

Technology and Tough Economic Times

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If one looks across the vision documents of a number of professional associations and groups, there is widespread agreement on a central role for technology in the transformation of teaching and learning. Four district documents come to mind as the core of the vision.

Teacher-librarians are no doubt familiar with the vision of NETS, P21, and AASL, but might not know that the Software & Information Industry Association (SIIA) has an excellent vision statement, *Vision K-20*, which was published in 2008. The SIIA principles are as follows:

- By the end of the decade (2010), we believe that every K-20 institution can—and should—have an instructional and institutional framework that embraces technology and 3-learning in order to:

- Increase student engagement and achievement
- Provide equity and access to new learning opportunities
- Document and track student performance
- Empower collaborative learning communities
- Maximize teaching and administrative effectiveness
- Build student proficiencies in 21st century skills (p4).

Each year, SIIA sends out a questionnaire to try to gauge progress toward their broad visions. Results of the answers to 20 questions across seven goals embracing the six principles over the three surveys reveals that there has not been a lot of progress (see chart from p. 18 of the full report).

The two real learning targets, deep learning/motivation and creativity/self-expression, seem to stall between 50-60%. Administrative and assessment technologies fare better. And, of course, we realize that in such surveys, the actual reality in your classroom or library might be quite different than a national glimpse at progress.



Figure 1

During the economic downturn, there is likely less money for technology in a typical school and so the challenge of building effect on teaching and learning with less money becomes the center of attention.

We think that teacher-librarians and teacher technologists can make a great deal of progress if they find creative ways to maximize the results they want on the technology they already have. We have noticed a number of trends in our visits, professional reading, conferences, and the various social blogs about technology:

- Slowly, teachers are making progress in knowing how to use technology to have an effect on learning. Teacher-librarians and teacher technologists concentrate on the early and middle adopters and hope to infect the rest.

- We are encouraged by the number of visionary teams of a teacher technologist and a district teacher-librarian who have matched visions of technology as a teaching and learning tool and push their vision in concert. For example, we admire:

- Mark Carbone and Anita Brooks Kirkland of Waterloo Regional District School Board, Ontario, Canada.
- Dawn Nelson and Tim Wilson of Osseo Area Schools, Maple Grove, Minnesota.
- Rich Boettner and Marsha Pfahl of Hilliard City Schools, Hilliard, Ohio.

- The trend toward cloud computing and the use of free tools such as Google Apps can relieve school and district budgets allowing what funds schools have to concentrate on the increase of bandwidth rather than the building of server farms.

- We notice there is more and more interest in linking a student's personal computing device into the school networks so the financial responsibility to buy a computer for each child begins to switch from the school to the home (with equity in mind, of course). Students with their own iPads, Netbooks, or cell phones can be counted as having access and ready to learn.

And, while all these trends bode well for increased impact, one target can make a major difference even in dismal financial times and even when there is a decreasing number of professionals in the schools devoted to library/learning commons and technology coaching:

If specialists concentrate on using the best free tools to have an actual impact on teaching and learning, then when money does come available, there is a demonstrated track record to target.

What do we mean? Perhaps an example might illuminate the point.

In every school, students study people across disciplines and grade levels. Explorers, presidents, scientists, African Americans, sports figures, or pop culture figures are just a few. Students are often encouraged to become familiar with these notables and do some sort of report, presentation, or multimedia project that illuminates their person of interest. Letting the student choose a person of interest has always been assumed as a way to create interest and engagement with the individual.

However, the teacher technologist/teacher-librarian want to use the power of technology not only to help the student become better acquainted with a single individual, but to build some collaborative intelligence about the group of persons being studied by the class as a whole. Using Google forms, the students complete a two-question form as many times as they wish about their particular person: What character trait does the person you are studying exemplify? And, describe how your person exhibited this trait. A student might cite COURAGE for Vasco daGama saying it took courage to travel around the southern tip of Africa where Europeans had never sailed before.

Google Forms automatically populates a Google Spreadsheet so we know who and when students entered data. Then we sort the spreadsheet by characteristic and assign groups of students to analyze and synthesize the results relating not only character traits of the people they have studied but how they might incorporate that trait in their own lives, or how they notice people around them exhibiting the same traits. We are pushing young minds not to just collect and spit out data but to think critically as they see patterns and trends developing across people they have identified. If teacher-librarians and the collaborative teacher see higher order thinking happening in



Figure 2

activities like this, then documenting that across collaborative learning experiences becomes evidence of our contribution to teaching and learning.

Numerous studies and reports connected to technology and learning are published every year. Some are positive; others, negative. Nothing is stronger, however, than documented evidence experience by experience with the learners at hand. Look for evidence of sophistication both in the process of teaching and the direct effect on learning. Conduct a Big Think with the collaborating adults and the learners asking such questions as:

- What do I know about the topic studied?
- What do WE know about the topic studied?
- How did I learn what I know?
- How did WE learn what we know?
- How could we be better learners next time?

Event by event, such metacognitive reflection focuses on sophistication over time. And that is what its all about both in times of plenty or scarcity.

RESOURCES

International Society for Technology in Education. (2009). *National Educational Technology Standards for Students*. [... Teachers; ...Administrators]. Retrieved July 19, 2010 from <http://www.iste.org/AM/Template.cfm?Section=NETS>.

American Association of School Librarians. 2007. *Standards for the 21st Century Learner*. Retrieved July 19, 2010, from <http://www.ala.org/ala/mgrps/divs/aasl/guidelinesandstandards/guidelinesandstandards.cfm>.

Partnership for 21st Century Skills. (2009). *Standards: A 21st Century Skills Implementation Guide*. Retrieved July 19, 2010 from <http://www.p21.org/>.

FOR INFORMATION ABOUT THE SIIA STANDARDS:

"Survey Reveals Ed Tech is Progressing if Slowly," *T.H.E. Journal*, Retrieved July 20, 2010 from <http://thejournal.com/articles/2010/07/19/survey-reveals-ed-tech-is-progressing-if-slowly.aspx>.

Vision K-20: A Vision for K-20 Education. Software and Information Industry Association (SIIA), 2008. Available at http://siiainet.org/presentations/VisionBooklet_2007.pdf.

SIIA: Results of the Spring 2010 SIIA Vision K-20 Survey: Technology—Education—America's Future. SIIA, June 29, 2010. Complete document available at http://www.siiainet.org/index.php?option=com_docman&task=doc_download&Itemid=318&gid=2634.