December 15, 2010
Mark Zuckerberg, Time Magazine, Person of the Year

February 4, 2011
New Enrollment History Chart: Florida Virtual School (Julie Young, President & CEO)

February 16, 2011
How Bill Gates' Favorite Teacher Wants to Disrupt Education, Gregory Ferrenstein, Fast Company


April 12, 2011. NCTM Conference
Free Online Degrees
iSMART: Integration of Science, Mathematics, and Reflective Teaching (iSMART), University of Houston

April 29, 2011
Shared Online Video (e.g., YouTube and the Royal Channel)
News for Thursday May 12, 2011
Chronicle of Higher Education

May 15, 2011
The Quiet Revolution in Open Learning, Kevin Carey, The Chronicle of HE

July 7, 2011
Facebook says membership has grown to 750 million, USA Today, Jon Swartz

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

August 2, 2011
Stanford U. Offers Free Online Course in Artificial Intelligence, Jie Jenny Zou, Chronicle of Higher Education

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

Some $6.5 billion worth of textbooks were sold in 2010, according to the Association of American Publishers. Expects digital textbooks to represent 3% of sales in 2011, growing to 44% by 2017.
September 15, 2010
Study: Online learning might be less effective for some, eSchool News, Dennis Carter

Classroom students scored 84.5 percent on the first exam in the economics course, and online students scored 83.3 percent.

May 24, 2010
Author Nicholas Carr, The Web Shatters Focus, Rewires Brains, Wired
http://www.wired.com/magazine/2009/05/f_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...

2011

Nature AND Nurture: Technology

A Dozen Learning Technology Trends of the Past Year...
1. Inexpensive Laptops and Netbooks

2. Online Language Learning
   (e.g., EnglishCentral, iTalki, Pelabea, Babbel)

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

4. Pocket Dictionaries and Digital Textbook Projects (Korea), July 6, 2011:
   Fasama 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

First Look at Google+ Hangouts, June 29, 2011
   http://www.youtube.com/watch?v=7kFuf7Fj7F8&feature=related
#6. 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"

#7. 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.

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

Computer vs. human as they square off on "Jeopardy!"

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

#10. Group Video Chat
11. Mobile Apps (e.g., Tutors), April 7, 2011: Tutor.com Releases First Ed App that Connects Students to an Expert Tutor


Is this a revolution?

Nature AND Nurture: Pedagogy

- Nature (Technology)
- Nurture (Pedagogy)
- People, Society, Culture, etc.

Question:
What is the Web?
- An entertainment system?
- A writing aid?
- A communications system?
- A means to handle commercial transaction?
- A social networking device?

No, it is a learning tool!

Answer:
The Web of Learning
We are entering a jumping off point...

Elements of the Web's Next Generation

It is Open in Norway...
(May 23-26, 2011)

Very open in Norway!

Framework #1: WE-ALL-LEARN:
Ten Forces that Opened the Learning World

- Web Searching in the World of e-Books (i.e., Darwin)
- E-Learning and Blended Learning
- Availability of Open Source and Free Software (e.g., Moodle)
- Leveraged Resources and OpenCourseWare (e.g., MIT)
- Learning Object Repositories and Portals (i.e., shared content)
- Learner Participation in Open Info Communities (YouTube)
- Electronic Collaboration and Interaction (sync and async)
- Alternate Reality Learning (Online Massively Multiplayer Simulations, and Virtual Worlds; e.g., Second Life)
- Real-Time Mobility and Portability (e.g., iPhone)
- Networks of Personalized Learning (Blogs, RSS)

Audience Participation!

1. WE
2. ALL
3. LEARN!!!
Triple Learning Technology Convergence of "WE-ALL-LEARN"

1. **Pipes**: The availability of tools and infrastructure for learning.
2. **Pages**: The availability of free educational content and resources (OER—Open Educational Resources).
3. **Participatory Learning Culture**: A move towards a culture of open access to information, international collaboration, and global sharing.

99 Second Break for questions or reflections on models...

Masterclass Part 1: Stretching the Edges of Technology-Enhanced Teaching: From Tinkering to Tottering to Totally Extreme Learning

Tinkering

Tinker #1. Webcast Lectures (Tegrity, Echo360, Mediasite, etc.)

Tinker #2. Video Animations and Self-Testings
Tinker #3. Pubcasts.  
(videos of authors of scientific papers and science; e.g., Scivee)

Tinker #4. Collaborative Groups  
(Google Docs, Ning, Google Groups, MSN Groups, Yahoo Groups)

Tinker #5. Track Life of a Scientist or Famous People (e.g., Brian J Ford, independent scientist)  
https://www.youtube.com/watch?v=Ag18hAxGwV0

Tinker #6. Online Portals of Rich Data  
United Nations Opens World Digital Library, Turning the Pages from the British Library, etc. (history, culture, literature, writing, art, etc.)

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

Tinker #8. Educational Simulations
Tinker #9. Online Role Play (e.g., Tulane University, Exercise for Renewable Energy, Freeman Sch. of Business, roles include power traders and utility dispatchers, etc.)

Tinker #10. Simulations and Video Animations and Self-Testings (e.g., Foldit)

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, Illuminate, WebEx, Dim Dim)

Totter #3. Combining Asynchronous and Synchronous Events
Totter #3b. Asynchronous and Synchronous Events
(e.g., William and Mary, March 3, 2011)

Totter #4. Global Class Videoconferencing and Remote Lands
(e.g., The project was conducted on a series of videoconferences and visits (Oro- and-Long platform, designed by the Team of the National and Technical Council of Ibarboun) for the specific field in town of population of the villages in the province of France.)

Totter #5. Wikibooks, Wikipedia editing, wiki syllabi, wiki glossaries
(Ron Owston, York University, Toronto)

Totter #6. Podcast Productions and Virtual Performances for students of pronunciation class
(e.g., Tzu-Su Chen, Taiwan)

Totter #7. Video Blogging

Totter #8. YouTube as Class
Totter #9. Collect Student Data for Shared Online Videos (e.g., Michael Wesch, Kansas State)

Totter #10. Podcasting Medical Lectures (School of Dentistry, University of Michigan)

Totally Extreme Learning

Totally Extreme #1. Live Science (Nautilus Live allows people to watch expeditions live & listen to scientists in control rooms as discoveries made)

Totally Extreme #2. Immediate Science Ida (a transitional species) 47-Million-Year-Old Fossil the Missing Link? (May 20, 2009)

Totally Extreme #3. Armchair Archeology UCLA Summer Digs Program
**Totally Extreme #4. Google Earth Archaeology**
(David Thomas, Archeologist, La Trobe University, Australia)

**Totally Extreme #5. Adventure Learning**
(e.g., GeoThentic, Earthducation, Polar Husky, GoNorth; Aaron Doering, Univ of Minnesota; cars and bikes—Dan Grec and Mark Beaumont)

**Totally Extreme #6. South African teens get virtual mentoring from all over the world**
By Danielle Berger, CNN, January 14, 2011

**Totally Extreme #7. International and Global Education and Competitions**
(e.g., Global Game Jams, online role play, Global Videoconferencing)

**Totally Extreme #8. Telepresence and Teleportec Systems**
(e.g., Cisco and HP)

**Totally Extreme #9. MBAs from War Zones...!**
Poll: Is your brain mush?

1. Yes.
2. No.
3. Not sure yet...

Stop and Share: Top Three Things Learned!

Masterclass Part 2: Adding Some Jumbo Motivation to Online Courses and Activities with the TEC-VARIETY Model

Dr. Curtis J. Bonk
Professor, Indiana University
http://php.indiana.edu/~cjbonk,
cjbonk@indiana.edu

We are not motivating students with the technologies that they love!

Jumbo Motivation is Needed!
Ok, Million Dollar Question: How do you motivate online learners? What words come to mind?

Motivation Research Highlights
(Jere Brophy, Michigan State University)
1. Supportive, appropriate challenge, meaningful, moderation/optional.
2. Teach goal setting and self-reinforcement.
4. Novelty, variety, choice, adaptable to interests.
5. Game-like, fun, fantasy, curiosity, suspense, active.
6. Higher levels, divergence, dissonance, peer interaction.
7. Allow to create finished projects.
8. Provide immediate feedback, advance organizers.
9. Show intensity, enthusiasm, interest, minimize anxiety.
10. Make content personal, concrete, familiar.

I even reflected on this for a moment...and then something magical happened...

Magic #1: TEC-Variety Model for Online Motivation and Retention
1. Tone/Climate: Psych Safety, Comfort, Belonging
2. Encouragement, Feedback: Responsive, Supports
3. Curiosity: Fun, Fantasy, Control
4. Variety: Novelty, Intrigue, Unknowns
5. Autonomy: Choice: Flexibility, Opportunities
6. Relevance: Meaningful, Authentic, Interesting
7. Interactive: Collaborative, Team-Based, Community
8. Engagement: Effort, Involvement, Excitement
9. Tension: Challenge, Dissonance, Controversy
10. Yields Products: Goal Driven, Products, Success, Ownership

1. Tone/Climate: Social Ice Breakers
A. Public Commitments: Have students share how they will fit the coursework into their busy schedules
B. Favorite Websites
1. Everyone posts 1-2 of their favorite websites and explain why.
2. Peers comment on or rate them.
1. Tone/Climate: Social Ice Breakers

C. 8 nouns (adjectives, verbs)
- List of nouns: (e.g., pirate, computer, traveler, roadrunner, wind, bookworm, musician, mentor, etc.)
  - [http://www.mammababble.com/reading/list-of-nouns.html](http://www.mammababble.com/reading/list-of-nouns.html)
- List of adjectives: (e.g., lazy, powerful, shy, bored, exotic, cooperative, sloppy, rebel, etc.)
  - [http://www.mammababble.com/reading/list-of-adjectives.html](http://www.mammababble.com/reading/list-of-adjectives.html)
- List of verbs: (e.g., coordinate, entertain, amuse, push, unite, beg, dream, publicize, etc.)
  - [http://www.mammababble.com/reading/list-of-verbs.html](http://www.mammababble.com/reading/list-of-verbs.html)

2. Encouragement, Feedback, etc.: A. Online Self-Testing (e.g., self-study in vocabulary, anatomy, chemistry, dissection, etc.)

3. Encouragement, Feedback, etc.: D. Vocab Sushi ($25 for 3 months)


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1. Tone/Climate: D. Video Course Intros
(examples from Northern Virginia Community College and Indiana University KD (online MBA) program)

Tan Tran Chau, Open U MBA, Making Art Lessons Come Alive with Web 2.0
[http://www.youtube.com/watch?v=a8D9xJr07Qw](http://www.youtube.com/watch?v=a8D9xJr07Qw)
2. Encouragement, Feedback, etc.: 
   E. Online Accounting Lessons 
   (e.g., Lyryx: https://lifa.lyryx.co)

3. Curiosity, Fun: 
   A. Online News 
   (Politics, Giant jellyfish, Tiny T. rex, and Ardi)

3. Curiosity, Fun: 
   B. Online Social Networking Games 
   (e.g., scrabble, hangman, etc.)

3. Curiosity, Fun: 
   C. Online War Games

3. Curiosity, Fun: 
   D. Online Database Activities (e.g., WolframAlpha) 
   http://www.wolframalpha.com
3. Curiosity, Fun: E. Track a Scientist, Scholar, Celebrity, Writer
(e.g., Biography.com, biography online, FamousPeople.com)

4. Variety, Novelty: A. Cool Resource Provider or Tech Demos

4. Variety, Novelty, Fun, Fantasy:
B. Random Lists (Random.org—clocks, coins, playing cards, dice, integers, passwords, jazz scales, lists, sequences, etc.)

RANDOM.ORG

C. Timers (Stopwatches, Countdown Timers, Stopwatch Bombs, etc.; http://www.online-stopwatch.com/countdown-dinner)

4. Variety, Novelty, Fun, Fantasy:

Arlington Racetrack

Jockey's are Important
5. Autonomy, Choice:
A. Online Literature Search (Class Google Jockeys)
(links to text, soundtracks, video clips, etc.)

5. Autonomy, Choice:
B. Web Exploration Assignments
1. Complete Works of Charles Darwin Online: http://darwin-online.org.uk/
4. Einstein Archives Online: http://www.albert einstein.org/

5. Autonomy, Choice:
C. Open Teaching and Massive Open Online Courses (i.e., MOOC, David Wiley, George Siemens, Ray Schroeder)

6. Relevance, Meaningfulness:
A. Online Cases (e.g., Mark Braun, IU)

6. Relevance, Meaningfulness:
B. Google Art Project (new Google project that allows visitors to explore museums around the world and view hundreds of artworks) http://www.googleartproject.com/

6. Relevance, Meaningfulness:
C. 60 Second Recap, Jenny Sawyer
http://www.6secondrecap.com/
Actress to students: Land ma your ear bud! English major, 24, rambunctiously recap the classics in 60-second Web videos; By Greg Toppo; USA TODAY, September 2009
6. Relevance, Meaningfulness:
D. Tour an Online Oil Drilling Site or Role Play Situations (i.e., BP)
http://www.youtube.com/watch?v=5f45d04a07s

7. Interactive, Collaborative:
A. Working In Virtual Teams
   (e.g., Colanos, Ning, Groove, SharePoint, Google Docs)

8. Engagement, Effort:
A. Flash, 3-D Visualization, & Laboratory Software

8. Engagement, Effort:
B. Dr. Monica Rankin's class, UT Dallas, Cuban Revolution (April/May 2011)
http://www.youtube.com/watch?v=ocQM£fPo98

8. Engagement, Effort:
C. Flash, 3-D Visualization, & Laboratory Software

8. Engagement, Effort:
D. Time Tracker (e.g., Indy Race Tracker, May 29, 2011)
http://www.youtube.com/watch?v=ocQM£fPo98

24
10. Yields Products, Goals:
C. Photo Festivals and Competitions
(e.g., COFA at UNSW, Scrapblog, flickr, etc.)
http://www.youtube.com/watch?v=aeYTVhX07Mk

TEC-VARIETY Model for
Online Motivation and Retention
Tone/Climate
Encouragement, Feedback
Curiosity
Variety
Autonomy
Relevance
Interactive
Engagement
Tension
Yields Products

Poll: How many ideas did you
get so far?
1. 0 if I am lucky.
2. Just 1.
3. 2, yes, 2...just 2!
4. Do I hear 3? 3!!!!
5. 4-5.
6. 5-10.

99 seconds: What have you
learned so far?
• Solid and Fuzzy in groups
of two to four

Do you feel JUMBO
MOTIVATION?
Note: Bonk papers and talks at:
http://www.publicationshare.com/
http://www.trainingshare.com/

Masterclass Part 3: Where Are You R2D2?:
Addressing Learning Styles and Diverse
Learners with the Read, Reflect, Display, and
Do Model
Dr. Curtis J. Bonk
Professor, Indiana University
http://php.indiana.edu/~cjbck,
cjbck@indiana.edu
Frame work: #5: The R2D2 Model

The R2D2 Method

1. Read (Auditory and Verbal Learners)
2. Reflect (Reflective Learners)
3. Display (Visual Learners)
4. Do (Tactile, Kinesthetic, Exploratory Learners)

1. Auditory or Verbal Learners

- Auditory and verbal learners prefer words, spoken or written explanations.

Read 1a. Wikibook or Wikipedia Editing or Critiques
- Ask students to critique a wikibook or page from Wikipedia

Read 1b. Reading from Open Access Journals (e.g., PLOS)

The International Review of Research in Open and Distance Learning
Read 1c. Course Announcements
(e.g., Teaching with Twitter; Course announcements and following people (e.g., microblogging))

2. Reflective and Observational Learners
- Reflective and observational learners prefer to reflect, observe, view, and watch learning; they make careful judgments and view things from different perspectives

Reflect 2a. Individual Blogging Reflections

Reflect 2b. Critical Friend Blog Postings (Kristen and Susan)

Reflect 2c. Expert and Domain Specific Blog Reflections (English, Health, Business, etc. blogs)
Reflect 2d. Cultural Blogs (e.g., Dr. Kim Foreman, San Fran State University, Come and See Africa Blog: http://comeandseeafrica.blogspot.com/)

Reflect 2e. Scenario Learning (e.g., Krispy Kreme Management 101)

Reflect 2f. Case and Online Discussion (Kelley Direct, IU)

Reflect 2g. Analyze Online Cases (problems, solutions, etc.)

Reflect 2h. Workplace and Field Reflections

3. Visual Learners
- Visual learners prefer diagrams, flowcharts, timelines, pictures, films, and demonstrations.
Display 3a. Videos for clinical education
(Sungkyunkwan University School of Medicine,
www.mededu.or.kr)

Display 3b. Visual presentations (e.g., Prezi)
https://prezi.com/lllkhla56d46/is-the-world-open/
https://prezi.com/bli7pactxasy/twe-world-is-open/

Display 3c. Radical Cartography
http://www.radicalcartography.net/index.html/instocartocollaborative

Display 3d. Concept Mapping and Timeline Tools (e.g., Bubble.us, Cmap, Freemind,
Gliffy, Mindmeister, or Mindomo)

Display 3e. World Trends and Indices (e.g., Worldmapper)

Display 3f. Medical Animations and Videos (e.g., YouTube, CNN, BBC)
Display 3g. Download and Use Online 3D Sketches (Google SketchUp; download http://sketchup.google.com/3dwarehouse)

Display 3h. The Virtual Zooarchaeology 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 Moraghton, July 16, 2011, Chronicle of Higher Education http://vzap-idaho.edu/VViewPage.aspx?id=26)

Display 3i. Weather-Related Visuals and Animations

Display 3j. Online History Portals and Resources (Civil Rights Digital Library and Amistad)

4. Tactile/Kinesthetic Learners
   - Tactile/kinesthetic senses can be engaged in the learning process are role play, dramatization, cooperative games, simulations, creative movement and dance, multi-sensory activities, manipulatives and hands-on projects.

Do 4a. Podcast Productions and Shows
**Do 4b. Paired Article Critiques in Blogs**

- Students sign up to give feedback on each other's article reviews posted to their blogs.

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<tr>
<th>Article</th>
<th>Student One</th>
<th>Student Two</th>
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<td>Aoki, T. (2009).</td>
<td>Student A</td>
<td>Student B</td>
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<td>Sketch and Comment on Improve Framework</td>
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**Do 4c. Online Warm-ups Activities**

*Just-In-Time-Teaching (JiTT)*

http://webphysics.iupui.edu/jitt/jitt.html

**Do 4d. Uploading Mobile Books**

*(e.g., BookRix, [http://www.bookrix.com/](http://www.bookrix.com/))*

**Do 4e. Virtual Microscopes**

*Sungkyunkwan University School of Medicine, [www.mededu.or.kr](http://www.mededu.or.kr)*

**Do 4f. Virtual Quizzes**

*(www.mededu.or.kr)*

**Do 4g. Virtual Worlds**

*(e.g., Second Life)*
Do 4h. Virtual Worlds with Video Archive
(e.g., Dr. Monica Rankin’s class, UT Dallas, Cuban Revolution)
http://www.youtube.com/watch?v=O4u8kkW90os

Do 4i. Simulation Games

It is both Nature AND Nurture as well as PEOPLE!!! Technology is just part of the Equation

Technology
Pedagogy
People,
Society, Culture,
etc.

Phillips 66
6 minute Brainstorm:
In groups of 6 for 6 minutes brainstorm 6 ways you can use these ideas...

Any Extreme Questions?
Try the R2D2 and TEC-VARIETY!

Slides at: TrainingShare.com
Papers: PublicationShare.com
Book: http://worldisopen.com/
Email: curt@worldisopen.com