partial } \eta^2 = .32$
Type: $F(1, 48) = 966.37, p < .001, \text{partial } \eta^2 = .95$

Main Effects
Type * Group: $F(1, 48) = 4.33, p = .04, \text{partial } \eta^2 = .08$
Genre * Type: $F(1, 48) = 4.22, p = .05, \text{partial } \eta^2 = .08$

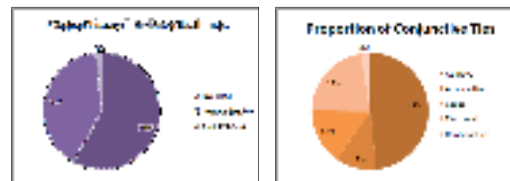
Simple Effects
Genre: $F(1, 48) = 19.43, p < .001, \text{partial } \eta^2 = .28$
Type: $F(1, 48) = 165.18, p < .001, \text{partial } \eta^2 = .78$

Main Effects
Type * Group: $F(1, 48) = 6.41, p = .02, \text{partial } \eta^2 = .12$
Genre * Type: $F(1, 48) = 34.42, p < .001, \text{partial } \eta^2 = .42$



Spearman rho Correlations	Frequency		Completeness	
	Referential	Conjunctive	Referential	Conjunctive
Narrative Quality	.002	-.270	.437*	.218
Expository Quality	.083	-.175	.177	---

* $p < .01$



Acknowledgements

- Many thanks to the students, families, schools, classrooms, and teachers who participated in this study.
- Special thanks to the Undergraduate and Graduate Research Assistants from Seton Hall University who worked on this project, especially April Horner, Marie Odejar, and Alexa Terravecchio.
- We wish to thank the School of Health and Medical Sciences and the Department of Speech-Language Pathology for support of this project.

References

- Bae, J. (2001). Cohesion and Coherence in Children's Written English: Immersion and English-only Classes. *Issues in Applied Linguistics, 12*, 51 – 88.
- Education Northwest (2006). *6 + 1 trait writing*. Retrieved November 21, 2006, from <http://www.nwrel.org/assessment/departement.php?d=1>
- Finestack, L. H., Fey, M.E., & Catts, H. W. (2006). Pronominal reference skills of second and fourth grade children with language impairment. *Journal of Communication Disorders, 39*, 232 – 248.
- Fitzgerald, J., & Spiegel, D. L. (1986). Textual Cohesion and Coherence in Children's Writing. *Research in the Teaching of English, 20*, 263 – 280.
- Graham, S., Weintraub, N., Berninger, V.W., & Schafer, W. (1998). Development of handwriting speed and legibility in grades 1-9. *The Journal of Educational Research, 92*(1), 42-52.
- Halliday, M. A. K., & Hasan, R. (1976). *Cohesion in English*. London: Longman.
- Koutsoftas, A.D., & Gray, S. (2012). Comparison of narrative and expository writing students with and without language-learning disabilities. *Language, Speech, and Hearing Services in Schools, 43*(4), 395-409.
- Liles, B. Z. (1987). Episode Organization and Cohesive Conjunctions in Narratives of Children With and Without Language Disorder. *Journal of Speech and Hearing Research, 30*, 185 – 196.
- Liles, B. Z. (1985). Cohesion in the Narratives of Normal and Language-Disordered Children. *Journal of Speech and Hearing Research, 28*, 123 – 133.
- Merritt, D. D., & Liles, B. Z. (1987). Story grammar ability in children with and without language disorder: Story generation, story retelling, and story comprehension. *Journal of Speech and Hearing Research, 30*(4), 539-552.
- Ripich, D. N., & Griffith, P. L. (1988). Narrative Abilities of Children with Learning Disabilities and Nondisabled Children: Story Structure, cohesion, and Propositions. *Journal of Learning Disabilities, 21*, 165 – 173.
- Semel, E., Wiig E., & Secord, W. (2003). *Clinical Evaluation of Language Fundamentals Fourth Edition*. San Antonio, TX: The Psychological Corporation.