The M word

In education circles today, there is a big bad thing that an educator should never do, and that’s the M word. Yes, Memorization! Somewhere along the road of modern education, Memorization has become a witch that is to be hunted and burned at the stake.

It started -- and probably ends too—in Mathematics. Educators stated that memorizing facts were meaningless if the child did not understand them. Instead of just parroting for example, “6 times 7 is 42”, a child should be able to visualize/draw six rows of seven objects. All this makes good sense, and teachers breathed a sigh of relief: now they didn’t have to crack the whip and check on their students’ times tables any more. All they had to do was give them manipulatives to play with.

However, as the years went by, more and more children failed in Math, and strangely enough, understanding facts did not seem to make students achieve better. Not surprisingly, very few teachers require students to memorize parts of plays or poems any more. Fifty years ago, in France, we were required to memorize a fable or poem every single week, and recite it with expression. Our weekly history “lesson” (meaning homework) was a little resume of facts that we had to learn then recite by heart, yes, orally, in front of the entire class. Today I can still tell you without missing a beat that Charlemagne was crowned emperor in the year 800 AD. Knowing certain key dates, places and events helps you peg down history and locate in time and place all other events.

In Math, the cracks start showing usually by Grades 2 and 3. Sometimes, especially in the US, the actually deficiencies are not apparent till Grade 6 because of the way Math textbooks are designed. All exercises are confined to the skills taught in that particular chapter without reviewing prior skills (what is knows as “spiraling”). Therefore, most children, when solving word problems, do not learn to really think through the problem. They pick the numbers in the text and either add, subtract, multiply or divide according to the topic of the week. Teachers do not realize it because: a) the class size is too large to pay attention to each student; and b) as long as all answers are correct, all students must be learning the required skills, right?

When students start studying fractions, those who were never required to memorize their times tables now start performing poorly. How much is 2/3 + ¼ ? They try to figure that out, and that takes about 20 minutes because they have to add threes and lay them out, then add fours and lay them out, then remember why they were doing that, now find the lowest common denominator, then wonder why they were doing that in the first place, then rewrite the fractions with the common denominator. Then try to remember what they were supposed to do with the numerators… and so on. No wonder the poor children tell you, “I hate Math!”

Now, if they knew their times tables on the tip of their fingers (in my book, this translates as: giving the answer within 2 seconds), they would immediately see the 12 in their mind and write it down. Their brain is still thinking of the fractions and how to add them, so the rest comes easily.

I can see parents and teachers shaking their heads and saying, “yes, but HOW do you make them memorize those tables?” And, by the way, it’s not just the times tables that are important, but also addition and subtraction, as well as division. We cannot assume that knowing 3x5=15 means they know (within 2 seconds) that 15/3 is 5. That needs separate training as well.

And that, my friends, will be the topic of this column next week.