

Title: *Cross-Sectional Examination of Writing Quality in Elementary School Students: An Exploration of an Empirical Based Model of Writing Factors Across Grades 1 to 5*

Topic and Goal: Reading and Writing; Goal 1 Exploration

Purpose: The primary purpose of this project is to explore an empirically-based conceptual framework for understanding writing in elementary school students in the general education setting, with the goal of improving assessment and instruction for writing. We will model latent factors of writing performance (i.e., Conventions, Productivity, and Syntactic Complexity) and examine relations with writing quality (i.e., Text Organization and Development) for two genres at each grade from grades 1 through 5. We will also examine differences by grade level among the models using cross-sectional methods, thus providing a systematic examination of the way in which constructs of written expression compare from one grade to another and across different genres. By understanding the malleable factors of writing across grade levels, we eventually can inform teachers of the developmentally appropriate skills to educate students. Furthermore, developing an empirical framework for written expression will provide a strong foundation for creating age-specific measures of written expression, and more effective tools for monitoring progress. With these resources, teachers will be better able to determine which factors of written expression to consider when planning instruction and providing feedback to students.

Setting: The study will take place in grades 1-5 in public elementary school classrooms in Palm Beach County, Florida.

Sample: The sample will include at least 400 students per grade for grades 1-5, and may include students with disabilities or English Learners, which will be marked in the sample.

Description of Project: In this exploratory study, we will examine the relationships between malleable factors of writing (i.e., constructs of writing including conventions, productivity, and syntactic complexity) and writing quality across two genres: informative and opinion.

Research Design and Methods: This three-year study will employ a cross-sectional design to conduct primary data collection and analysis. Student writing samples will be collected in Years 1 and 2 of the study by the students' primary classroom teachers. All 1st through 5th grade teachers will ask their students to respond to four writing prompts over a 2 week time period. The written responses will be coded using 16 different writing scoring methods that are available in the literature.

Control Condition: Due to the nature of the research design, there is no control condition.

Key Measures: We hypothesize that the constructs of writing will be specified by 3 domains(see figure 1): conventions, productivity, and syntactic complexity, and indicated by the data coded from the variables generated from the various scoring methods. *Conventions* will be indicated by Correct Capitalization, Correct Punctuation, Correct Word Sequences, Handwriting Legibility, and Spelling. *Productivity* will be indicated by Handwriting Fluency, Long Words, Unique Words, Total Number of Ideas, and Total Number of Words. *Syntactic Complexity* will be indicated by Clause Density, Complete Sentences, Mean Length T-unit and Length of Correct Word Sequences. The outcome variable, *writing quality*, will be assessed on two dimensions: text organization and text development.

Data Analytic Strategy: We will test several models of the constructs of writing necessary to assess writing quality at each grade level 1-5. The models will be tested via measurement invariance analysis comparing each year to the previous and across genres. Finally, this model will be expanded to a full structural equation model in order to examine the relationships of these variables to our writing outcomes.

Empirically-Based Model of Writing

