

Sometimes the best high tech is low tech.

I'm a high tech math teacher. I use a tablet pc throughout my lessons, I use i-clickers to gauge student progress and understanding, I record all of my lessons to post on my website, and I frequently use applications and websites to help students understand concepts; and yet, the technology that has fully transformed my teaching and my classroom fits in the palm of a hand, costs less than a calculator, and has no electronic parts.

For nineteen years, I felt pretty good about my teaching. I believed I was on the "cutting edge" because of all of the high tech "goodies" that I continued to implement; however, I was always bothered by a certain ineffectiveness in most of my classes. By ineffective, I mean a general inattentiveness, lack of engagement, and apathy amongst most of my students. I'm not referring to my honours classes or my top students of course, but pretty much everyone else was uninterested, unmotivated, and uncommitted to learning mathematics. In recent years, I thought I just needed to perform better, be more funny (hard to imagine... I know), or provide more incentives to learn. I think I succeeded at all three of these self-improvements, but the general culture in my class was not changing.

Then, twelve months ago, I attended a teaching conference where Peter Liljedahl gave the key note address. He spoke directly to this ineffectiveness that I was experiencing, and provoked me to make some changes. I began to change the culture in my classroom. Three significant changes to my traditional classroom were all that was needed to begin the transformation:

1. Visibly Random Groups
2. Vertical Non-Permanent Surfaces
3. No more notes

After implementing these three low tech changes to my classroom twelve months ago, I have found a whole new energy and love for my job. I have made other changes as well that I will elaborate on during my presentation, but these three provided the largest impact for the change. I now feel energized as I make my way around the room dealing with the productive chaos. I can see who needs attention, as they are all working on vertical surfaces. I gently nudge these groups in the right direction by answering their questions with crafty counter-questions – this is where the art of teaching shines. Instantly after implementing these changes, I noticed almost whole-class engagement in the lesson, an increase in energy and excitement in my students and more noise in my class.

I'm a high tech math teacher. I still use all of my high tech goodies throughout my classes, but I no longer find them as important for the learning in my class. Today, my most prized technology to help with student engagement and problem solving in mathematics is the whiteboard pen.