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Handwriting Research—Crib Notes

Steve Graham, Ed.D. (Research presented by Tanya Santangelo, Ph.D.)—Vanderbilt University, Currey Ingram Professor of Literacy

- Examined the effectiveness of handwriting interventions
- Findings support the value of teaching handwriting, as explicitly teaching handwriting improves handwriting legibility and fluency as well as the quality of students' writing

Jane Case-Smith, Ed.D.—The Ohio State University, Division of Occupational Therapy

- Developed co-teaching models with occupational therapists supporting first grade teachers' handwriting and writing instruction, while embedding specific interventions for students who show need for additional support
- The co-teaching model, Write Start, resulted in first grade students improving an average of 27% in handwriting legibility and writing the alphabet in less than half their original time

Stephen Peverly, Ph.D.—Teachers College, Columbia University, Department of Health and Behavior Studies

- Researched the importance of transcription speed as well as verbal ability and sustained attention to note-taking
- Results highlight the relationship of notes to test performance by addressing whether notes are more strongly related to tests that emphasize memory or to tests that emphasize inferences

Gerry Conti, Ph.D.—Wayne State University, Director of the Human Movement Laboratory

- Researched kinematic (motion) and clinical correlates of handwriting in elementary school children; findings indicate that with maturation, children show less force inefficiency in the up-and-down direction of writing, complemented by improved hand steadiness and coordination in clinical assessment
- These findings suggest that precursor tasks requiring hand dexterity are important in the development of legible handwriting skills

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Handwriting Research—Crib Notes (continued)

Karin Harman James, Ph.D.—Indiana University, Department of Psychology and Brain Sciences

- A recent study utilizing Magnetic Resonance Imaging (fMRI) investigated how printing letters by hand affects the brain
- Findings suggest there is a distinct system in the human brain that is recruited during reading that is also recruited during writing, that the reading network develops as a function of handwriting (printing) experience, and that handwriting (printing), and not keyboarding, leads to adult-like neural processing in the visual system of the preschool child

Virginia W. Berninger, Ph.D.—University of Washington, Department of Educational Psychology

- Once children have been introduced to letter formation, they must learn to retrieve and produce letters automatically. Handwriting automaticity is a strong predictor of quality of composition, and if letter production is automatic, memory space is freed up for higher level composing processes
- Brain processes—and how they change—are impacted by specific instructional treatments
- Research focuses on nature vs. nurture interactions in learning to read and write