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Perspective from the Ed Tech Field

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Working at a non-profit trade association for the last ten years has given me a great perspective on how schools are using technology to support the teaching and learning process. This part of my career comes after 12 years of teaching in elementary, secondary and postsecondary classrooms (both face-to-face and online) and after 20 years of working in education and technology companies.

SIIA, the Washington, DC-based association where I work, is the principal trade association for the software and digital content industries. There are more than 500 member companies that range from the two-person start-up to the largest publishers and technology platform companies. Regardless of size, though, all members use our support in government relations, business development and intellectual property protection.

I lead the Education Division and, with our members, develop initiatives that support a comprehensive, life-long learning strategy, initiatives that help integrate technology into education to provide “anytime, anywhere” and personalized learning and help to meet our high-tech workforce needs. Five years ago, we put forth a vision for technology use that supported educational goals. Our “Vision K-20” initiative promotes the best uses of technology to ensure that all U.S. students have access to a teaching and learning environment capable of preparing them to compete globally and lead the world in innovation.

Our members always want more information about technology use within education institutions, as it helps them design and produce products appropriate for the classroom. So, five years ago we designed a survey to assess schools’ progress in reaching the Vision and have implemented this survey annually since. The survey is an annual, online self-assessment designed for educators and administrators in K-12 classrooms, schools, and districts, and postsecondary courses, departments, and campuses. The survey consists of 20 benchmark statements that indicate progress toward the SIIA Vision using five measures of progress: Enterprise Support, 21st Century Tools, Anytime/Anywhere Access, Differentiated Learning, and Assessment Tools.

What have we learned in those five years that is important to the broader education community? Our key “take-away” in our last survey is that, despite having to contend with deep budget cuts, schools have been able to maintain current levels of technology growth, a surprising find given the difficult economy and drastic budget cuts within education. And this year, the 1600 responders provided information that shows that educational institutions are maintaining their level of investments in each

of the key measures of progress, showing the growing importance of technology within their institutions.

The other key take-away comes from comparing the results of five years of data. The comparison shows that the overall progress toward attaining Vision goals continues to be very slow. There have been some increases and decreases recorded for various benchmarks in both K-12 and post-secondary, but these changes year-to-year have been relatively minor. SIIA analysis suggests that, while schools have made progress each year in their use of technology, technology innovation has matched that pace. While schools do indeed move ahead, so have their end points and their goals – and therefore their vision for how technology could be used.

This year's survey showed some surprising trends in the industry.

- Although participants say current technology use lags behind their ideal level, schools are continuing to implement technology despite budget cuts. Some likely reasons: they're using existing technology; they're turning to free or inexpensive digital content and resources; and they're redirecting funds from things like print materials for digital resources.
- Results showed an increase in technology integration that focuses on differentiated instruction, assessment tools, and information systems, suggesting these areas are priorities for schools. These include tools like learning management systems, online tutoring, online assessments, e-portfolios, and data-tracking systems.
- The survey items that are closest to ideal integration, including broadband and security systems, may suggest that school- and district-wide goals are more attainable than individual classroom goals like new hardware. This supports the commonly-held notion that district personnel have prioritized Internet access, student privacy, and security when making tech decisions.

The areas that did see growth reflect an increased emphasis on assessments and accountability in schools. Survey respondents rated their current level of technology implementation on a scale of 1-4, with 1 being the lowest level of integration and 4 the highest. The four benchmarks that saw the most growth include

- courseware and/or learning management systems that are used to differentiate instruction (average 2.07 from 1.91), confirming the recent interest and growth of adaptive curriculum tools that allow for personalized learning and instruction;

- student information systems that track performance and institutional data for educational accountability and decision making (2.49, up from 2.35 in 2010);
- institution leaders that use technology tools for planning, budgeting, and decision making (2.52 from 2.42); and
- technology-based assessments that measure a full range of 21st-century skills and knowledge (2.01 from 1.9).

The survey also showed, for the fourth year in a row, a marked difference between K-12 and post-secondary institutions in the adoption of technology. The average scores for the 2012 survey were 2.39 for the K-12 segment and 2.71 for post-secondary (on a scale of 1-4), meaning post-secondary institutions are integrating new technologies faster than K-12 institutions.

Despite variance in technology adoption, SIIA reports that, in many areas, K-12 and post-secondary schools have made similar progress in 2012. This suggests that technology priorities for K-12 and post-secondary are strikingly similar when it comes to using security tools to protect student data and privacy; providing high-speed broadband access for robust communication, administrative, and instructional needs; and building institution websites for the education community with access to applications, resources, and collaboration tools.

In 2012, for the first time in the survey, participants were asked to respond to each of the questions based on both their current level and their ideal level of technology integration. For each of the measures of progress, survey participants rated their ideal implementation of each measure much higher than the current level. Overall, 75 percent of K-12 respondents chose the “highest” level of technology use as their ideal level.

Responders this year indicated they appreciate the survey because it helps them see where their focus needs to be for the future of their institutions. Even with limited equipment and lack of a technology budget, they think it’s important to have a solid plan and informed priorities. That said, perhaps the true value of the survey is not in the resulting scores they achieved, but simply the planning support it gives to their educational institutions.

There have been numerous research and evaluation projects to determine just what the benefits are to using technology in schools. SIIA is attempting to compile the credible ones and make them available to everyone who can access our website. Studies that come to mind show that

- technology-enriched classrooms will typically have a greater positive effect on achievement and on self-esteem for students in low socioeconomic status (regardless of ability levels); and
- the effects of distance education of virtual/online learning is about the same as traditional instruction, and the best results are coming from 'blended' learning (a mix of online and traditional face-to-face instruction).

These are described and sourced, along with others at our Vision website at <http://www.siaa.net/visionk20/pages/evidence.html>.

I believe that, as schools become more successful at using technology they will become more successful at meeting their educational goals. I more firmly believe, even after spending most of my life supporting the use of technology in schools, that technology will never be a replacement for teachers, but instead, will always be an effective enabler for good teaching.