



Developmental Differences between Fourth and Sixth Grade Students on a Writing Process Task



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Résumé: Cette étude examine les différences entre l'écriture d'étudiants âgés de 9 à 11 ans (entre cours moyen 1^{ère} année et sixième) à l'aide du modèle d'écriture Hayes et Flower (1980) qui inclut des éléments de préparation, traduction et correction. Cette tâche donne aux étudiants plus de temps pour écrire à la fois dans une même séance de classe ou bien à travers une période de plusieurs séances, ce qui donne un échantillon d'écriture représentatif. On a procédé à des comparaisons entre les données représentant les trois éléments de l'écriture des trois niveaux d'étudiants. Les conclusions sont exprimées en termes de considérations didactiques et développementales.

Introduction

- Writing is an important academic target for school age children, allowing for the uninterrupted expression of language which in turn supports simple and complex idea development.
- Writing is assessed annually for progress monitoring of educational agencies and is gaining emphasis in U.S. curriculum initiatives (Common Core State Standards Initiative, 2012; U.S. Department of Education, 2002).
- Hayes and Flower (1980) defined writing as a recursive process that includes planning, translating, and revising. Developmental research suggests:

- Intermediate grade children may not yet attend to all three components of the writing process (Berninger & Swanson, 1994; Berninger et al., 1996).
- Planning and Revision age effects are observed among 4th, 5th, and 6th graders (Whitaker et al., 1994).
- Survey research found that writing instruction is conducted in a linear fashion, over extended periods of time (Gilbert & Graham, 2010).



- The **purpose** of the present investigation is to describe developmental differences between 4th (~9 years) and 6th (~11 years) grade students on a three day writing process protocol (Koutsoftas & Gray, 2013) designed for this study that reflects the Hayes and Flower (1980) writing process model. The goals are:
 - To identify between group (4th and 6th Grades) and within group (drafts and final copies) differences.
 - To describe errors by grade between rough drafts and final copies.

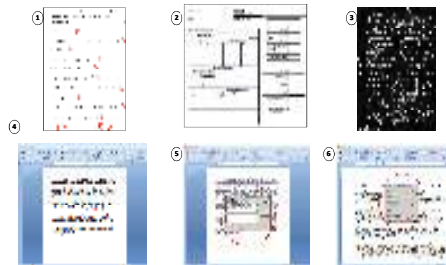
Sample

N = 59	4 th Grade (n = 29)	6 th Grade (n = 30)
Age in Years*	9.62 (.49)	11.57 (.63)
Mother's Years of Education	14.69 (1.75)	13.93 (1.61)
Girls : Boys	14 : 15	11 : 19
GRADE Reading Test (Williams, 2001)		
Total Test, SS	110.21 (11.91)	110.73 (11.82)
Comprehension Composite, SS	107.66 (10.82)	109.07 (10.38)
Vocabulary, SS	113.59 (14.00)	110.87 (15.85)
Listening Comprehension, S9	5.31 (1.95)	4.93 (1.51)

* $p < .05$

Procedures

- This data is a subset of data from a larger study evaluating the writing process in **intermediate grade** students.
- Writing samples were collected across three days, one for: 1) planning; 2) translating; and 3) revising.
- Language transcription techniques (Puranik et al., 2008; Wagner et al., 2001) were used to analyze writing samples.



Discussion

- Children in this study appeared to be strong writers. Developmental differences between grades were observed for sentence complexity, and grammatical and mechanical accuracy.
- 6th graders outperformed 4th graders on sentence complexity measures suggesting that the older group was able to produce more complex syntax and maintain this advantage from drafts (Cohen's $d = .85$) to final copies (Cohen's $d = .73$).
- Significant differences were observed on grammatical (Cohen's $d = .63$) and mechanical (Cohen's $d = .67$) accuracy measures on final copies, with older students outperforming younger.

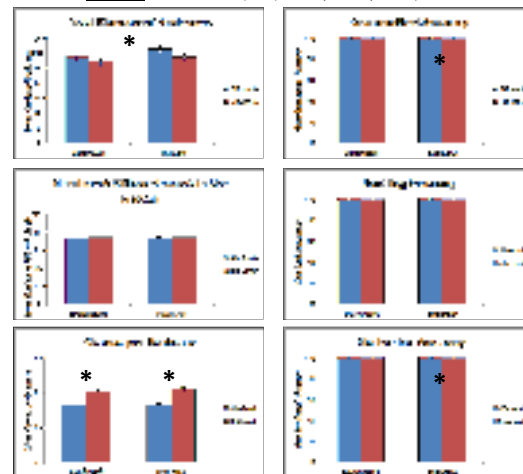
- Across grades children produced significantly more sentences from rough drafts to final copies (Cohen's $d = .15$) suggesting longer and perhaps more detailed and revised final copies.
- Patterns of grammatical and spelling errors suggest similar errors made across grades; however, patterns between rough drafts and final copies suggest that children in this study made sophisticated edits, especially in terms of grammar.

Results

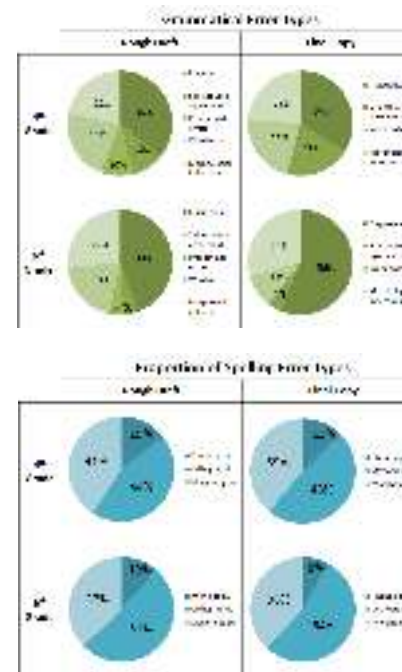
Planning Measures			
# of Ideas, M (SD)		Complexity, M (SD) *	
4 th Grade	6 th Grade	4 th Grade	6 th Grade
11.14 (5.13)	10.37 (5.55)	4.21 (.86)	3.67 (.84)

Wilks' $\Lambda = .90, F(2, 56) = 2.97, p = .06$

Rough Draft: Wilks' $\Lambda = .70, F(6, 52) = 3.71, p < .01, \text{partial } \eta^2 = .30$
 Final Copy: Wilks' $\Lambda = .71, F(6, 52) = 3.55, p < .01, \text{partial } \eta^2 = .29$



* $p < .05$



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- Be sure to visit: <http://blogs.shu.edu/row-lab/>

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