



# Write On!

with the  
**Writing Skills Development Project**

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## Welcome to the Writing Project

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STEPHEN HOOPER, PH.D.  
PRINCIPAL INVESTIGATOR

Welcome to the fourth issue of Write On! In this, the final year of the study, we have the sometimes daunting, but always interesting, task of putting together the different parts of the study. This includes the yearly assessments, the writing intervention, the annual school record review, and the parent and teacher forms. We are excited to share updates about the project and writing in general, and especially some findings from the study, but first, we need to say Thank You!

We want to extend our gratitude to the administration, faculty, and staff in the Orange County Schools. We greatly appreciate your willingness to say “Yes” to this longitudinal study that included, not only a yearly assessment, but a semester-long intervention component. Thank you to the dedicated teachers, classroom assistants, and staff in the elementary schools for making our job much easier with your continued support! Thank you, too, to all of the families for allowing us to work with your children! We have enjoyed getting to know the children and watching them grow from tentative first graders to confident fourth graders.

Our last, but never least, Thank You goes to the students. We enjoyed working with you. The team agrees that you made our work feel more like play. It was so apparent that you gave your very best to all of the tasks. Your hard work will help us learn more about how writing skills develop in young elementary school students. As the saying goes, we could not have done the study without you!

We hope that you enjoy this issue of *Write On!*



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## Important Skills When Learning to Write

An important part of the study was to look at the factors, such as memory or planning, that could affect writing development in the early elementary years. To do that, we examined fine-motor, language, memory, and attention/ planning/problem-solving (i.e., executive function) skills, because these skills have been linked to writing development. Our findings suggested that three of the skills seemed to be particularly important in the development of written language: fine-motor, language, and attention/executive function.



**Two** activities assessed fine-motor skills. In the first task, called a finger succession task, the student touched his or her thumb to finger in sequence with each hand. For the second task, the student wrote as many letters as possible in a set amount of time; this activity gave us important information about graphomotor skills, that is the skills that combine muscle or mechanical movements with recognition or perception of letters in order to actually write the letters.



**Three** tasks made up the language-related component. In the first task, the student quickly read a series of letters and letter groups. This task helped us to determine how quickly, or automatically, the student could say the letters/letter groups. In a second language-related task, the student circled the correctly-spelled word from a choice of three words that could be pronounced the same. This activity measured the student's ability to recognize a word by sight, called orthographic skills. The third language task measured syllable-phoneme awareness, or the ability to identify sounds within words and syllables within multi-syllable words; in this activity, the student repeated words with syllables or sounds left out.

**Three** activities also measured attention/executive function skills. The first was a planning task, in which the student showed planning and problem-solving skills by tracing increasingly more difficult drawings without tracing over any previously traced line. In the second activity, the student named as many items as possible about a topic within a set amount of time. This is called a retrieval fluency task, because the student had to quickly retrieve, or pull-up, words from memory. The final task was a computer task to measure attention, in which the student pressed the space bar when he or she saw the correct letter sequence on the computer screen.



**In** our study, these three functions were shown to be especially important in the development of writing skills of young, elementary-aged students. The results suggested that writing cannot be taught in isolation. Guidelines for writing instruction need to take into account factors, such as fine-motor, language, and attention/executive function (planning and problem-solving) skills.

## Participation-Who, What, Where?

Now that the final assessments and interventions have been completed, we thought that you might like to know how many students and teachers participated in the study. The study began in the autumn, 2006, when the first group of 102 students from 27 first grade classrooms enrolled. This group of students comprised about half of the total enrollment. During the fall 2007, we enrolled an additional group of 104 students from 28 first grade classrooms for a total of 206 students; 118 boys and 88 girls.



Each year, some of the students moved out of the school district or changed schools within the Orange County school district. We were able to follow the students who moved to new schools within Orange County or to some of the neighboring schools and school districts to complete the yearly assessments, so that 179 students were able to participate during all four years of the study. In the classrooms, a total of 152 teachers from all seven elementary schools in Orange County and 17 schools outside Orange County provided feedback and support!!

In addition to studying how writing skills develop and the factors that affect writing development, we also wanted to examine the effectiveness of a writing program called the *Process Assessment of the Learner*, or *PAL*. Sixty-eight students were randomly-selected to participate in the writing intervention, also known as the Writing Club. There were 41 boys and 27 girls. The Writing Club was a supplement to the classroom writing curriculum. In each of the seven elementary schools in Orange County, small groups met for 24 lessons, plus pre-test and post-test sessions for a total of 26 times each year. Activities included practicing letter-sound connections, spelling, handwriting, and, of course, writing. This was hard work for many of the students but, believe it or not, most of the students truly enjoyed the Writing Club.



*Thank You* We have been privileged to get to know so many talented and hard-working students and teachers!!



IT WAS A JOY TO GET TO KNOW ALL OF THE WONDERFUL STUDENTS!  
~ MS. KATHLEEN ANDERSON ~

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★ THE NUMBER ★  
★ ONE ★  
★ ALL-TIME ★  
★ FAVORITE ★  
★ THANK YOU ★  
★ GIFT ★  
★ WAS THE ★  
★ MAGIC ★  
★ SPRING! ★  
★ ★ ★ ★ ★ ★ ★ ★ ★ ★

**IF YOU DID NOT RECEIVE THE ASSESSMENT SUMMARY LAST YEAR**

**OR IF YOU HAVE ANY QUESTIONS ABOUT THE STUDY**

**PLEASE FEEL FREE TO CALL OR EMAIL**

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## Our Team



THANK YOU FOR THE  
WONDERFUL MEMORIES!

<< MS. DONNA YERBY >>

Dr. Stephen Hooper, Principal Investigator, and Kathleen Anderson, Project Coordinator, are very grateful for the dedicated project team. Donna Yerby, Intervention Coordinator, and Lara-Jeane Costa, our graduate student, continue to provide needed support. For Lara this has been an exceptionally busy year. In June, she and her husband, Robert, became the very proud parents of a darling little boy!

Throughout the project years, a number of talented and dedicated UNC Graduate students joined the project to assist with yearly assessments and interventions. Many of these graduate students have completed their studies and now are completing internships or working in local school districts. Thank you to Sean Knuth, Amy Childress, Kylee Miller, Jaelyn Zins, and Rachel Kitson!



I SO MUCH ENJOYED WORKING  
WITH ALL OF THE STUDENTS!

\*\*MS. LARA COSTA\*\*

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## Impact of a Writing Intervention

In addition to learning about factors that affect writing development, we also were interested in the impact of a specific writing intervention, *The Process Assessment of the Learner* (PAL), on writing development. The PAL has been shown to have a positive effect on writing skill development in research settings, and we wanted to determine if we could reproduce these positive findings within the school setting using a response-to-intervention model. In this first study of the intervention, the results from second grade suggested that direct intervention of spelling and handwriting skills improved written expression.

**The Writing Intervention:** Students in the writing intervention, also known as the Writing Club, met twice a week for 12 weeks, or for a total of 24 lessons. At each lesson, students received instruction on the sound-to-letter connection of consonants (e.g., b, c, t) and vowels (e.g., a, e, o), handwriting, and spelling before they composed (wrote) in response to a prompt, or topic, provided by the instructor.



**How we determined change in writing skill:** The students in the Writing Club completed a writing pretest; that is, we had the students complete the writing tasks before they received any instruction. Then, at the end of the 12 weeks of instruction, the students completed the same tasks as part of the post-test, and all of the students completed the same test during their yearly assessments.



**What we found:** Although the students received only 10 hours of intervention, the results showed that direct instruction in handwriting, letter-sound connections, and spelling provided modest positive improvement in written expression, suggesting that students will benefit from transcription skill (handwriting, spelling) instruction combined with authentic writing experiences. In fact, students of varying skill levels participated, and the results indicated that the students who were most at-risk for problems with writing responded most strongly to the intervention. We also discovered that selected cognitive abilities (i.e., executive functions, language) may play a role in the response to an educational intervention. Consequently, we will continue to study this as we continue to analyze our data.