

18 September 2009

By: Tudor Vieru, Science Editor

[Children Still Write Faster with a Pen](#)

Their keyboard skills are a bit behind



Children still write faster and better using a pen rather than a keyboard
Wikimedia Commons

Though it may seem surprising, today, children still prefer writing their longer essays and other texts using a pen rather than a keyboard. And, apparently, they are good at it too. A new scientific study has revealed that they write both better and faster when they do not use a keyboard. The investigation was conducted on second-, fourth- and sixth-grade children, some of whom had handwriting disabilities. All of them performed better at writing essays, sentences, or even the alphabet, when using a pen.

"Children consistently did better writing with a pen when they wrote essays. They wrote more and they wrote faster," University of Washington Professor of Educational Psychology Virginia Berninger, the leader of the new study, says. The expert usually studies normal writing development and writing disabilities. She admits, however, that it came a lot easier for children to write the alphabet using the keyboard, but that results when it came to sentences were mixed. The differences between the two means of writing became obvious when the small ones got to compose their essays.

For all three grade levels, the children who used pens, regardless of whether they had handwriting disabilities or not, produced longer essays and composed them at a faster pace than those who used keyboards. The study revealed, however, that a large number of participants did not yet know what a sentence was. This was especially true for the younger kids. "Children first have to understand what a sentence or a complete thought is before they can write one. Talking is very different from writing. We don't talk in complete sentence[s]. In conversation we produce units smaller and larger than sentences," Berninger says of the results.

She adds, "People think language is a single thing. But it's not. It has multiple levels like a tall building with a different floor plan for each story. In written language there are letters, words, sentences and paragraphs, which are different levels of language. It turns out that they are related, but not in a simple way. Spelling is at the word level, but sentences are at the syntax level. Words and syntax (patterns for organizing the order of words) are semi-independent. Organizing sentences to create text is yet another level. That's why some children need spelling help while others need help in constructing sentences and others in composing text with many sentences."

The team of experts at the university believes that schools need to take a more active role in teaching children how to write using keyboards. The scientists argue that the small ones need to become "bilingual" writers at an early age, so as to avoid other dysfunctions at a later age. "A brain imaging study at the University of Washington with children showed that sequencing fingers may engage thinking. We need more research to figure out how forming letters by a pen and selecting them by pressing a key may engage our thinking brains differently," Berninger concludes.