

I'm afraid I come to you today with **more questions than answers**. And I suppose that, ultimately, that's my message to the other people here today who are technology leaders in their schools. I think we need to be a **little more humble, a little less cocksure: we need to ask more questions**.

I guess the big question I have for you today, the "essential question," if you will, is: **in this world of accountability, where everything has to be quantified and measured, how do we measure the success of the technology leaders in our schools?** I think that in most schools and districts, that question is answered **in one of two ways**. In some cases, the technology director is measured – or measures him/herself – by **how many computers there are, how many software applications, the speed of their internet pipe, and so on**. Thankfully, I think that most of us recognize how short-sighted and ineffective a measure that is.

The other answer to the question, the more common answer in this day and age, is **adoption: how many teachers have "bought in?"** How many teachers are using the Smartboard and how often? Does every teacher have a web page? I would argue that **one of the main themes of educational technology in the 1990's was motivating teachers to use all of that technology that we ran out and bought but was now sitting dormant**. And now the question is, how do we move adoption down the curve from the early adopters to the middle group and then to the laggards? **How do we get everyone using technology? How do we make them do what we want?**

And here is where I'd like to stop and ask another question: **Is this really an adequate measure** of the impact of a technology leader or a technology program? Does a large number of teachers using technology mean that kids are learning? Not necessarily. I think that, like standardized testing, technology **adoption is a measure of convenience: It's data that can easily be observed and collected**. I think that widespread adoption of technology is oftentimes viewed as a validation of large-scale investments in technology infrastructure. And in turn, I think that in technology we tend to "think big" when we go shopping because we've learned that standardization of hardware and software is key to managing it. We buy site licenses so the software can go into the image and be blasted out to every machine in the district quickly and efficiently. But then **we insist that everyone use that piece of software because we paid so much to acquire it. It's starting to sound like the tail wagging the dog**.

I used to come home from these conferences depressed, because I would hear other people in my position brag about their schools' big investments in technology and their global technology initiatives. "We're rolling out Smartboards in every classroom." "We're having all of the teachers keep a blog." I would leave these conversations thinking, "I'm must not be very good at what I do. There are a lot of teachers in my district who are doing good things with technology and I see kids learning in their classrooms. But there are even more who are either struggling with it or actively resisting it. What am I doing wrong?"

Fortunately, I'm older and wiser now and I've realized a few things: **a lot of those wonderful programs wound up dying off (or being killed off)** a year or two later. A lot of those same people who would tell me things like, "we are all building class web sites in Frontpage; the teachers love it!" are actually **resented by many of the staff in their buildings**. I discovered that those **other technology leaders tend to exaggerate their successes and rarely fess up to their frustrations and failures**, especially when it comes to discussing just how many of the rank and file in their faculty are actually using technology. Who can blame them? After all, that's how everyone has been measuring their success and of course they, too, have most likely internalized that measure as an indicator of their own effectiveness. Well, **I for one am here to tell you today that in my schools, we do struggle mightily with this stuff and I've witnessed many failures, not a few of which were my own personal brainchildren.**

At the same time that I was coming to appreciate that the grass on the other side was not always as green as I had previously thought, I noticed something else, too. ***When given time and lots of opportunities to connect with one another, teachers tend to figure this stuff out on their own.*** It's not an overnight process, but I witnessed at my old school and am beginning to witness at the schools in my new district an evolution in teachers' sophistication and enthusiasm regarding use of technology in the classroom. If there's one thing I've learned after doing this for the last ten or so years, it's that **the ultimate "teachable moment" in technology professional development happens when one teacher peers over the shoulder of a colleague as she works at preparing an activity and the teacher says, "hey, what's that?"** In my view, you couldn't find a better way to start a teacher thinking critically about teaching with technology. ***How can we, as technology leaders, make those moments happen more frequently and make them meaningful?***

Monolithic, top-down roll-outs of professional development and/or curriculum look great on paper. And it's easy to make people do things when you (or your friends) sign their paychecks. But I think that **these sweeping initiatives frequently result in the illusion of learning, not necessarily learning itself**. I think that **for technology to really have an impact, teachers have to own it. And I don't mean they have to "buy in" to it – I hate that term. I'm not selling anything to them. My job is to help them become more aware of what's out there and to connect them to one another.** Anything more proscriptive than that – especially things done in a one-size-fits-all do-it-or-else manner – may change behaviors but I'm not all that confident that it will result in learning.

So what does this sort of "grassroots approach" look like in practical terms? Here are a few tips that I've gleaned from my own experience:

1. **Connect teachers to one another:** for every instructor-led training you do, sponsor a "jam session" where individual teachers can stand up and share with their colleagues things that they've learned about teaching with technology. **Get as many teachers as possible involved in presenting new tools and classroom approaches to their colleagues.** In one of our schools, we recently

sponsored a “Tech Tasting” where 10 teachers set up kiosks around our library and the rest of the faculty could move around and tour the exhibits of classroom technology use that their colleagues were showcasing.

2. **Try to help teachers develop a critical awareness of instructional technology:** We need to **empower teachers to make informed decisions** about the use of technology in their classes. I think our roles as technology leaders should be not only to get teachers to use technology but to **help them learn when to “just say no.”** Of course, this flies in the face of the whole “adoption” paradigm, but if it results in better student learning, I feel like I’m doing my job. These people know a lot about their students and the curriculum; our job is to help them develop the ability to identify, select, and implement appropriate tools to support their instructional goals. I always model **this when I talk to teachers about some new tool.** Instead of taking the “this is the best thing since sliced bread” approach, I’ll be **very frank in noting not only its benefits but its weaknesses, as well.**
3. **Understand who and what you’re dealing with:** How can we make recommendations to teachers about the tools they should use in their classrooms if we don’t understand what goes on there? I think that technology leaders need to **spend a lot of time in classrooms**, not necessarily to support instruction but just to **understand more thoroughly the needs to the students, the teacher, and the curriculum.** I think this also means taking the time to **talk with teachers about their curriculum.** Is the information flow in your office two-way? I think we all send teachers lots of information about useful web sites and tools; how many of us are getting information back in return about the things that happen in those classrooms?
4. **Differentiate:** We place so much emphasis on differentiating instruction for students and then we design professional development days where you’ve got high school social studies teachers sitting next to 2nd grade teachers learning about Microsoft Excel. I would recommend adopting a **consultant model**, where you offer your services to individual grade levels, departments, and even individual teachers.
5. **Be patient: Change doesn’t happen overnight.** With technology comes the unreasonable expectation that change is certain, quick, and always positive. We frequently find ourselves under a lot of pressure from various quarters to bring out change quickly, but I think that sometimes we have to **push back and tell the others around us that for a meaningful evolution of learning in our schools to occur, teachers need time to learn, plan, practice, play.**

If you take a minute to think about the four tips I just offered, you might realize that what it really boils down to is **cooperative learning, critical thinking, formative assessment, and differentiation of instruction: all things that we probably claim to believe in** but are we designing professional development experiences around older, less effective models. To put it another way, isn’t it time that we took our own advice and **stopped being the “sage on the stage” and instead took the role of the “guide on the side?”**

I started my career back in the 1990's as a **high school English teacher**. There were no Directors of Technology or Technology Coordinators back then. There were just **a few of us who recognized the potential power of technology in the classroom and started playing, experimenting, and helping others** to incorporate what we were discovering. It was an exciting time. As the numbers of computers, applications, and users grew, each year I lost a section of English and took on more responsibilities until I found myself in a nice administrative position with no class sections, a big budget, and a mandate to "get the faculty using technology." Considering the way that technology has exploded in schools, it's necessary to have people like us around right now. But I think it's important to remember that, **despite our crazy titles and fancy job descriptions, it is the teachers in a school who more than anything determine the quality of the learning that goes on there and it's our job to support them and work in partnership with them to help students learn**. So the next time you find yourself sitting in a meeting discussing how to get teachers to "buy in" to whatever it is you're trying to sell, think back to the days when you were on fire about PC's, the internet, Inspiration, or whatever. I'm guessing that it wasn't a mandatory inservice in the computer lab that started that fire and made you stay at work way too late playing at the computer. **What smoldering flames are out in your faculty, just waiting to be fanned and fed? What can you do to keep them alive and make them grow?**
Thanks.