



NCTI 2009 Innovators Conference

Tuesday Keynote

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Transcript

It is a privilege to be back with NCTI and to this conference. I had a vacation last year, and it was wonderful to be able to sit in the audience and watch. It's also a privilege to be here and to introduce a couple of fantastic speakers and to, before that, share a few thoughts with you.

This is one of the premiere technology-in-education conferences in the world. You hear the finest speakers anywhere in the world. You also have the benefit of being with Tracy and Heidi and their fantastic team... in what they are helping young people with disabilities believe is their future...

But this is all about raising the expectations for people with disabilities, for children with disabilities and young adults. It's about letting them believe that they can do just about anything in the world that they wish to do, and then giving them the tools to be able to do it. And I know we're not there yet.

And the faster innovation occurs, the more smart phones that get out there, the more iPhones that I can't use myself – I'm down to one little device that I can use as a phone ...with my clamps and I'm a little worried about the future and I don't know really what I'm going to do. So I've got to deal with that, just in my own particular circumstance.

But as innovation pushes out, I'm the last person to say stop, you know, just all I'm saying is, **include me.**

So we keep widening and widening and widening the use of devices as small as they get, and actually I think having clamps is a real advantage to typing on those little keyboards. Those little QWERTY [keyboards] are all perfect for me, so long as I can touch the screen and it responds to what I'm touching on the screen, that's great. But when you think about cell phones and smart phones, and we think about the books and the way books are going to be delivered, electronically, the access to information and communication that young people will have, will jump over a lot of hurdles...we are really on the verge of another great wave of innovation and change.

And our job is to make sure that all people come along with it- everybody.

So my hat's off to the Department of Education. Jane, thank you very much and all of your colleagues at the Department of Education. It's a privilege to be here and with Tracy and Heidi, to see Barry Fingerhut, my friend from New York that I just referenced... To know that David



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Rose was here yesterday, lucky you, lucky you, and lucky all of us whoever got to hear David and Chuck Hitchcock who's also here, we're all very fortunate that CAST is a part of what we're doing and congratulations to them and to everybody here for what's going on.

I wanted to say a couple of thoughts and remarks that hopefully frame some of our discussion today and we're very privileged to have some great speakers, but I got onto the issue of broadband and really thinking it's really one thing to have all this content and then not be able to view it, or be able to use it in homes and classrooms and even in workplaces. And I've been watching the developments at the FCC and really seeing the convergence of these issues, hopefully being guided through the White House, and looking at broadband.

Now the Federal Communications Commission has come out with the **five chief barriers to broadband adoption**.

- One is the affordability of the service.
- Two is affordability of hardware.
- Three is the insufficient digital and technical literacy levels, which I think we just referenced.
- Four is the lack of awareness of the personal relevance and utility of broadband technology and online content, thinking about "I'm overwhelmed with information". Well, you're going to be overwhelmed, but how do you use that information in a meaningful way – how do you develop it and know how to interpret it.
- And the fifth one that the FCC identified was an inability to use existing technology and applications due to physical or mental disabilities.

Okay. They acknowledge it. Part of me says much like we were talking about the physical environment 20 or 30 years ago, it's the environment, it's not me. And part of the way this is written is sort of like it is me, but it really should be the problem is the environment that has been created, the infrastructure that has been created.

So we have to think a little bit about what the context of that statement is. I'm hoping that it's really not due to the physical or mental disabilities but it's due to our inability to widen out the use, broaden the use and make sure that all people can possibly use all of the benefits that broadband has to offer.

We have the **UN Convention on the rights of people with disabilities**, and I know we have international guests here, I understand, Mexico, Saudi Arabia, and many companies here and educators work on an international platform. The UN convention is going to drive some change I hope, and I really commend President Obama for directing Secretary Rice to sign the UN convention on July 30th, this was a breakthrough issue.



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We were stuck for a few years in not thinking beyond our borders, not thinking broader, not realizing the power and the impact of what the ADA meant and the promise that the ADA meant to people worldwide. Countries followed our lead for a number of years, and then they went past us. So I really must say I applaud President Obama for what he has delivered to us and for us, and I am just grateful that we have the UN Convention. But to conform to the UN Convention ... we hopefully get it ratified in the spring and I'm working on a coalition of people through the United States International Council on Disabilities to get that done. I'm sure Larry is very involved in that as well... To get it ratified by two thirds of the Senate and that may be harder than it seems, but I think it will be done, and we will be on board.

Two years from that point then, after monitoring kicks in and we start looking at how we have to change during those two years, what changes to our laws do we need to make, we are going to see that at least nine provisions of the UN Convention on the rights of people with disabilities talk about accessible ICT and it will drive some changes that we will have to make in the United States which I think will only be for the good. It was a very well written document, very well thought out, very well written document and I'm really very excited about it.

I work closely with the business community in how they take the products, the brilliant minds of young people with and without disabilities and give them the tools and hopefully move them on. So when I think about what does all this technology mean in schools, can they use it, can they transition from school to work or school to home or school to graduate school and beyond, where do they go once they leave the elementary and secondary education. What are they used to? What are their expectations? Kind of hard to dial back a kid who's learned how to be involved in social networking and have all these tools available to him or her and then dial them back because they can't now afford it, they cannot afford what is available and possible out there. The schools were providing it as accommodations, maybe they go to the workplace, the workplace has a different set of standards, say yes, reasonable accommodation is part of it, but we're talking about hopefully empowering everyone and wise companies really see this issue in a pluralistic way. What's good for people with disabilities is also very good for all their employees.

Without becoming proactive about the accessibility of ICT in the workplace, public and private enterprises will experience severely negative outcomes. The inability to incorporate those with disabilities, those of us with disabilities, into the workplace will drive unemployment rates for our population (which is already higher than those without disabilities even higher), and in turn higher unemployment will increase the cost to government in terms of benefits programs and compensation programs. And without the ability to fully take part in the modern workplace, people with disabilities will be denied the benefits, both financial and non-financial, of employment and we lack seriously the opportunity to work which is hopefully one of the major outcomes of why we pursue education, besides gaining the knowledge and being enriched just unto itself.



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What could limit, what factors could limit the adoption of accessible IT in the workplace? We fail to integrate and look at a holistic approach. We don't think across various departments and agencies, I think hopefully that's what the White House is doing on the governmental side.

Organizations often have challenges interpreting and applying existing and new accessibility standards and tool kits for the development and procurement of workplace technologies. What can we learn from what you're doing here in the marketplace and in the workplace? And then finally, organizations often fail to implement mechanisms that effectively promote and support cross functional coordination between aligned organizations. Do you think that the HR department and the IT department in agencies work well together all the time? No. Do the suppliers know what's going on out there? No, they don't. So this is all relatively new.

So we have lots of challenges, kind of fun things to think about.

Let me just conclude with some remarks – I read this book by Daniel Pink, *A Whole New Mind: Why Right Brainers Will Rule the Future* here. I'm talking to a bunch of technologists, everybody's very scientific, mathematical, hopefully we're looking at these kinds of things. Three forces will drive us from the information age to the conceptual age: abundance, Asia, and automation. When facts become so widely available and instantly accessible each one becomes less valuable. What begins to matter more is the ability to place these facts in context and to deliver them with emotional impact. People are overwhelmed, how do they organize their thoughts? Symphony is the ability to put together these pieces. It is the capacity to synthesize rather than to analyze, to see relationships between seemingly unrelated fields, to detect broad patterns rather than to deliver specific answers. To invent something new by combining elements nobody else thought to pair.

Do we give our children these powers? Do we say to our kids, conceptualize, understand, and appreciate?

Most of us are trying to figure out will my scooter work today, will my prosthesis work today, will the AT work with the technology that I have today? We're all busied up looking at our shoes, while the whole world is changing in front of us. Do we lift up our eyes and do we help them lift up their eyes to understand the context in which we live our lives?

You know how we sometimes get surprised ... where did that come from, how did that get there, why are we doing it this way? This happens to us in the disability field frequently in that we're so tied up and busy doing basic stuff that we then almost are forced to have to jump far, far ahead.

I know we're going to run out of time here, so I just have to say something about games.

I love the whole concept of serious gaming. I think this is where the idea of serious gaming and all these kids who have been playing with their oversized thumbs are really going to take over the world. When you shake hands with somebody and you see a huge thumb, bow down and



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respect that person immensely because they're way ahead of us, all right, they're just way ahead of us.

The fact is when kids play video games they experience a much more powerful form of learning than when they're in the classroom. So says James Paul Gee [formerly] of the University of Wisconsin. He says learning isn't about memorizing isolated facts; it's about connecting and manipulating them. We believe games are the literature of the 21st century, says Chris Swain of the University of Southern California. When you look at games today it may be difficult to see that, but the pieces are in place for this to happen.

Games are teaching a variety of whole minded lessons to a whole new generation of workers and have given rise to an industry that demands several key skills for the conceptual age. This is very exciting, exciting times and when we think about young people who have been playing games moving into the workplace and now workplace adopting the gaming 3D environment to do scenario planning over a counter say at a Hilton Garden Inn, all online, in a 3D environment, those 23, 24, 25 yr olds are understanding and playing that game of interaction, what's the right answer, what's the right question, how do you change it?

If you're the administrator, operator of it, you can tweak and turn and change those scenarios in a second and do it very efficiently across all the platforms that are out there. But we have the technology to teach this today, we have young people who are willing to do it, the questions that I think about are, "are the games accessible, are 3D environments accessible and if not how do we provide real time participation for people with disabilities in all these activities?"

So public policy was and is very well framed by the authors and signatories to the Americans with Disabilities Act of 1990. Equality of opportunity, independent living, full participation, and economic self-sufficiency. Those were the values that were embedded in the ADA and the question is does public policy [embed those values] today? Hopefully our speakers and our panelists will talk about the role of public policy and innovation and how not to limit the innovation that is occurring. So with that, I get the privilege of introducing two great speakers to you today. Kwasi Asare, Special Assistant, [Office of Innovation and Improvement, U.S. Department of Education](#), where he drives strategy and policy for learning technology programs. Prior to joining the department, Kwasi was senior product manager in the Tivoli brand of IBM's Software Division. In this role, he was responsible for the profit and loss of compliance software helping customers satisfy regulatory requirements. And previously, Kwasi was the worldwide product marketing manager for IBM's energy management portfolio and brand manager. So we are privileged to have Kwasi Asare, and then following Kwasi will be Karen Cator.

Karen is the new, and I mean new, like really new, of course all of you are new with the little change of administration, but I mean seriously new like November 9? November 2, off by a week – is the new director of the [Office of Education Technology at the U.S. Department of](#)



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Education. She was at Apple where she directed leadership and advocacy efforts in education and she focused on the intersection of education policy and research, emerging technologies, and the reality faced by teachers, students, and administrators. We are privileged to have these individuals speak with us today. Kwasi is first, followed by Karen. Thank you.