

Righting Rote

by pazooter

Rote learning has acquired a bad name in the United States. But is *learning by rote*, the process whereby students are made to memorize without consideration for comprehension, the baby that got thrown out with the bathwater?

Historically, it's the Chinese who perfected the talent for *rote learning*. The master would give the statement to be learned and the entire class, in unison, would chant back the exact statement. Again and again and again until they had it memorized. Over the centuries it generally served them well. The downside was that, while Chinese students became highly knowledgeable and skilled in their cultural arts and professions, creative thinking was not, with some important exceptions, a common forte.

It appears that in the United States, *rote learning* went the way of knuckle-whacks and butt-whumpings. Well-financed experts (i.e., not teachers) determined that comprehension was lacking and targeted most forms of force-fed education in favor of kinder, gentler teaching methodologies that vied for children's attention and sought to nourish experiences of cognitive learning.

Now, decades later, the results have been tabulated. And the professionals who introduced and subscribed our educational evolution are not at all quick to mention America's position in international standings of educational excellence -- except where they can sell new solutions. It is a ponderous fact that the industry that we now expect to bail us out of the downward spiral of educational standards is the very same industry that created the mess in the first place.

What we got right about education is that *comprehension* is of higher importance and value than *rote learning*. But the two ideologies have never been diametrically opposed to each other. They are both needful ingredients in the holistic learning process.

Too often I have seen middle school students grappling with algebra and higher math concepts. Upon investigation it is quickly borne out that the point where they are stalled and stumbling is not knowing their multiplication tables or not knowing them well enough. The multiplication tables require straight memorization. They are usually taught at the intermediate level in elementary schools. But as the practice of rote drilling is considered boring and outmoded it often gets short shrift.

Does this mean that once students get their times tables down cold they now understand algebra and higher math concepts? No, of course not. They still need to tackle the comprehension of terminology as well as the syntax of the language of mathematics itself. But at least now they can arrive at the task of studying the theory instead of stumbling all over themselves grappling with the deepest mysteries of seven times eight.

And perhaps surprisingly, rote drilling can also be widely used in teaching theory. When students in my Science classes are reading the textbook aloud to the class they know to pause at every newly-introduced scientific term. We then drill the definition exactly as given in the glossary, over and over until they get it. I will usually start the drill by saying the term followed by the definition and then having the entire class repeat it. Loudly, just like the Chinese. Usually after six to ten times or so, they start to get it. We often follow it up with examples and then repeat a few more reiterations. Sometimes it is also necessary to drill the definition of a term found in the original definition. One might think students find this type of activity grueling, if not at least boring. Far from it. My experience is that students love drilling definitions. It's time intensive..., but not really, because they get and can then move on with their learning. It also instills an appreciation of the exactness of technical terms. And the results show up well in subsequent testing.

Unfortunately, a major barrier to implementing rote learning is a lack of barriers; specifically, the absence of physical walls or insubstantial or so-called curtained walls in our school buildings. In my home district we are cursed with what's called "Kelly schools," buildings with no or few windows having a central hall and ancillary pods, each containing four open classrooms. The county is busily building more of these open-type classrooms as of this writing. Too bad, because rote learning can be noisy.

Many positive things can be said concerning the virtues of having quiet in the classroom, as any new or veteran teacher will tell you. But the importance of quietness is too often over-valued and overstressed. The real test of a successful learning environment is, *are all students actively engaged in the process of learning?* That does not necessarily translate as, *quiet*. And in the case of drilling by rote, it means the exact opposite of quiet. So one enthusiastically-engaged class activity can be, in an open or podular system, another class's distraction. It is a sizable mistake where *quiet* activity takes precedence over *engaged activity*. The solution is having sound-absorbing walls and teachers more tolerant to the full experience of engaged learning.

So while *rote learning* may have gone down the drain, it wasn't the main thing. The baby somehow survived; it's just that nobody bothered to give it a proper bath.

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The author is an educator currently working as a substitute teacher in Florida.