

Technology Integration: Closing the Gap between Theory and Practice.

Matthew R. Winn

The University of North Texas

All schools love the idea of saying that they have implemented technology and that they are integrating it into their pedagogy. Billions of dollars each year, in Texas alone, are spent on educational technology (TEA, 2009). Schools have purchased document cameras, interactive whiteboards, mobile laptop stations, and sophisticated software packages. Schools love to check the box and, by all outward appearances, say that they are up to speed and technologically relevant. The problem is that, in many cases, this is where intentional technology integration stops, at the purchase.

The result of this haphazard attempt at technology integration is that the technology is not really being integrated. It may be used from time to time, but is it really infused in everyday student activity? We are not talking about teachers using technology for grading and organizational purposes. Ten years ago, that was the conversation. Now we must focus our conversation around the student. Are the students using technology on a daily or even weekly basis to enhance and enrich their holistic educational experience? I think the answer is sadly no. Why is this happening? If we are spending massive amounts of public and private resources on technology integration, shouldn't it be integrated?

Sadly, I feel as though the problem rests solely on administrative and teacher training programs' shoulders. If we expect teachers to integrate technology into their curriculum, we have to train them how. If we don't, we will end up with an ineffective attempt that will leave both students and teachers frustrated. Studies have shown that pre-service training is the most effective way to train teachers to integrate technology. In-service while, not as effective as pre-

service, can still have positive effects on teacher's ability to integrate technology as well (Russell et al., 2003). It is not enough to simply give teachers the technology; we have to train them to use it.

Training aside, there are other barriers to effective technology integration. For many school districts it seems as though policy can be a significant barrier. School districts add blogs, social networks, and other sites to a block list. While there are potential hazards that come with these types of sites, there are also benefits to education. As educators, we ask our students to collaborate, share ideas, and produce products of understanding. All of the aforementioned objectives can be met, and are being met outside of school, with the use of such sites, namely web 2.0 websites. Students already possess many skills that we want them to use in the classroom. A study has shown that students spend 16.7 hours a week online (Harris Interactive, 2010). This is more time than they spend actively engaged in learning at school. With adjustments to policy, and teacher training, schools could use what students are already doing. We don't need to change the student; we need to allow the students to change us. This is a call to adopt a progressive educational philosophy that is student centered. The alternate is to be an essentialist, and believe that all students must be able to obtain a foundational education that essential to all. While there are benefits of essentialism, it tends to take away student voice. If you take away their voice, you take away their heart, attention, and ultimately their achievement.

Personal preference tends to be a major barrier for educators in their quest to become technology integrators. Many teachers, unfortunately, find themselves in a pedagogical rut.

The art and science of teaching has become a set of routines that are used over and over each year. This rut does not allow teachers to see technology as a means to alternately assess students. Not to say alternate is either formal or informal, because it can certainly be both. If a teacher was given guidance to step outside of their normal routines, and explore what technology has to offer, I feel as though they will find how technology can give students an alternate way to be heard in the classroom. Just to name a few examples, posting videos on YouTube, sharing ideas on Twitter, using text messaging as a way to engage in the classroom, and other programs that would allow for divergent assessment, are all ways in which modern technology can be used to reach and assess students. Teachers will agree that all students are not the same, but why must we force every student to demonstrate our objectives in our method of preference? Technology offers teachers and students limitless options for assessment. In many cases, these options are student created, and are not a significant burden on the teacher in terms of preparation.

In the public school system, it is somewhat understandable for teachers to be reluctant to introduce new forms of assessment using technology. After all, the assessment that really matters, the state's standardized assessment, is not alternate itself. As a teacher, why would you want to spend time on assessments that do not mirror the style of the assessment that will ultimately determine your effectiveness as a teacher? While, I do not personally believe that using alternate assessment will lead to poor performance on a standardized test, I can understand a teacher's trepidation about using valuable class time and opportunities that may or may not bode well for the students on such a standardized assessment. Not only do schools', or district policies serve as a barriers to technology integration, but state and national

standards force the hand of many in the educational system. Until state and national standards adapt, we cannot blame teachers for not adapting.

So what are we to do? It seems apparent that we cannot wait on state or national standards to yield to technology efforts, but rather it must start in the teacher's class and move outward. A recent study showed that a significant enabling factor to teacher readiness for technology integration was peer support in the school (Crews, 2004). One teacher can influence many. Schools can influence others. Many schools can influence a state and so on. Universities need to prepare students entering the teaching profession to be integrators of technology. Current administrators need to urge teachers to strive towards integration, and teachers need to step outside of their pedagogical ruts and seek out the benefits of technology. When all three groups are doing their part in this goal of an integrated classroom, students will benefit, and will truly be prepared for their digital future.

In terms of my own educational practice, technology has been an increasing addition to my classroom. I use technology for students to conduct research, show demonstration of objectives by means of alternative assessment, and for student communication. Currently, my school has a mobile laptop station that is available for student use. I frequently check the cart out for my students to use. In addition, I have requested a class set of iPads for my class next year, and it seems as though my request will be granted. My goal is to infuse technology in every aspect of my class. True integration can only happen when you forget that you are using technology. While there will be some off task behavior, when the novelty wears off, the school will be able to assess the one-to-one computer use and its effectiveness on learning. If our goal

as an educational institution is to prepare students for their future, then it is a necessity to harness next generation technology and utilize it for our students. Otherwise, we are graduating students who are not prepared to use current technology in a manner that will enhance their academic and professional careers.

While technology integration is claimed by many schools and teachers, the reality is that there still stands a significant gap between claims and practice. Most educators would agree that the use of technology is important, but few are truly proficient in their efforts. Armed with this knowledge, teacher preparation programs, administrators and proficient teachers need to take the challenge of spreading their knowledge and skills to reach a point of actual technology integration. There are certainly many barriers, namely policy and state and national standards, and teacher readiness. We, as educators, owe our 21st century students a 21st century education. If we don't integrate technology into our curriculum, we can't be student centered. We are not focused on the students' success; I fear we are missing the entire point of education. Technology is here to stay, as educators we must embrace this in theory and practice.

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