Stretching the Edges of Technology-Enhanced Teaching: From Tinkering to Tottering to Totally Extreme Learning

Curtis J. Bonk, Professor, Indiana University

cjbonk@indiana.edu
http://mypage.iu.edu/~cjbonk/
It is very open!
(May 2011, Norway & June 2011 the Philippines)

Yonsei University, Seoul, Korea

Yonsei University Library, Seoul, Korea

Yonsei University Library, Seoul, Korea
April 12, 2011
NCTM Conference Session, Free Online Degrees: iSMART: Integration of Science, Mathematics, and Reflective Teaching (iSMART), University of Houston

May 9, 2011
Defense Acquisition University, Training Courses: Reaching the Workforce

July 22, 2011
GETideas Channel, Cisco (Education Thought Leader Series uploaded to YouTube)

August 3, 2011
Inkling opens textbooks on the iPad
USA Today, Jefferson Graham

April 29, 2011
Shared Online Video (e.g., YouTube and the Royal Channel)

July 20, 2011
Smart phones driving lecture capture growth
eCampus News, Dennis Carter

August 3, 2011
Inkling opens textbooks on the iPad
August 11, 2011
Unleashing the Potential of Technology in Education, The Boston Consulting Group, Allison Bailey, Tyce Henry, Lane McBride, & J. Pucet

August 12, 2011
Moodle (45 million users in 209 countries, 54,000 sites, 4.6+ million courses)

April and August 24, 2011
Departments Stay Afloat with new Online Ventures (new Ed.D. in IST/Ed Tech)
(e.g., http://iuconnected.iu.edu/)

IUconnected

Welcome!

August 25, 2011
Brain-training games are new exercise craze, USA Today, (e.g., Lumosity, MindSparke;
http://www.lumosity.com/)

But I am not Content!!!
Those in earthquakes!

Those effected by volcanos
(Iceland, April 2010)

Those in blizzards and ice storms...

Snowmageddon, Washington, DC
(winter of 2010)

Those stuck in airports the "Groundhog Day Blizzard" of February 2011 (Jan 31-Feb 2nd)

Those in tsunamis?
(Japan, March 11, 2011)
Those in tornadoes...!
(April 24, 2011)

Why should we be content?

September 15, 2010
Study: Online learning might be less effective for some, eSchool News, Dennis Carter

May 24, 2010
Author Nicholas Carr, The Web Shatters Focus, Rewires Brains, Wired
https://www.wired.com/magazine/2010/05/11_nicholas_carr/

September 15, 2010
Timeline of Technology for Teaching, NY Times
Technology of the 1980s

Let's Reflect Back 10 Years...

Virtual Tactical Operations Center (VTOC)

Shovelware

Ten Years Later...
Fourteen Learning Technology Trends of the Past Year or Two...

1. Inexpensive Laptops and Netbooks

#2. Online Language Learning
January 27, 2010 and Feb 5, 2010: The Web Way to Learn a Language, NY Times, ERIC A. TAUB (e.g., EnglishCentral, iTalki, Palabaa, Babbel)

#3. Tablet Computers Hit (iPad)
April 10, 2010: Seton Hill Univ. 2,100 students an IPad and throwmen a 13-inch MacBook laptop
Feb 1, 2011: An Android Tablet Made Just for School, David Zax, Fast Company

#4. Pocket Dictionaries and Digital Textbook Projects (Korea). July 6, 2011:
Hasna Haq, In South Korea, all textbooks will be e-books by 2015, speeding past the US. South Korea will be digitizing reading material in all public schools by 2015. Christian Science Monitor.

#5. Video Conferencing/Webcaming
December 20, 2010: Skype for iPhone adds two-way video calling, CNet Reviews
Group Video Chat, February 28, 2011:
SocialEyes delivers group video chat, USA Today, Jon Swartz,
http://www.socialeyes.com/

First Look at Google+ Hangouts,
June 29, 2011

Facebook introduces video calling, Eric Stoller, July 6, 2011, Inside Higher Ed

#6. Shared Online Video:
TED, Academic Earth, TV Lesson, and Fora TV

#7. Social Networking Gaming
December 24, 2010: CityVille 16.8 million daily users,
FarmVille 16.4 million. CityVille 61.7 million monthly users,
FarmVille 56.8 million users. Mashable.

CityVille is Now Bigger than FarmVille

#8. E-Book Readers
January 28, 2011: Amazon: Kindle Books Finally Eclipse Paperbacks, Doug Aamoth
March 2, 2011: Why Amazon would be smart to give away the Kindle, March 4, 2011, CNN Tech, Amy Gahran

Whether a surge in e-book sales can be sustained and what effect it could have on traditional bookstores remains to be seen.
Worldreader, August 22, 2011
What Makes Ed Tech Successful in the Developing World?, ReadWriteWeb, David Risher

#9. Artificially Intelligent Computers
February 18, 2011: Watson dominated at Jeopardy! — but what else can it do? As IBM seeks new uses, man still has edge over machine, Dan Fergano, USA Today.

August 2, 2011
Stanford U. Offers Free Online Course in Artificial Intelligence, Jie Jenny Zou, Chronicle of Higher Education (over 135,000 sign up as of August 27)

#10. New Interfaces
February 18, 2011: Telekinesis 2.0, David Zax, Fast Company

#11. Mobile Apps, May 13, 2011:
USA Today, Mary Beth Marklein

August 18, 2011
HowStuffWorks, iPhone App, USA Today, Marc Saltzman
August 18, 2011
Eco Mania and Face the Waste (iPhone/iPod),
Green games gain in popularity, USA Today, Mike Snider

#12. Augmented Reality, May 17, 2011:
USA Today, Edward Baig, May 17, 2011, Augmented reality has potential to reshape our lives.

#13. Language Translation Tools, Aug 19, 2011
(e.g., Bing Translator (a convenient way to translate between languages in Internet Explorer 8)
http://www.microsofttranslator.com/default.aspx

#14. Online Portals and Open Educational Resources (OER) February 8, 2011
Google Art Project, Chronicle of HE (now Google project that allows visitors to explore museums around the world and view hundreds of artworks) http://www.googleartproject.com/

July 10, 2011
The Virtual Zoarchaeology of the Arctic Project (VZAP) is a virtual, interactive, osteological reference collection for the study of northern vertebrates. VZAP is a dynamic natural history archive which allows students and researchers to examine the complete skeletal anatomies of multiple bird, mammal, and fish species in both 2D and 3D.
(Anthropologist Puts an Idaho Museum's Many Bones Within Virtual Reach, Peter Managhan, July 10, 2011, Chronicle of HE)

The Web of Learning

Google
We are entering a jumping off point...

Tinkering

Tinker #1. Video Scenario Learning Accounting
Interviews and Preparatory Course Review Modules
(Franklin University, cost and forensic accounting course)
http://www.franklin.edu/roggeman/forensicacc.html
http://www.franklin.edu/roggeman/twocourses.html

Tinker #2. Webcast Lectures
(Tegrity, Echo360, Mediasite, etc.)

Tinker #3. Timeline Tools
(e.g., USA Today, August 26, 2011)

Part 2: Stretching the Edges of Technology-Enhanced Teaching: From Tinkering to Tottering to Totally Extreme Learning
**Tinker #3. Timeline Tools**
(e.g., Steve Jobs' career, CNN, August 24, 2011)

**Tinker #4. Video Animations and Simulations**

**Tinker #5. Collaborative Groups**
(Google Docs, Ning, Google Groups, MSN Groups, Yahoo Groups)

**Tinker #6. Case and Scenario Learning**
(Kelley Direct, IU)

**Tinker #7. Online Experiments**
(e.g., psychology)

**Tottering**
Totter #1. Bridges to World of Expert and Practitioners
(e.g., Watch or Listen to Online Conferences, Expert interviews, blogs, chats, etc.)

Totter #2. Class Synchronous Sessions and Archives
(Breeze/Adobe Connect Pro, Elluminate, WebEx, Dim Dim)

Totter #3. Global Class Videoconferencing and Remote Lands
(e.g., The seminar was instructed on a panel of videoconferencing and virtual classes of examining students, organized by the Faculty of the Health and Veterinary Sciences of Appalachian State University, located in the specific field of Human populations in the province of Tabal.)

Totter #4. Combining Asynchronous and Synchronous Events

Totter #5. Multi-Site Events
(e.g., William and Mary, March 3, 2011)

Totter #6. Online Language Learning and Conversations
(e.g., PalTalk, ITalki, Palabea, Babbel)
Totter #7. Wikibooks, Wikipedia editing, wiki syllabi, wiki glossaries
(Ron Owston, York University, Toronto)

Totter #8. Student YouTube Products
http://www.youtube.com/watch?v=xlwStvFzg0Q
http://www.youtube.com/watch?v=x9P3y6PwE
http://www.youtube.com/watch?v=a0JxwpaSu9R
http://www.youtube.com/watch?v=BPUE7RvXt00

Totter #9. Podcast Productions and Virtual Performances for students of pronunciation class (e.g., Tzu-Su Chen, Taiwan)

Totter #10. Video Blogging

Totter #11. Podcasting Medical Lectures (School of Dentistry, University of Michigan)

Totter #12. Music Videos of Content
History for Music Lovers, Washington Post
The French Revolution ("Bad Romance" by Lady Gaga)
Trojan Way ("Tainted Love" by Soft Cell)
Charlemagne ("Call Me" by Blondie)
**Totally Extreme Learning**

- **Totally Extreme #1. Immediate Science**
  Ida (a transitional species) 47-Million-Year-Old Fossil the Missing Link? (May 20, 2009)

- **Totally Extreme #2. Live Science**
  (Nautilus Live allows people to watch expeditions live & listen to scientists in control rooms as discoveries are made)

- **Totally Extreme #3. Armchair Archeology**
  UCLA Summer Digs Program

- **Totally Extreme #4. Adventure Learning**
  (e.g., GeoThentic, Earthducation, Polar Husky, GoNorth; Aaron Deering, Univ of Minnesota; cars and bikes—Dan Grec and Mark Beaumont)

- **Totally Extreme #5. Learning on the Sea.**
  (May 2010, Jessica Watson became the youngest person ever to sail solo, non-stop and unassisted around the world.)
Totally Extreme #6. The LAST OCEAN Website and The Last Ocean Project

Totally Extreme #7. South African teens get virtual mentoring from all over the world, By Danielle Berger, CNN, January 14, 2011

Totally Extreme #8. Open Teaching and Massive Open Online Courses (i.e., MOOC, David Wiley, George Siemens, Ray Schroeder)

Totally Extreme #9. International and Global Education and Competitions (e.g., Global Game Jams, online role play, Global Videoconferencing)

Totally Extreme #10. Learn Anytime, Always On/Mobile. Will Technology Kill the Academic Calendar? Online, soomasters give way to students who set their own schedules, Marc Parry, Chronicle of Higher Ed, October 10, 2010

Totally Extreme #11. Pocket School and Videoconferencing in Developing World
(Paul Kim, Stanford, Rwanda, August 2010, Kigali Institute of Education linking up with universities in India and Cameroon through Satellite Internet video conferencing system. They were discussing Java programming.)

Robert Johnson, who championed the open-format Learn Anytime program at a two-year college in Louisville, Ky. checks students' e-mail while waiting for a flight. "Everything I need to do today, I can do on my phone," says Robert Johnson...He often grades papers and communicates with students from a café near his home.
**Totally Extreme #12.**
Telepresence and Teleportec Systems (e.g., Cisco and HP)

**Totally Extreme #13. Military Mobile Learning**
(See: the U.S. Army Learning Concept for 2015; 2011, January 15).
[http://www.youtube.com/watch?v=KDoOnJvVn3s](http://www.youtube.com/watch?v=KDoOnJvVn3s) (4:26 minutes)

**Totally Extreme #14. Virtual Choirs**
April 6, 2011: Eric Whitacre: A virtual choir 2,000 voices strong;
[http://www.youtube.com/watch?v=9x9hM6Cw9Hw](http://www.youtube.com/watch?v=9x9hM6Cw9Hw)

**Totally Extreme #15. Virtual Worlds**
(e.g., Dr. Monica Rankin’s class, UT Dallas, Cuban Revolution, April/May 2011)
[http://www.youtube.com/watch?v=ooQMf1kPo98](http://www.youtube.com/watch?v=ooQMf1kPo98)

---

**Is this a revolution?**

---

**Any Extreme Questions and Comments?**
Slides at: TrainingShare.com
Papers: PublicationShare.com
Email: curt@worldisopen.com