



NCTI 2009 Innovators Conference

The Federal Perspective on Innovation and Technology

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Summary: This session offered insights from top-level officials at the U.S. Department of Education on the future of education technology policy, with specific information about the area of assistive technologies and the National Educational Technology Plan.

Discussion

John Kemp

- When we think about cellphones and smartphones, how books will be delivered, we are on the verge of another great wave of innovation and change. Hats off to Department of Education. There are several things on the near horizon that will affect our work for individuals with disabilities:
 - **Broadband:** It's one thing to have all this content, and another to not be able to use it. We should be watching five chief barriers to broadband adoption:
 - Affordability service
 - Hardware
 - Digital technology literacy levels
 - Lack of awareness of relevance and utility of broadband and online content
 - Inability to use existing technology and applications due to physical or mental disabilities
- We need to make sure that these concerns focus on fixes to the environment and delivery – not on locating problems in the individuals.
- **UN Convention on the Rights of People with Disabilities:** Addresses international platforms and can drive change. This is a breakthrough issue—and we will be advocating for Senate ratification.
- Schools provide tools as accommodations – empowering everyone. Wise companies see this issue in a pluralistic way.



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- **Accessibility of ICT in the workplace** – People with disabilities are often denied the benefits of employment. We need to work closely with the business community and help them take tools for those with disabilities and move them into the workplace. How do we help transitions from school to work, school to home, grad school and beyond?
- What factors could limit the potential in these trends? Fail to integrate and see holistic approach, or to think across departments and agencies. Failure to implement mechanisms for cross-functional divisions.
- A whole new way of mind is needed. Right brainers will rule the future. Forces are taking us from information age to conceptual age (as written about by Daniel Pink in [A Whole New Mind](#), 2005):
 - **Abundance:** Placing facts in context and deliver them with emotional impact. Synthesize rather than to analyze. Relationships between unrelated fields, detecting patterns, inventing something new.
 - **Automation:** Serious gaming: Kids playing with oversized thumbs are going to take over the world. When kids play video games they experience a more powerful form of learning than in the classroom. Youth understand game play: what are the right questions, changing scenario, rolling out to platforms. But how accessible are games? Are 3D environments accessible?

Kwasi Asare

- President Obama set a course for America to lead the world by 2020 and that requires that we produce the most talented and brightest students on the planet. Some key initiatives include:
 1. Invest in STEM (science, technology, engineering and math education), visual arts, media arts, other vocations: It is imperative that we prep all our children to succeed.
 2. Improve tracking data to follow performance of teachers and students across time, grades, geography, post-secondary, etc.
 - a. Address the “dropout factories” and turn around struggling schools
 - b. Place a premium on human capital
 - c. States encouraged to remove policy barriers
 3. Employ data systems in classrooms, developing data-driven decision making cultures.



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4. Establish fewer clearer higher standards. Many not prepared to meet standards for success.
 5. Encourage innovation in technology for 21st century success for American students. Doing more with less is attainable with technology, including creating deeply personal relationships, collaboration with master instructors, matching students with different learning paths, the personalization of learning.
- Collaboration and engagement is vital to reaching these goals and acting on the priorities. We need to use tech to document and share what works and boost productivity and personalization.
 - What's next from the Department of Education:
 - Continue having conversations, dialogue, look to convene more of these meetings.
 - Dept. considering pilots involving personalized open programs.
 - National Education Technology Plan, is open now and soliciting comments. It is an example of transparency and of establishing communities of practice to forge connections.

Karen Cator

- It is going to take a village. Technology is everywhere and nowhere. There are people all over the department and the country, immersed in how to help kids learn with technology.
- The **National Education Technology Plan**:
 - More than just about technology, it is laying out the vision for how all students can learn.
 - All students are critically important.
 - We know many of the technologies are good for all kids.
 - Rise above the niche and speak loudly and clearly about how technologies are critical for all students.
 - Draft in January:
 - Created in a wiki-type collaborative environment at <https://edtechfuture.org/>.



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- Find the best stories that we can have at our fingertips to show legislators, to explain to people what it looks like, to give people the vision for how they should be thinking about this for all students.
- From a study being conducted through the OECD, analyzing the correlation between student use of tech at home and school and science exam, they are finding that technology use at school did not correlate with higher performance, but technology use at home did. This leads to questions of how kids use technology in informal settings, how technology allows and enables personalized learning environments, learning what kids do outside of school.
- Research and evaluation:
 - 3 years from now – if we still have people saying “this study suggests that technology isn’t effective” – we will be asking the wrong question.
 - If the FCC is successful, we will have broadband everywhere.
 - Accessible devices in the hands of all students.
- Content: We need new development and interoperable content that includes simulations, people, environments, and community.

Discussion and Q&A

Question: With the amount of researchers that are in this room today, can we add a national database to share the research, to make this research available to anyone in to access for free?

Question from Lucy Baney, ATG: Currently there exist cyber grants, SBIR grants. These provide a leg up to small companies in the initial and stage 2 and 3 funding. But there is a lack of capital available for small business specifically in this area of assistive technologies. We can not just have the R&D go to all the big companies?

- **Karen Cator:** It may be possible to take a clearinghouse approach: wherever this development is happening, how do we support it? Also, there isn’t a methodology for small companies or incentive for large companies to do the evaluation of their tool. We are thinking more about this.
- **Kwasi Asare:** It is not just in the small businesses but in the education market as a whole. How do you encourage technologies getting off the ground? Support them, bridge great ideas. The education market is a mess. Selling is hard and the customers are fragmented. Some of the investments in the common core standards and assessments will help that and provide platforms for distribution and access.



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Question from Donna McNear, consultant: As a retired teacher after 32 years, I want to continue mentorship and advocacy for colleagues going to work in difficult daily circumstances. I'm so excited about listening to you this morning because you bring a message of hope. Kids show up in school buses every morning, we need to meet their needs today, too. How can we get the message up to policy-makers regarding what is happening in today's schools?

- **Karen Cator:** Everybody has stories. We have to get really good at publishing and distributing those.

Question from Larry Goldberg, WGBH: I have an administrative question. In the review of grants, when proposing grants, peer review process traps us in terms of stretching the boundaries. For instance, a recent review panel I submitted to had no idea about Second Life in a project we proposed. What can peer review panels for ed tech do to be more open minded?

- **Karen Cator:** Given text limitations of grant submissions, review panels can't SEE the technologies that are being proposed in the paper-based proposal. We might need to change that.

Question from Cheryl Volkman, AbleNet: We need more attention focused on commercialization of new products way earlier in the process of development. I'm excited to hear you talk about the selling process and how difficult it can be. The expense of aligning materials to standards is daunting.

- **Karen Cator:** Commercialization is being addressed in new grants coming out.

Question from Nancy Reder, NASDSE: Let's talk about data. Just because tech provides us with capacity to collect data, collecting data should be tied to improving outcomes for all students. We need to focus on improving outcomes. There is overlap in data being collected and we need to undertake some kind of analysis and look cross-program and reduce the duplication, using ed facts and collecting it in a meaningful way.

- **Karen Cator:** There are multiple data projects going on such as the national education data model project, a data dictionary, and state longitudinal data systems project. I don't think we have the right data yet. We don't have the right assessments yet to understand how kids are learning with technology.

Question from Kim Hynes, CEC: State can't turn around data collection on a dime. State education agencies may not operate their own centers, they may have to stand in line to get IT changes made. Changes may take up to a year. When changes come down from on high, with expectation that changes have to be made and implemented, states can't turn them around that quickly.



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- **Kwasi Asware:** There are districts that are further ahead of states, states that are just beginning. We're marching towards a roadmap moving towards a direction towards accountability, more towards an innovation culture. Having a thoughtful approach for sharing this innovation.

Question from Shelly McLaughlin, doctoral candidate, University at Buffalo: We need a common language teaching with technology and teaching through technology. I see this amazing transformation for teachers when they get that. Lots of stories, for teachers, students and families- meaningful. We need common language to talk about that.