

Scarp: Tossing out knowledge with the bathwater

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Posted: Saturday, October 20, 2012 8:47 am | Updated: 9:08 am, Mon Oct 22, 2012.

By Mark Scarp, contributing columnist |

The story of the Greek mathematician Archimedes is one of those classic, basic things you learn in school. In the centuries since the time of the ancient Greeks, knowledge has grown exponentially. Yet the amount of time children spend in school — in many cases re-learning forgotten knowledge — in more recent years has remained relatively constant.

For those of you who didn't keep your notes, the well-known tale is that Archimedes came up with the principle of displacement as he was taking a bath. Not too many of us think about math when filling up the tub, but what most of us can take from Archimedes' experience is that if you fill it with too much water, right after settling in you'll have a wet bathroom floor.

Now, think of that bathtub as your child's mind. These last several years have seen the greatest-ever amount of growth in knowledge, as well as for the need for children to learn and retain more to fully participate in 21st century life. The increase in mandatory testing in recent years has provided additional challenges to teachers and their pupils.

And now, think of that bathtub as the school day, or the school year. Each day the tub remains the same size, yet we keep pouring more into it. You don't need to have excelled at math to know what will ultimately happen: More water will be poured into the tub than it can hold.

Archimedes' bathtub and this modern educational challenge came to mind while reading Friday's story by the Tribune's Stacie Spring about a gathering of educators, parents and students at Mesa Community College to watch a 2009 documentary, "Race to Nowhere." Spring wrote that the film "focuses on how many students are over-tested, over-stressed and willing to do anything to get good grades."

A discussion followed the screening that included parents complaining about increases in homework, Spring reported.

Of course, reducing the workload is not a particularly smart option. Like it or not, the technology boom that put a world of information into a small handheld device is not going to abate. Our children will need to know more and apply it.

So the water's going to keep flowing into the tub. The answer, no higher math needed, is to increase the size of that tub. Maybe we can do something to increase students' capacity to learn. In the meantime we should take steps to properly lengthen the school day and the school year.

Is this unpopular? Sure. Change to longstanding traditions always is. And maybe a third-grader's school day, or even school year, shouldn't be as long as a sixth-grader's, and a sixth-grader's not as long as an 11th-grader's. Those kinds of decisions on the details would have to be made. But the overall principle is simply that we can no longer afford to keep an agrarian school calendar based on the need for children to work the harvest that became obsolete 125 years ago.

Do longer school days and school years cost money? Absolutely. Schools that are open longer will have higher operating costs. Teachers' salaries will need to be increased to compensate them for the additional time and effort. The amount will not be insignificant. But in the long run, America and its economy stand to suffer more significant, even permanent consequences if things don't change.

As the nation slowly emerges from its recent economic crisis, it's becoming plain that many high-skills jobs being outsourced abroad are jobs our schools and colleges aren't training enough American students for, but other nations' educational institutions are. Already, to increase the amount of mathematics and science training in schools to the degree that it has, other important subjects have had to have their share of time reduced, most notably, civics.

To ignore this situation, which leaves the bathtub the same size while more water gets poured into it, is only going to result in more

knowledge spilled over the side and not retained by the next generation, to its detriment and to ours.

We are fortunate in the East Valley to have so many terrific public, private and charter schools. The vast majority of them are doing most everything they can with what they have, with the size bathtub of learning they have to work with.

With a little more than two weeks until the general election, we hear candidates talking far too generally about education. Voters desperately need to hear more specifics about the growing knowledge explosion and what can be done to make sure our young people are in the best possible position to benefit from it.

Unfortunately, nearly all we're going to get are ads telling us how lousy an individual somebody's opponent is going to be if elected, while the bathwater keeps flowing out the door.

Read Tribune contributing columnist Mark J. Scarp's opinions here on Sundays. Reach him at mscarp1@cox.net.

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