

**IBM Accessibility Facebook Expert Hour on Accessibility and Inclusive e-Learning  
Transcript 4/19/2011**

**IBM Accessibility** Hope you're joining us today at noon ET, on this wall for our "Accessibility and Inclusive e-Learning" Facebook Expert Hour.

If you're using a screen reader, you can use <http://m.facebook.com/home.php>.

If you'd like to join in the conversation, you must "like" IBM Accessibility.

[Marc Johlic](#), [Kember A R Forcke](#), [Phill Jenkins](#), [Peter Fay](#), [Rosemarie Livigni](#), [Steve Stansel](#), [Holly Dolly](#), [Dorian D'Ausilio](#), [Damayanti Bhattacharya](#), [Beverly Dywan](#), [Chris Schmechel](#) like this.

[Mary Olson](#) How do I join?

**IBM Accessibility** You're here, Mary. We'll start in a few minutes. Just keep watching this space. ;-)

[Paola Consalvo](#) Hello This is Paola, how do I join as well?

**IBM Accessibility** Just watch this page :-)

[Phil Briers](#) Well I'm on. When does it start?

[Phil Briers](#) Sorry, but I've been waiting for ten minutes and nothing appears to be happening. Apparently this session is not accessible.

[Phil Briers](#) now I've found it!

**IBM Accessibility** Good morning, good afternoon, and good evening. Welcome to the April IBM Accessibility Expert Hour.

Our topic today is "Accessibility and Inclusive e-Learning".

[Hidenori Sakai](#), [Travis Culbreth](#), [Pilar Cataño Canabal](#), [Jennifer Klein Charrette](#) like this.

**IBM Accessibility** We have five IBM education experts today who are looking forward to answering your questions:

- \* AR Forcke, IBM Project Executive and Education Program Manager
- \* Chris Davia, IBM Global Education Industry Lead Architect
- \* Marc Johlic, IBM Education Compliance & Accessibility Consultant
- \* Phill Jenkins, IBM Senior Engineer & Business Development Executive
- \* Susann Keohane, IBM Master Inventor & Accessibility Consultant

[Brian W. F. Peaston](#) and [Jennifer Klein Charrette](#) like this.

**IBM Accessibility** Please remember to refresh occasionally -- sometimes Facebook has trouble keeping up with the pace of our Expert Hours.

To ask a question, type it into the box on your screen that says, "Write something..." and press Enter. Our experts will answer your question as a Comment, and it will show up underneath your question.

**IBM Accessibility** Okay, let's open the floor for questions.

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**Mary Olson** Hi All, I just figured out that I need to hit the refresh button to make the new comments appear on my browser window. Not sure if everyone does. Thanks for hosting this expert hour.

**IBM Accessibility** Yes, please continue to refresh your screen to see the new comments. We really push Facebook's ability to keep up with us. :-)

**Chad Leaman**: What are key products IBM is working on to improve accessibility? I heard that you have 5 new tools regarding accessibility testing?

**Susann Keohane** Hello Chad, Here's a link to some of our new accessibility tools

**Susann Keohane** <http://www-03.ibm.com/able/projects/intro.html>  
**Brian W. F. Peaston** and **Charu Pandhi** like this.

**Susann Keohane** specifically the IBM AbilityLab Compliance Checker is a testing/verification tool. IBM's Rational Policy tester also contains accessibility rules.

**Chad Leaman** Thanks!

**Mary Olson** Accessibility is a key topic for Universities today. Can you highlight the top 3 challenges in developing a comprehensive approach to accessibility?

**Kember A R Forcke** Hi Mary- #1 challenge to accessibility is the profusion of user - generated content

**Kember A R Forcke** #2 challenge is the adoption by universities of new devices and the pace of change/advances in technology (devices)

**Kember A R Forcke** #3 challenge is the capability-building: keeping the entire University community up-to-date on skills and keeping those skills current as the technology, devices and standards change

**Kember A R Forcke** Along with the #2 challenges goes the development of university policies (procurement) as well as the enforcement of accessibility policies that the university does develop.

**Mary Olson** agree with all. And for #1, user generated content, most users just don't think how their content will be used by people unlike themselves.

**Kember A R Forcke** That's probably a comment applicable to all humans... it's the central ethnographic/accessibility/usability challenge ... but how do we make tools/techniques easy-to-use themselves that helps folks understand what their content looks like to someone NOT like themselves?

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**Karen Steele** How are we handling education for the "hearing impaired"

**Marc Johlic** Hi Karen - we emphasize the importance of providing captions for all e-learning. Within IBM we promote using our own tools such as the IBM AbilityLab Media Captioner and Editor as well as the IBM AbilityLab Sametime Conference Transcriber: <http://www-03.ibm.com/able/projects/intro.html> We're also partnering with Liberated Learning on furthering Speech Recognition technology:  
<http://www.liberatedlearning.com/>

**Chad Leaman** IBM, do you want to talk about the Liberated Learning consortium and your work with them to use speech recognition as transcription?

**Chad Leaman** <http://www.transcribeyourclass.ca/>

**Chad Leaman** <http://www.liberatedlearning.com/>

**Linda Laggos** Many eLearning tools allow us to add in Closed Captioning and Text-To-Speech capabilities, which help many folks seeking additional accessibility in our deliverable content.

**Clare Ruckdeschel** Any thoughts on bringing together accessibility and gaming for educational purposes? Either make the game accessible, or best practices for providing accessible alternatives?

**Phill Jenkins** IBM is looking to collaborate more in the virtual worlds space, have you seen [http://www-03.ibm.com/able/projects/virtual\\_worlds\\_accessible\\_UI.html](http://www-03.ibm.com/able/projects/virtual_worlds_accessible_UI.html)?  
**E Marie Robertson**, **Brian W. F. Peaston**, **Charu Pandhi** like this.

**Clare Ruckdeschel** Thank you. Is this anything that could be used in a Thinking Worlds project?

**Phill Jenkins** Not sure, but I have used it with <http://secondlife.com/>

**Phill Jenkins** Do you have any grant funding to explore it?

**Clare Ruckdeschel** No, I have no control over funding. I might follow up with you offline and suggest a fellow IBMer or two to contact.

**Anil Joshi** Hi, This is an important topic and I like to thank the WW Team for taking this up. Just wanted to understand how IBM Technologies can help esp. developing countries address education issues - either through Cloud or other technology being developed.

**Laura Lanham Kelley**, **Emmanuelle Gutiérrez y Restrepo**, **Bhavya Sahni** like this.

**Christopher Jay Davia** IBM has cloud computing centers worldwide which can help lower the cost of e-learning and administrative services delivery in a public or private environment

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[Christopher Jay Davia](#) IBM also has analytic s and reporting solutions which can be deployed in a cloud for a state, district, or Ministry of Education.  
likes this.

[Christopher Jay Davia](#) Finally, IBM can also manage virtual student / teacher desktops in the cloud and also the different devices such as thin clients and tablet PCs -- everything from security to network to replacement devices

[Susann Keohane](#) There is an interesting article on IBM's spoken Web <http://www-03.ibm.com/able/guidelines/documentation/accessdoc.html>

[Susann Keohane](#) IBM Spoken Web is targetted to help developing countries

[Susann Keohane](#) Specifically, IBM Researchers in India teamed up with a branch of India's Department of Labor on a real-world trial of the Spoken Web. Using a combination of cloud computing, mobile phones and voice recognition technology, people looking for jobs will be able to call into so called "voice sites" — think Web sites that you navigate by voice over the phone — to search for jobs that match their skills.

[IBM Accessibility](#) Just a reminder to keep refreshing your page. :-)  
[Mirvat Al-Hweitat](#) likes this.

[Bhavya Sahni](#) How would you balance between interactivity and accessibility?

[Phill Jenkins](#) People who have disabilities need (have a right?) equal access to the interactive parts of the learning technology and content. Video players CAN be usable by both the deaf and blind - if it complies with the technical accessibility standards.

[Bhavya Sahni](#) Thanks..Would you have sample courses that showcase learner interactivty with compliance to accessibility norms?

[Phill Jenkins](#) Well, we did a real cool interactive "High School Science" on photosynthesis with WGBH NCAM, but I can't find it on-line any more. There are techniques for your course developer at <http://www-03.ibm.com/able/guidelines/web/webapplets.html#flash>

[Bhavya Sahni](#) Thanks! Great session..very informative!

[Mohammad Ismail Gundlur](#) Hi, is there any data or stats available on percentage of users with different types of disabilities?

[Kember A R Forcke](#) The World Bank is an excellent source of disability data outside of country census data

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[Kember A R Forcke](#) For the last 10 years, the OECD, World bank, UN, WHO and World Economic Forum have been working together to devise a consistent set of methods and practices for collecting population statistics.

[Kember A R Forcke](#) Currently, there is no consistent set of definitions or collection methods for countries to use to collect data on the various disabilities. Additionally, there is a strong drive for redefining "disabilities" ... so the data can NOT be compared today between countries.

[Laura Lanham Kelley](#) Links to several U.S. and some of international sources AR mentions above: [http://dsc.ucsf.edu/main.php?name=finding\\_data#sources](http://dsc.ucsf.edu/main.php?name=finding_data#sources)

[Mohammad Ismail Gundlur](#) thanks! is there anything specific to IBM?

[Kember A R Forcke](#) No, there's not that we are aware of. Disabilities are considered a matter of your personnel record and that information cannot be disclosed...

[Mohammad Ismail Gundlur](#) Yes, that's true. I was trying to see if there is any such data, that will be helpful when we develop the education/any solutions. But you are right, it is a privacy matter.

[Clare Ruckdeschel](#) But, to tie this in to Danese's question, it would be interesting to know the number of students who access the accessible alternatives for our formal learning offerings.

[Kember A R Forcke](#) The data lies scattered.... there are pockets of data about country populations in UN and World bank data bases. There are also studies done on Education and I'll need to go get you that link - but that talks about students with disabilities in countries around the world

[Kember A R Forcke](#) Here's a new study out by the World Bank on their "Education For All" project --> <http://siteresources.worldbank.org/DISABILITY/Resources/280658-1172610312075/EFACostAccessibility.pdf>

[Clare Ruckdeschel](#) (As an FYI, I am an IBMer so I am referring to any data from our own LMS)

[Marnie Hoover](#) I was wondering what are considered the best practices in developing a virtual learning environment?

[Patsy Popa](#) likes this.

[Susann Keohane](#) At the CSUN 2010 conference we presented best practices for live virtual classrooms. Here's a link to the article [http://www-03.ibm.com/able/resources/challenges\\_of\\_LVC.html](http://www-03.ibm.com/able/resources/challenges_of_LVC.html)

[E Marie Robertson](#) and [Patsy Popa](#) like this.

**IBM Accessibility Facebook Expert Hour on Accessibility and Inclusive e-Learning  
Transcript 4/19/2011**

[Susann Keohane](#) This article is more about how to ensure you include everyone during the training session.

[Marnie Hoover](#) Thanks Susann!

[Susann Keohane](#) For developing content, we offer our Documentation checklist to help create accessible content <http://www-03.ibm.com/able/guidelines/documentation/accessdoc.html>  
[E Marie Robertson](#) likes this.

[Spencer Hunley](#) Will IBM use FOSS to improve accessibility and assistive technology in the future, such as Linux-based OSes and software?

[Maureen Kraft](#) The GNOME Accessibility Project (GAP) has improved the accessibility of Linux and the user experience. When using the GNOME desktop 2.16 or later, these platforms are accessible:

...\* RHEL5 or later  
\* SLES11 and SLED11  
<http://projects.gnome.org/accessibility/>

[Maureen Kraft](#) Also see, <http://www-03.ibm.com/able/guidelines/software/swreferences.html>

[Spencer Hunley](#) Thanks!

[Travis Culbreth](#) Hi All, I am IBM designer/Developer and am the 508 contact on our project. While my question does not relate directly to e-Learning it does relate to the technologies used for presentations and user interaction.

As a developer, how is the best way to add navigation to controls, be it flash or script controls. I'm fairly sure it is based on the control being used but I always hope I can get around what a control does not have.

Do ya'll have references or links that show how to make, sy, stubborn controls more navigatable?

[Marc Johlic](#) Hi Travis - IBM is moving away from 3rd party proprietary dependencies and instead opting for open source solutions such as Dojo and WAI-ARIA for reasons such as this. Take a look at the Dojo toolkit (and the Dojo Widgets) for some better controls: <http://dojotoolkit.org/> and WAI-ARIA for markup that will greatly improve the navigation on your e-learning sites: <http://www.w3.org/WAI/intro/aria.php>

[Marc Johlic](#) An additional reference for Dojo Accessibility: [http://www-01.ibm.com/software/ucd/gallery/dojo\\_accessibility.html](http://www-01.ibm.com/software/ucd/gallery/dojo_accessibility.html)

**IBM Accessibility Facebook Expert Hour on Accessibility and Inclusive e-Learning  
Transcript 4/19/2011**

[Travis Culbreth](#) Thanks for the response, We were unable to use dojo and have to use jQuery, very similar, due to the client did not have dojo authorized

[Marc Johlic](#) Another great reference just posted yesterday: The WAI Forward for Accessibility: [http://www-03.ibm.com/able/news/WAI\\_ARIAatIBM.html](http://www-03.ibm.com/able/news/WAI_ARIAatIBM.html)

[Travis Culbreth](#) Thanks I'll look there and add the site to my collection

[Danese Frazier Turner](#) I'm sorry, I was late joining, but I wanted to ask if there are any stats or way of tracking how many users are using screen readers or accessible alternatives to our learning offerings?

[Patsy Popa](#) likes this.

[Kember A R Forcke](#) Hi, Danese. Are you asking if IBM tracks the number of its employees that use screen readers?

[Clare Ruckdeschel](#) If Danese doesn't follow up, I will. Yes, it would be interesting to know an approximate number of employees who might be using screen readers, devices other than mouses to control cursors, etc. Perhaps if IBM is purchasing these assistive technologies for its employees, just to know how many bought would be a clue?

[Brian W. F. Peaston](#) likes this.

[Clare Ruckdeschel](#) (Of course some of these purchases would be for our own testers...)

[Kember A R Forcke](#) Yes - IBM has an "Accessible Workplace Connections" which helps managers identify and source the appropriate accommodations /Assistive technologies. But I am not aware of anyone in IBM HR who tallies up the number of accommodations purchased... that might - again - be a matter of HR record and protected by privacy rules.

[Clare Ruckdeschel](#) Thank you for the reply.

[Danese Frazier Turner](#) Yes, thanks for your response! To further clarify, I know that we spend countless hours on developing and testing accessible deliverables, I realize that we are required by law to comply; however, I'm interested to know if there is an equitable return on the investment in terms of how many users with disabilities are actually using our courses/offerings. Thanks!

[Kember A R Forcke](#) Try this study, Danese...  
<http://siteresources.worldbank.org/DISABILITY/Resources/280658-1172610312075/EFACostAccessibility.pdf>

[Danese Frazier Turner](#) Thank you very much!

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[Phill Jenkins](#) IBM worked with Forrester to publish an ROI study on ATMs, web sites, kiosks, and enterprise applications, but it didn't specifically include courses; they all showed a positive ROI. You also need to include the benefits from accessibility for search engine optimizations, transcoding to mobile devices, and others – the business cases is much broader than just users with disabilities

[Laura Lanham Kelley](#) Hi, all! Great Q&A here...Can you tell me about cloud trends? Is it really being developed? Who's buying it and why?

[Christopher Jay Davia](#) We're finding all sorts of customers are interested in the cloud. Administrators are purchasing things like hosted teacher and student information systems and learning environments, IT departments are purchasing development and test environments.

[Christopher Jay Davia](#) Others are moving towards virtual computer labs and virtual student desktops hosted in the cloud

[Christopher Jay Davia](#) The biggest transformation change that I see is around eLearning content -- standards like the IMS Common Cartridge are encouraging cloud delivery by formalizing student results tracking and assessment accessibility

[Christopher Jay Davia](#) The other trend is around mobile devices, thin clients, and tablet PCs - these devices are perfect for accessing services in the cloud

[Christopher Jay Davia](#) Finally I want to mention that when states or ministries implement cloud technologies for tracking, analyzing, and intervening performance issues, the data that is collected grows over time and the analytics get even better.

[Apple Suwannawut](#) To conduct the user testing in order to explore/improve the best design for an accessible online learning systems is somehow difficult due to the small population size of learners, esp. in the similar learning environment. I wonder what would be the most practical/efficient to do such a test? Also, what would be the future of online learning applications and accessibility, particularly when there're a lot of emerging technologies like 3d internet and virtual space?

[Phill Jenkins](#)

1. I would separate the design testing with users from the technical compliance testing of a learning system that has already been developed. I find user testing always helps prioritize the bugs found though.

2. IBM is helping make 3d internet and virtual spaces, whether for learning, games, museums or conferences, accessible to blind and vision impaired users at [http://www-03.ibm.com/able/projects/virtual\\_worlds\\_accessible\\_UI.html](http://www-03.ibm.com/able/projects/virtual_worlds_accessible_UI.html)

[Charu Pandhi](#) Hi, all ! very useful information is being presented.....can you highlight some major enhancements to the accessibility processes and tools and tools used to ensure we are deploying accessible learning

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Transcript 4/19/2011**

[Susann Keohane](#) For Web based content, IBM Rational Policy Tester contains accessibility rules. Here's a link to it: <http://www-01.ibm.com/software/awdtools/tester/policy/accessibility/>

[Susann Keohane](#) For other content, we recommend using the Documentation Checklist to help ensure your content is accessible: <http://www-03.ibm.com/able/guidelines/documentation/accessdoc.html>

[Markku Kunnas](#) Hi experts.. I wonder how IBM could support young students who are disabled? For example how easy is to apply for example a practice sessions at IBM locations which relates with own education? Or for example a month or 2 months time of testing how it is being a IT-specialist for example?

[Spencer Hunley](#) likes this.

[Kember A R Forcke](#) Hi, Markkus. IBM has historically been very involved with supporting students with disabilities in their STEM careers

[Markku Kunnas](#) What is STEM abbreviation for?

[Susann Keohane](#) Here's a link to an IBM programs to support "diversity" students: [http://www-03.ibm.com/employment/us/un\\_diversity\\_students.shtml](http://www-03.ibm.com/employment/us/un_diversity_students.shtml)

[Kember A R Forcke](#) [http://www-03.ibm.com/employment/us/divers/feature\\_solarcar.shtml](http://www-03.ibm.com/employment/us/divers/feature_solarcar.shtml)

[Kember A R Forcke](#) STEM is "Science, Technology, Engineering and Math"

[Fran Hayden](#) What a great topic!!! Thanks for all of this good information. My question: What questions would you ask a vendor if you were developing an e-learning environment?

[Marc Johlic](#) Hi Fran - I would suggest first asking the vendor for a VPAT (Voluntary Product Accessibility Template) and/or any Section 508 material they have available. That will give you an idea of whether the application and its output are accessible.

Some of the more important features to look for on the output would include the ability to caption videos and audio, keyboard navigation for all controls, and screen reader accessibility for all of the content.

[Fran Hayden](#) and [Charu Pandhi](#) like this

[Fran Hayden](#) Marc - thanks. I totally forgot VPATs/Section 508 material - that's a great idea.

[Christopher Jay Davia](#) I would ask a vendor if they support numerous types of content from different publishers to user generated to open content.

**IBM Accessibility Facebook Expert Hour on Accessibility and Inclusive e-Learning  
Transcript 4/19/2011**

[Christopher Jay Davia](#) I'd also ask the vendor if their licensing model supports delivery in a cloud, and if they support standards such as the IMS Common Cartridge, ISM LTI, etc

**[IBM Accessibility](#)** All right. Our hour is up. This was a great session -- thanks for joining us today. The session will remain on the Facebook wall, but if you'd like a transcript, send an email to [acweb@us.ibm.com](mailto:acweb@us.ibm.com), and we'll send you a copy in the next few days.

[Susann Keohane](#) Thank You!

[Marc Johlic](#) Thanks for the great questions!

[Clare Ruckdeschel](#) Thank you!

[Apple Suwannawut](#) Thank you.

[Travis Culbreth](#) Thanks much