Chairwoman Lehner, Vice Chair Huffman, Ranking Member Sykes and members of the Ohio Senate Education Committee, my name is Lisa Miles and I would like to offer support for HB 58. I would like to thank you for providing me with the opportunity to support this important issue. I am an Occupational Therapist and I work at a local suburban school district and currently serve students K-6th grade. I graduated 30 years ago from The Ohio State University. I have also earned a Master’s of Science degree in Special Education and hold an alternative teaching license as an Intervention Specialist.

The students I serve have increasingly higher demands in regard to handwriting skills as they progress through the elementary grades. Each year, according to the Common Core standards, students advancing through each grade are expected to meet each year’s grade-specific standards as well as retain or further develop those writing skills and understandings which were mastered in preceding grades. Although research shows that handwriting increases a student’s potential for academic and professional achievement, this skill is rarely mentioned in the Common Core State Standards and cursive handwriting is excluded altogether. The expected growth in student writing ability reflected in the standards is disproportionate to standards that demand the development of the automatic and fluent production of manuscript and cursive handwriting. The lack of automatic and fluent production of handwriting in children has been shown to adversely affect fluent composition skills.

Studies by several leading researchers including Steve Graham, a professor of special education and literacy at Vanderbilt University, commonly note the increased demand for writing proficiency placed on students and highlighted the potential for school failure when fluid and legible handwriting skills are not developed. Studies by Graham as well as Dr. Virginia Berninger, a licensed psychologist and former teacher who is currently a professor of educational psychology at the University of Washington commonly noted that once handwriting becomes a fluent and automatic skill, working memory is relieved of the burden of considering the mechanics of handwriting thus decreasing cognitive demand with greater gains demonstrated in compositional fluency. Dr. Karin Harman James, who is an associate professor of psychological and brain sciences at Indiana University, demonstrated that the actual motoric process of handwriting contributes to reading fluency. This was demonstrated by functional magnetic resonance imaging which displayed increased brain activation after the children printed letters. Her results suggested that the self-generated action, in the form of printing letters by hand is a crucial component in setting up brain systems for reading acquisition. Dr. Berninger likewise reported results of further research in regard to students in grades 2, 4, and 6 who used actual handwriting to compose essays as opposed to keyboarding. Those students using handwriting wrote more words, wrote words faster, and expressed more ideas than the students that used keyboarding.

Handwriting is a fundamental skill that strengthens fine motor skills, develops higher level cognitive skills, develops visual perceptual skills, and as supported by Dr. Berninger’s research, activates the orthographic loop in the brain that supports reading, spelling and composing. Researcher Karin Harman James also demonstrated research results supporting cursive handwriting with brain imaging studies revealing multiple areas of brain activation during learning of cursive pseudo-letter. Handwriting instruction can also be beneficial for all learners, including English language learners and dyslexic and special needs students. Print instruction teaches ELL students the foundational concepts of print, such as the idea that printed letters and words run from left to right and from top to bottom. Learning cursive has been shown to support students with dysgraphia or dyslexia because they have to lift their pens/pencils fewer times when forming letters.

As an occupational therapist, I have witnessed firsthand the benefit of systematic instruction of an evidence based handwriting method. I have also witnessed the consequence of inadequate and illegible handwriting and the detrimental effect that results in writing fluency and composition and the unnecessary struggles that those students experience. Cursive handwriting helps train the brain by requiring the integration of visual and tactile information, as well as increases fine motor demand which improves fine motor dexterity. Once cursive handwriting is mastered, it is a more efficient means of writing (i.e., greater writing speed). Within my school district, there has been an extensive expansion of the use of technology in response to 21st century demand as well as Common Core standard demands. Writing tasks as well as standardized testing in the area of writing have been replaced with the use of a keyboard. As research supports, the motoric act of handwriting, and especially cursive handwriting, activates the brain and supports learning at a higher level when compared to use of a keyboard. The research supports, and as an occupational therapist, I support, the systematic instruction in both manuscript and cursive handwriting for students in kindergarten through the fifth grade to ensure that those students develop the ability to print letters and words legibly in order to facilitate the ability to create readable documents and assure future academic and career success.

This concludes my remarks. I am happy to answer any questions the committee may have.

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