



THE RESEARCH ON WRITING 9.0

WHY STUDENTS NEED TO WRITE

RESEARCH, RECOMMENDATIONS, AND CORRELATION TO
STUDENT LEARNING

WRITE, TURN, AND TALK

YOUR SCHOOL AND WRITING

- What's going well?
- What needs to be better?
- As a coach, how do you nurture writing as a best practice?





WHAT'S NEW IN THE RESEARCH?

Neuroscience and cognitive science research are increasingly providing information that correlates creativity and the practice of writing with intelligence; academic, social, and emotional success; and the development of skill sets and *higher-process thinking* that will become increasingly valuable for students of the 21st century. Consider all of the important ways that writing supports the development of higher-process thinking: conceptual thinking; transfer of knowledge; judgment; critical analysis; induction; deduction; prior-knowledge evaluation (not just activation) for prediction; recognition of relationships for symbolic conceptualization; evaluation of emotions, including recognizing and analyzing response choices; and the ability to recognize and activate information stored in memory circuits throughout the brain's cerebral cortex.

Judy Willis, neurologist and consultant, The South Coast Writing Project



WHAT'S NEW IN THE RESEARCH?

“That’s’ all fine and good, but I teach math (or science)”:

Writing can help the brain to develop the logical functions required for successful math and science learning. From the ages of 8-18, a rapid phase of maturation takes place in the brain, developing an individual's “executive function.” The practice of writing can enhance the brain's intake, processing, retaining, and retrieving of information. Through writing, students can increase their comfort with and success in understanding complex material, unfamiliar concepts, and subject-specific vocabulary. When writing is embedded throughout the curriculum, it promotes the brain's attentive focus to classwork and homework, boosts long-term memory, illuminates patterns, gives the brain time for reflection, and when well-guided, is a source of conceptual development and stimulus of the brain's highest cognition.

Judy Willis, neurologist and consultant, The South Coast Writing Project

SOME INTERESTING FACTS

- Less than 2% of HS students will major in English in college.
- Less than 1% of HS students will enroll in journalism or professional writing related majors in college.

Elmore and Abelman, "When Opportunity Knocks..." CPRE, 1999.

SOME INTERESTING FACTS

- Writing is identified as #2 on the list of academic predictors for college success.
- Professors cite the lack of habit, voice, passion, and completeness as the most pronounced deficiencies in college freshmen.

Higher Education Research Institute, "Report on Academic Readiness," 2008.

SOME INTERESTING FACTS

- Writing skills are identified as a core requirement of more than 95% of the 25 top paying jobs in America.
- Writing skills are identified as a core component of 75% of the top job opportunities for HS graduates entering the job market .

Sauter, "High Skills, High Pay..." *ACT Information Brief*, 2007.

WHAT STANDS OUT FOR YOU?

- What are the implications of this research for you?
- Does this challenge any long-held beliefs?
- With whom would you like to share this information?

Please discuss.



WHY IS WRITING SO IMPORTANT?

- Promotes processing and learning:
 - Connections to prior knowledge
 - Comprehension
 - Deeper understanding
 - Retention
- Promotes critical thinking skills
- Promotes vocabulary development
- Promotes effective communication skills
- Promotes effective assessment – “a window to learning”



Brown, Collins, Duguids, *The Culture of Learning*, 1999.

WHAT WILL MAKE A DIFFERENCE?

- Habit
- Fluency
- Authenticity
- Variety
- Choice
- Focused Practice
- Focused and Timely Feedback



Writing Next, Carnegie Commission, 2007.

IS THE PEN MIGHTIER THAN THE KEYBOARD?

There **IS** a difference between writing by hand and typing at a keyboard:

- ***There are cognitive benefits to putting a pen to paper:***
 - Compared to typing on a keyboard, writing by hand uses more complex brainpower – it integrates three brain processes:
 - Visual: Seeing what is on the paper in front of you.
 - Motor: Using your fine motor skills to actually put the pen to paper and form the letters to make the words.
 - Cognitive: Remembering the shapes of the letters requires a different type of feedback from the brain.

Advances in Haptics, by Anne Mangen and Jean-Luc Velay,
National Centre for Reading Education and Research, 2013.

IS THE PEN MIGHTIER THAN THE KEYBOARD?

- ***There are cognitive benefits to putting a pen to paper:***
 - It coordinates left and right brain processes
 - It boosts cognitive skills (processing of thoughts, feelings, connections to prior knowledge)
 - It inspires creativity (when “connected” script is used)
 - It improves memory and retrieval of ideas
- ***Recommendations:***
 - Consider purpose and product
 - Consider fluency at the keyboard
 - Consider access
 - Consider assessments
 - Teach keyboarding skills
 - Seek a balance

