

Effective Beginning Handwriting Instruction: Multi-modal, Consistent Format for Two Years, and Linked to Spelling and Composition

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In Study 1, the treatment group (33 first graders) received Slingerland multi-modal (auditory, visual, tactile, motor through the hand, and motor through the mouth) manuscript handwriting instruction embedded in systematic spelling, reading, and composing lessons. In comparison, the control group (16 first graders) received manuscript handwriting instruction not systematically related to other literacy activities. The treatment group improved significantly more than the control group on dictated spelling and recognition of word-specific spellings among phonological foils. In Study 2, new groups received either the second year of the manuscript (N = 29) or introduction to cursive instruction in second grade (N = 24) embedded in the Slingerland literacy programme. Those who received the second year of manuscript handwriting improved more on sustained writing than those who had only one year of manuscript instruction.

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- Many teaching practices have evolved over the years simply based on teacher creativity, insight, and experience, which often have not had the benefit of research approaches for evaluating their effectiveness.
- One example is the widely used practice of multi-sensory teaching.
- Despite the wide use of the Slingerland methods, controlled research has not yet been used to evaluate its effectiveness, which is one goal of this study.
- A second goal is to call attention to the multi-modal methods employed in Slingerland methods.
- Children are encouraged to a) attend to visual cues by looking at letters, auditory cues by listening to the letter names or their sounds, and kinaesthetic cues by touching and tracing letterforms with their index finger; and b) engaging their motor output systems by hand in holding the writing tool with a proper pencil grip and by mouth naming letters they write and saying the sounds that go with the letters.
- We recommend embedding handwriting instruction in a systematic instructional programme that teaches handwriting for transfer to word reading, word spelling, sentence construction and text composing and comprehension.

This study

This study focused on typically developing writers in general education classrooms.

- Study 1 evaluated whether first graders who were taught

handwriting systematically using Slingerland methods to transfer handwriting skills to spelling and composing improve more in multiple writing skills than those taught without Slingerland methods.

- Study 2 evaluated whether second graders who received the same Slingerland training as the treatment group in Study 1 would improve more than those taught a new handwriting format in second grade, i.e., cursive (joined letters) handwriting.

Slingerland instruction (Slingerland, 2008)

- Slingerland instruction integrates teaching handwriting with oral and written language instruction through daily modelling and practice of skills across levels and modes of language.
- Each lesson at the first grade level begins with learning to write – teaching, practising and reviewing letters.
- In the auditory activities, the students listen to the teacher's oral instruction and pronunciation of letter names, letter sounds, and spoken words. Instruction begins with a brief review of phonic elements used in the lesson (integrating letters and sounds). Students encode (spell) words (combining sounds with letters), add affixes (morphology), and write phrases, sentences, and paragraphs (syntax and text).
- In the visual activities, students practice decoding written words. The teacher guides students through successive steps that help them develop phrase concept "chunking," comprehension skills, and fluency for written letters, words, sentences and text.



Methods

Study 1 Participants were 33 first graders from one school (treatment group) and 16 first graders from two other schools (control group). For both groups pretesting occurred in the second month of the school year and post-testing in the ninth month. The measures used in pre-test and post-test included alphabet writing copying a paragraph, word choice, composition prompt narrative writing, and dictated spelling. The treatment group received Slingerland instruction with manuscript (unjoined letters) handwriting embedded in structured language activities. After initially receiving 30 minutes of daily manuscript handwriting instruction, the treatment group received 45 to 60 minutes of daily phonics, spelling, and written language instruction in addition to instruction in reading groups. The control group received non-Slingerland handwriting instruction. In the control group, spelling and reading instruction were not integrated with writing.

Study 2 Second graders in two different schools received one of two contrasting treatments: a second year of manuscript handwriting instruction ($n = 29$) or a first year of cursive handwriting instruction ($n = 24$). The same measures of handwriting, spelling, and composing used in Study 1 were given a pre-test and post-test in Study 2.

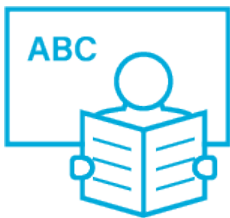
Results

Study 1

- Both groups improved in alphabet over time.
- Because there were group differences in the alphabet in Time 1, it was used as a covariate in other analyses.
- There was a significant group by time interaction (treatment effect) on both spelling measures. Those in the treatment group either improved more than the control group (word choice spelling) or improved while the control group decreased (dictated spelling).

Study 2

- There was a treatment effect (significant time by group interaction) on the copy task when the alphabet writing task was used as a covariate.
- When the alphabet was used as a covariate, the second year of continuing manuscript handwriting improved sustained handwriting over time needed for completing written assignments.
- There was a significant time effect for all spelling and composing measures, meaning that all improved across the year.



Conclusions

- The hypothesis that first graders who received Slingerland structured language instruction would show more gains than the controls in handwriting skills was partially supported.
- Two spelling measures – word choice and dictated spelling – showed treatment effects.
- Overall, the results show the benefits of continuing handwriting instruction with the same format beyond grade 1 into grade 2.
- However, all second graders showed improvement from beginning to end of second grade (significant main effect for time) on sustaining handwriting and multiple spelling measures.
- The primary effects for groups showed significant individual differences in learners and are likely to affect individual students' response to instruction in

real-world classrooms.

- The research findings provided evidence for the Slingerland method for teaching handwriting linked to spelling and composing.
- A method of providing handwriting instruction embedded in other literacy activities, which previously was thought to be needed only for students with specific learning difficulties, has been shown to benefit typically developing writers in the general education classroom.