



2.- MEMORIZATION

FACTS:

Do kids still need to learn them?

What's the role of memorization in 21st century learning?

Long before computers entered classrooms, facts began to make their exit. In an effort to make education relevant and reach the “whole child,” forward-thinking teachers abandoned rote learning and embraced learning by doing. Facts were out; concepts were in. Johnny should not be memorizing the times tables; he should be contemplating the idea of number. Now, with the advent of the Internet, why commit anything to memory? You can google it. Does memorization have a place in 21st century education? Should kids be required to learn certain things “by heart?” I think so, and here are five reasons why: focus, fluency, foundation, freedom, and fun. Let’s look at these ideas in the context of some familiar subjects.

Reading

Proficient readers are fluent readers. Decoding skills are critical, but efficient readers do not stop and decode each and every word. By memorizing basic *sight words*, beginning readers can focus their mental energy on decoding the new and unfamiliar words. As their store of sight words grows, so does their ability to gain meaning from what they read. Building your sight word vocabulary is also necessary in order to read “chunks” of words, which frees you to read much faster. And reading faster is much more fun than plodding through text one word at a time.

Mathematics

Do kids need to memorize math facts? Yep. According to the National Mathematics Advisory Panel (2008), “Computational facility with whole number operations rests on the automatic recall of addition and related subtraction facts, and of multiplication and related division facts. It requires fluency with the standard algorithms for addition, subtraction, multiplication, and division. Fluent use of the algorithms not only depends on the automatic recall of number facts but also reinforces it.” Computational fluency is a critical prerequisite to success at algebra, the foundation for advanced mathematics.

Writing

Yes, spell checkers are wonderful things, but every time I misspell a word, that annoying squiggly red line appears and I have to look at a list of words and decide which one—if any of them—I really want. As with sight words and reading, the more words I can spell automatically, the more of my brain can focus on what I’m trying to say and how I want to say it. Similarly, the better my grasp of the basic rules of grammar, the more freedom I have to develop my own style of writing rather than be an unknowing slave to my computer grammar checker.

Literature

In olden days, students memorized and recited nursery rhymes, poems, passages from literature, scenes from plays, and great speeches such as Lincoln’s Gettysburg Address or

Martin Luther King's "I Have a Dream." In his essay, "In Defense of Memorization," lawyer and writer Michael Knox Beran writes, "...memorizing poetry turns on kids' language capability. It not only teaches them to articulate English words; it heightens their feel for the intricacies and complexities of the English language." Susan Wise Bauer, author of *The Well-Trained Mind*, believes memorization builds the foundation for reading and composition skills by improving vocabulary and developing children's ability to understand and use complex English syntax.

Chemistry

The periodic table is the most important chemistry reference there is. For years, high school students were required to memorize it, element by element. I don't know that I would go that far. Certainly, however, every student of chemistry should memorize *how* the table is constructed. It's not a random array! Without that knowledge, it is a useless tool.

Foreign Language

Learning to read, write and speak a second language provides perhaps the best example of when knowing concepts and structure is not much use without the facts. In this case, the "facts" are vocabulary words. I studied Spanish for four years in high school. We had a weekly list of new vocabulary words to memorize. Through direct instruction and reading lots of Spanish literature, we developed a very good sense of the grammar and structure of Spanish. Now, many years later, I still remember how to "construct" Spanish sentences. Unfortunately, through lack of practice, I've forgotten a great deal of the vocabulary I once owned—the facts! So my ability to actually communicate in Spanish is compromised.

Are we recommending teachers stop teaching concepts, doing projects, and involving students in creative problem solving activities? Of course not We are encouraging you, whatever level or subject you teach, to think about what may be worth having your students memorize in order to help them focus of what's important, gain fluency, build a foundation of solid knowledge, and gain the freedom to have fun with whatever they are learning.