Assembling the Puzzle:
Five Tech Pieces for Education – Day 1

Ruben R. Puente, Ph.D.
Session 1: The Frameworks
Redefinition
Tech allows for the creation of new tasks, previously inconceivable

Modification
Tech allows for significant task redesign

Augmentation
Tech acts as a direct tool substitute, with functional improvement

Substitution
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Transformation
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![Image of human skull](image1)

![Image of ancient tool](image2)

![Image of ancient figurine](image3)

![Image of ancient mural](image4)

![Image of ancient bone](image5)
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[Images of artifacts and tools related to each category]
The 2009 K12 Horizon Report

- Collaborative Environments: Time-to-Adoption: One Year or Less
- Mobiles: Time-to-Adoption: Two to Three Years
- The Personal Web: Time-to-Adoption: Four to Five Years
- Online Communication Tools
- Cloud Computing
- Smart Objects
The 2010 K12 Horizon Report

- **Collaborative Environments**
  - Time-to-Adoption: One Year or Less

- **Mobiles**
  - Time-to-Adoption: Two to Three Years

- **Flexible Displays**
  - Time-to-Adoption: Four to Five Years

- **Cloud Computing**

- **Game-Based Learning**

- **Augmented Reality**
The 2011 K12 Horizon Report

- **Mobiles**: Time-to-Adoption: One Year or Less
- **Open Content**: Time-to-Adoption: Two to Three Years
- **Personal Learning Environments**: Time-to-Adoption: Four to Five Years
- **Cloud Computing**
- **Game-Based Learning**
- **Learning Analytics**
The 2012 K12 Horizon Report

- **Mobile Devices and Apps**
  - Time-to-Adoption: One Year or Less

- **Personal Learning Environments**
  - Time-to-Adoption: Two to Three Years

- **Natural User Interfaces**
  - Time-to-Adoption: Four to Five Years

- **Tablet Computing**

- **Game-Based Learning**

- **Augmented Reality**
The 2013 K12 Horizon Report

Mobile Learning
- Time-to-Adoption: One Year or Less

Open Content
- Time-to-Adoption: Two to Three Years

3D Printing
- Time-to-Adoption: Four to Five Years

Cloud Computing

Learning Analytics

Virtual and Remote Laboratories
2013 K12 Horizon Report:  
Key Trends

• Education paradigms are shifting to include online learning, hybrid learning and collaborative models.

• Social media is changing the way people interact, present ideas and information, and communicate.

• Openness — concepts like open content, open data, and open resources, along with notions of transparency and easy access to data and information — is becoming a value.

• As the cost of technology drops and school districts revise and open up their access policies, it is becoming more common for students to bring their own mobile devices.

• The abundance of resources and relationships made easily accessible via the Internet is challenging us to revisit our roles as educators.
2013 K12 Horizon Report: Significant Challenges

• Ongoing professional development needs to be valued and integrated into the culture of the schools.

• Too often it is education’s own processes and practices that limit broader uptake of new technologies.

• New models of education are bringing unprecedented competition to the traditional models of education.

• K-12 must address the increased blending of formal and informal learning.

• The demand for personalized learning is not adequately supported by current technology or practices.

• We are not using digital media for formative assessment the way we could and should.
HZ News
The ten hottest EdTech news items: 10 Unread/Week 73

NMC Horizon Library
Horizon Reports and Technology Outlooks

Explore NMC Navigator
Search projects, news, and resources

Reference
> Articles and Readings
> Reports and Research
> Technologies to Watch Lists
> Reflections on the Future

News
> Emerging Technologies
> Challenges and Trends
> Stories and Examples
> Technology in Popular Culture
Resources


• The Horizon Report: all editions online at: http://www.nmc.org/publications

• Horizon Report Wiki: all editions since 2006 online at: http://horizon.wiki.nmc.org/


Session 2: Social Software
Discovering

Annotating

categorizing, providing commentary, analyzing

Comparing

find differences, similarities and create meaning from them

Referring

linking, referencing

Sampling

selecting according to a criterion, showing relationships of items selected to the original set

Illustrating

showing an example, highlighting features within an example

Representing

changing depiction mode, publishing

Scholarly Primitives

selecting according to a criterion, showing relationships of items selected to the original set

searching, browsing, accessing, collecting

commentary, analyzing

find differences, similarities and create meaning from them

linking, referencing

changing depiction mode, publishing

**Community Types**

- **Communities of Practice**: A group of people with a common interest or practice who share information and/or network.
- **Teams**: Communities working on a shared goal for a particular project or function.
- **Technical Support Groups**: Provide technical support for a particular software or hardware tool.
- **IdeaLabs**: Communities in which members brainstorm around a set of questions or issues for a limited period of time, usually one to three days long.
- **Recreation**: Communities devoted to recreational activities unrelated to work.

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A Basic Social Toolkit

• Bookmarks: Delicious, Diigo, Pinterest
• RSS Feeds: Feedly
• Discussions: Edmodo, Google Groups
• Microblogging: Twitter
• Blogging: WordPress, Blogger
• Wikis: MediaWiki, Wikispaces, Google Sites
• Telepresence: Google+ Hangouts
• File Sharing: Box, Dropbox, Google Docs