



National Center for Technology Innovation
Advancing Technology Innovations for All Students

NCTI 2009 Innovators Conference

Welcome and Opening Remarks

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Good morning and welcome to the 2009 NCTI Technology Innovators Conference: *Educational Futures Powered by Technology*. We are very excited and honored to have you here today – the leaders and innovators who are focused on improving educational opportunities for students, particularly those with disabilities.

Woops! We have a message.....This reminds us to – not power down, but put your phones on vibrate.

So here we are today. You have come from far and wide, from Alaska to Saudi Arabia, WELCOME! We have a diverse group of leaders here today from industry, academia, education, the non-profit sector, foundations, government, graduate students, and the media. We are delighted to be able to bring you all together today. As many of know, the National Center for Technology Innovation, or NCTI, is funded by the Office of Special Education Programs at the U.S. Department of Education. We are funded to serve as a connector and an information hub for technology innovators, researchers, and educators. Like you, we seek to advance learning opportunities for all students, particularly those with disabilities.

As you registered for the conference, you all answered this question, Which trends are most likely to impact your work in 2010?? This slide shows which of the 19 possible “trends” people chose and how they are related to one another. The size of the circle is based on the number of people who chose the trend. Trends are connected if they were both listed together **more than 80 times**. Lines are thicker and darker if more people listed both together. Innovation and Online Learning had the strongest connection. Each of those was also connected closely with Social Media. NCTI has been using social media, such as Facebook and twitter for more than three years and have seen the power of these tools. We have worked with Derek Hansen of the University of MD iSchool to help us better understand the impact of our efforts. So let’s see the connections.

This next slide displays the followers of NCTI on Twitter where size of image = the strength of the connection. This shows the connectors, or “Bridge Spanners”, those people or entities that create and connect networks. Let’s see who is here, groups such as Bookshare, disability advocacy groups, the NEA, BrowseAloud, AdLit.org, Reading Rockets, Ldonline.org, TILES, and Scholastic. Let me underscore that this tool enables NCTI to build upon the power of all the other networks to significantly expand our reach and dissemination. So the question is, WHO is the NCTI Bridge Spanner, the person to whom all roads lead?? David Rose, Founder

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and Chief Education Officer of CAST. What a strong community we are, and it begs the question, how much stronger we could be if we all work together to leverage the power of these tools?

Together, during the next two days, we will explore new possibilities for breakthroughs in educational technology. As you can see from the Agenda in your conference books, we are very fortunate to have convened the gurus who will challenge us to expand our thinking and to work in new and different ways. They will provide valuable insights on the trends, tools, and research and the extraordinary opportunities to take our work to an entirely new level. We are counting on each of you to ask the hard questions to keep children with disabilities at the forefront of everyone's educational agenda. We want to take a moment to thank our funder, the Office of Special Education Programs (OSEP) at the U.S. Department of Education. And a shout out to our project officer, Jane Hauser.

I think we all agree that these are times of extraordinary opportunities for the field of educational and assistive technology. This administration has brought new priorities and goals. The U.S. Dept. of Education's core reforms are expected to transform public education powered by innovation and technology. These reforms have the promise to remove some of the barriers to innovation in education. And not only do we have policies that encourage reform but there is funding for implementation.

So with the talk of innovation, we at NCTI began to ask, What does this mean for **our** field of technology for students with disabilities? To answer that question, we reached out to experts in technology, education, industry, and government. From these discussions, plus a review of the literature and trends, we identified five key themes that define state-of-the-art. Here they are and you don't even have to take notes because they are discussed in detail in the issue brief in your conference binder, *Unleashing the Power of Innovation for Assistive Technology*. We encourage you to contribute to this draft on our site, via email, or even a call. It is posted at <http://www.nationaltechcenter.org/index.php/2009/11/16/rpt-innovation-for-assistive-technology/>. Here are the themes we have identified:

Convergence is the transformation of various systems or tools into a single platform or device. Think smart phones—like the vegomatic of years ago which sliced and diced and did everything you could imagine in the kitchen. These handheld devices bring together the PC and thousands of software applications, a telephone, a camera and the interactivity of the Internet. Smart phones, running multiple apps, can support the individual needs of students throughout the day IF schools understood all the creative ways these tools could be used.

Customizability to meet individual needs has become a common feature in educational software to increase access and benefit to technology. Applying the principles of Universal Design for Learning, or UDL, can be an effective way to customize teaching, learning, and assessment to meet the needs of diverse students.



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Evidence-Based Research. The research in the field is broadening, shifting from device-focused or disability-focused research to an examination of specific features and broader audiences. We know that 80% or more of our students with disabilities are in general education classrooms like this one taught by general education teachers. The evidence base needs to reflect these real-world implementation challenges and solutions so we can demonstrate what works for which students in which particular settings.

Portability. Portable technologies can boost student independence. Along with the themes of convergence and customizability, the technology exists today to support students where ever and whenever they are learning. As the Joan Ganz Cooney Center research tells us, our children aren't just digital natives, they've gone mobile.

What used to fit in a building

Now fits in your pocket.....what fits in your pocket now...

Will fit inside a blood cell in 25 years.

Interoperability. The ability of systems to exchange information enables us to link and mine teacher and student data in powerful new ways. This creates the opportunity to link students' performance data collected on assistive devices to that larger data stream contributing to the much-needed evidence base of AT outcomes and benefits.

As we can see, we have significant reforms in policy and rapidly evolving shifts in technology that together create unprecedented opportunity for innovation in educational technology. The question here is how do we seize this opportunity? Drum roll---the answer is...we can learn from innovators past and present. I've spent some time looking at innovators—people who have changed the game—in a number of disciplines. What is evident is there are common strategies to the way they think and approach problems.

1) They start by asking the right questions. There is an old marketing saying that says when someone goes to buy a drill, what they REALLY want is to make a hole. Innovators start with the right question. What is the problem we need to solve? They ask, not just what is, but what might be? What is possible? What should happen? Dean Kamen, who spoke at our conference in 2007, invented the mobile dialysis machine. He asked, "Why should someone have to go the hospital multiple times a week for treatment? Isn't there another way?" We need to ask these types of questions. Assistive technology isn't just about adding new features to what we already have, but really, it is about opening doors for learning.

2) Innovators see around the corners. I heard an example of this in a speech by marketing guru turned venture capitalist Guy Kawasaki who said, "If I were in the refrigeration business, I wouldn't be focusing on the next generation of cooling coils but rather on bio-tech and enzymes and other ways to preserve food." What is around the corner for us in education and technology? How are the needs and technology changing? Like this slide with a live feed of



people on the other side of the world, interacting with passersby on the street, our children have come to expect change. They are not afraid of what is around the corner. Those of us here today need to embrace this culture of change in our work.

3) They are not afraid to be wrong. Sir Ken Robinson, one of the foremost authorities today on creativity and education, says, “If you are not prepared to be wrong, you won’t come up with anything original.” He was speaking about children who are open to trying new things and making mistakes as part of their process to learn. Malcom Gladwell, author of *Outlier*, gave the same message here in Washington DC this summer at the National Education Computing Conference. The very act of doing something new may lead us to new directions. Think penicillin—discovered by accident while trying to discover something else. What a beautiful mistake that was.

In your conference bags is a pre-release copy of **Switch: How to Change Things When Change is Hard**, by Chip and Dan Heath. You will find engaging examples of leaders – large and small – who have made change happen.

How can we not be excited about the future? So many things we could not have imagined are coming together to foster innovation and opportunity for all of us. In this room alone, we have the intelligence, creativity, experience, and knowledge that can drive significant breakthroughs. I challenge all of you in the next two days to think about how we can work together to take the field to the next level and take our place among the innovators.

And now, it gives me great pleasure to introduce Larry Wexler, Director, Research to Practice Division, Office of Special Education Programs.