Engage Number One: This is the Next Generation
Curtis J. Bonk, Professor, Indiana University
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Audience Poll #1:
Has learning technology has ever transformed your life.

1728: 1st correspondence course advertised Boston
(learn shorthand from Caleb Phillips thru weekly mailed lessons)
The First University Correspondence Course
(University of London, External Program, 1858)
1728-1990s – Generally postal system based
1930s – phonograph and radio
1950s and 1960s – television
1970s and 1980s – VHS tapes
1980s and 1990s – DVD

May 10, 2013
10 ed-tech tools of the 70s, 80s, and 90s
eSchool News, Meris Stansbury
http://www.eschoolnews.com/2013/05/10/10-ed-tech-tools-of-the-70s-80s-and-90s/print/

Looking to the Past...

Life as an accountant/CPA in a high tech company in the 1980s...
Took Correspondence & TV Courses
(thanks to Bob Clasen and Charles Wedemeyer, the University of Wisconsin)

Knowledge Navigator (1987)
Apple Computer

http://www.youtube.com/watch?v=hb4AzF6wEoc

Fast Forward 25+ Years...
“Anyone can now learn anything from anyone at any time.”

Audience Polls #2:
I. Who remembers where they were when they found out that Steve Jobs died?
II. Who remembers what they were doing on 911?
III. Who remembers what they were doing on April 4, 2001?
IV. Has this open educ. movement changed your life?

Charles Vest (April 4, 2001)

"This is about something bigger than MIT. I hope other universities will see us as educational leaders in this arena, and we very much hope that OpenCourseWare will draw other universities to do the same. We would be delighted if -- over time -- we have a world wide web of knowledge that raises the quality of learning -- and ultimately, the quality of life -- around the globe."

Part I. Learning is Changing
New Technologies = New Delivery Methods...
I. Learning is More Open
Learning Portals, April 3, 2012
Google Art Project, NBC Nightly News
http://www.msnbc.msn.com/id/3032619/vp/46945508#46945508

II. Learning is More Open
Why I spent 10th grade online. Sophia Pink, Washington Post, August 23, 2013

III. Learning is More Collaborative
Collaboration and Discussion in Google Hangouts or with iPad, Jan. 28, 2013
(Carrie Gong from Beijing Normal University)

IV. Learning is More Mobile

10/17/2013
Digital Books (Korea)

VI. Learning is More Social
Facebook reaches one billion users, CNN Money, Aaron Smith, October 4, 2012

VII. Learning is More Modifiable
Inside Look: Learning Spaces, Meeting classroom teaching and collaboration expectations, University Business, Feb. 22, 2013

VIII. Learning is More Comfortable
Design for Students, with Students, “Hub Central”, the $42 million University of Adelaide learning hub opened in October 2011, May 8, 2012, Mike Roberts

IX. Learning is More Global
UC Irvine (2013 report)
Example 3: Fundamentals of Japanese

X. Learning is More Instantaneous
April 9, 2013
HER Computer fashions face social test: Can wearable computers fit in? Scott Martin, USA Today
(i.e., magnify moles or injuries, see vital signs, live stream surgeries, access previous PT sessions, access research and drug info, etc.)

XI. Learning is More Personal
iPotty Aims To Entertain Toddlers During Toilet Training, Mashable, Kate Freeman (January 10, 2013)
http://mashable.com/2013/01/10/ipotty/

XII. Learning is More Ubiquitous
Flexible displays bend what’s possible for computers, Jon Swartz, USA Today (May 4, 2012)

XIII. Learning is More Massive
April 16, 2013 (NovoEd)
New MOOC Provider Says It Fosters Peer Interaction
Chronicle of Higher Education, Jake New
http://novoed.com/

XIV. Learning is More Technology-Based
DataWind Prepared $20 Tablet Computer for Indian Market

10/17/2013
XV. Learning is More Flipped
One Man, One Computer, 10 Million Students: How Khan Academy Is Reinventing Education, Forbes, November 19, 2013, Michael Noer
The One World Schoolhouse (Twelve, Oct. 2, 2012)

April 15, 2013
World will soon be “Webified”
Google boss: Entire world will be online by 2020, Doug Gross, CNN

Google Wi-Fi from the Sky, Steven Levy, pp. 126-131, Wired, September 2013
http://www.wired.com/gadgetlab/2013/08/googlex-project-loon/

Google X chief Astro Teller (left) and Project Loon’s first leader, Rich DeVaul, holding the system’s ground-based antennas.

The Web of Learning

It is very open!
(at least in Norway & the Phillippines)

We are entering a jumping off point...
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 Massive Gaming, Simulations, and Virtual Worlds; e.g., Second Life)
- Real-Time Mobility and Portability (e.g., iPhone)
- Networks of Personalized Learning (Blogs, RSS)

Audience Participation!
WE ALL LEARN!!!

Poll #2: Is this a revolution in education today?
A. Yes...
B. No...

Part II. Motivation and Engagement
What was it that he said?
Ok, Million Dollar Question: What words come to mind when I say that I want to motivate learners?

Motivation Research Highlights (Jere Brophy, Michigan State University)

1. Supportive, appropriate challenge, meaningful, moderation/optimal.
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 products.
8. Provide immediate feedback, advance organizers.
9. Show intensity, enthusiasm, interest, minimize anxiety.
10. Make content personal, concrete, familiar.

Framework #1: TEC-VARIETY 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

Examples of TEC-VARIETY

1. Tone/Climate: A. Video Introductions, e.g., Flipgrid http://flipgrid.com/#429f88c5

MAKE IT SO
1. **Tone/Climate**: B. Share Visuals of Favorite Places (e.g., Panoramio, http://www.panoramio.com/)

2. **Encouragement, Feedback, etc.**: A. Voice Feedback
   Vocaroo: http://vocaroo.com/
   http://vocaroo.com/i/s00c4D6iUNmN (Wed Nov 13)

2. **Encouragement, Feedback, etc.**: B. Blog and Website Polling (e.g., Poll Everywhere, BlogPolls, BlogPoll, MicroPoll)
   http://www.polleverywhere.com/

2. **Encouragement, Feedback, etc.**: C. Create Screencasts
   Jing, GoView, Screenr, slide from Zaid Ali Alsagoff [zaid.alsagoff@gmail.com]

2. **Encouragement, Feedback, etc.**: D. Quizlet (online quiz tools)
   http://quizlet.com/

3. **Curiosity, Fun**: A. Something in the News
   (e.g., Fauja Singh, 101, finishes last race, February 24, 2013)

Fauja Singh, 101, finishes last race
3. Curiosity, Fun:
   B. Online Quiz Games
   Jeopardy Labs
   https://jeopardylabs.com/play/ganttparity

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

5. Autonomy, Choice:
   A. Online Database Activities
   (e.g., WolframAlpha)
   http://www.wolframalpha.com/

5. Autonomy, Choice:
   B. Demonstrate, Explore, and Share Websites
   Commonwealth of Learning, March 2013

6. Relevance, Meaningfulness:
   A. Video Scenario Learning
   (Franklin University, cost and forensic accounting course)
   http://video.franklin.edu/Franklin/acct/managerialAccounting/cost-behavior-player.html
   http://video.franklin.edu/Franklin/acct/342/common/fraudScenario02.html
   http://www.youtube.com/watch?v=cJmosLSUgQ8&list=TLzymmALKW1TI

6. Relevance, Meaningfulness:
   B. Design Multimedia Glossaries
   Ozgur Ozdemir, December 2012
   http://r685glossary.shutterfly.com/
   Umida Khikmatullaeva, Dec. 2011, P540
   http://learningplanet.shutterfly.com/
7. Interactive, Collaborative:
A. Collaboration and Discussion in Google Hangouts
(January 29 and February 25, 2013)

MeetingWords is a simple text editor for the web. Your text is saved on the web, and more than one person can edit the same document at the same time. Everybody’s changes are instantly reflected on all screens. Work together on meeting notes, brainstorming sessions, homework, team programming and more!

8. Engagement, Effort:
http://www.guardian.co.uk/world/interactive/2011/mar/22/middle-east-protest-interactive-timeline

8. Engagement, Effort:
also: Visualizing Emancipation

9. Tension, Challenge, etc.:
A. Decision-Making Scenarios
(e.g., Articulate Storyline)

9. Tension, Challenge, etc.:
B. Cage Match or Debate
MOOCs at SXSWedu (Curt Bonk & Chuck Severance)
https://soundcloud.com/sxswedu/cage-match-the-massive-open
10. Yields Products, Goals:
A. Final Product Video Summaries
Piercarlo Abate: [http://www.youtube.com/watch?v=_7URzH0tOu](http://www.youtube.com/watch?v=_7URzH0tOu)
Qi Li, Gangnam: [http://www.youtube.com/watch?v=7Q429lqxZaU&feature=youtu.be](http://www.youtube.com/watch?v=7Q429lqxZaU&feature=youtu.be)
Miguel Lara (Web 2.0 FREEDOM): [http://www.youtube.com/watch?v=8cmCFWi9lW8](http://www.youtube.com/watch?v=8cmCFWi9lW8)

B. Interactive Timelines (e.g., The Big Sleep, Kate Hurd)

C. I Done This, Milestone Planner, and 43 Things
[http://43things.com](http://43things.com)

Stop and Share:
Which principle(s) of TEC-VARIETY will you use?
Tone/Climate
Encouragement, Feedback
Curiosity

Variety
Autonomy
Relevance
Interactive
Engagement
Tension
Yields Products

What did Jean-Luc Picard say?

That’s right, Engage!
**Part III. How can technology address diverse learner needs?**

**Framework #2: 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. Collect and Listen to Interactive Stories**

(e.g., Meograph: [http://www.meograph.com/](http://www.meograph.com/))
Timelines with Oral Histories, Slavery and the Making of America
Time and Place, PBS

**Read 1b. Listen to Open Access Podcast Shows (and write papers)**
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. Big Issue Reflections
(Big Questions Online (BQO)), January 8, 2013
(e.g., Do We Have Souls?)
https://www.bigquestionsonline.com/content/do-we-have-souls

Reflect 2b. Reflect on Virtual Timelines
(Dipity, xtimeline, Simile, etc.)
http://www.usatoday.com/story/life/movies/2013/04/10/harrison-ford-jackie-robinson/2001783/

Reflect 2c. Cultural Blogs
(e.g., Dr. Kim Foreman, San Fran State University, Come and See Africa Blog;
http://comeandseeafrica.blogspot.com/)
3. Visual Learners

- Visual learners prefer diagrams, flowcharts, timelines, pictures, films, and demonstrations.

Display 3a. Virtualize Words Used (e.g., Wordle, Tagxedo, Tagul, Wordsift, Word It Out)
http://shellyterrell.com/2010/02/14/word-cloud-resources-tips-tools/

Display 3b. Interactive Map Timelines (adults with college degrees by county, May 7, 2012)
http://todayscampus.com/article/Keith_Hampson_Interviews_Josh_Keller_on__Interactive_Graphics_for_Higher_Education

Display 3c. Videos for clinical education (Sungkyunkwan University School of Medicine, www.mededu.or.kr)

Display 3d. Time Revealed Interactive Maps Mapping the Dead: Gun Deaths Since Sandy Hook, Huffington Post, March 22, 2013
http://data.huffingtonpost.com/2013/03/gun-deaths-

Display 3e. Concept Mapping and Timeline Tools (Bubbl.us, Cmap, Freemind, Gliffy, Mindmeister, or Mindomo)
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. Student Class Documentaries
Umida’s R546 Documentary Project
http://www.youtube.com/watch?v=EMLTzqCV_5A

Do 4b. Student Mobile App Creation
The App Builder: http://www.theappbuilder.com/
Mintian Guo (April 2013): http://myapp.is/r685final

Poll #6: What phase of the R2D2 Method did you get the most ideas from?
A. Read (Auditory and Verbal Learners)
B. Reflect (Reflective Learners)
C. Display (Visual Learners)
D. Do (Tactile, Kinesthetic, Exploratory Learners)

Poll #3:
Do you feel “MOTIVATED” to try any of this out?
A. Yes, R2D2
B. Yes, TEC-VARIETY
C. Yes, both
D. Neither

Part IV.
Wait, we are not done yet!
Part IV: From Tinkering to Tottering to Totally Extreme Learning...

**Tinkering**

**Tinkering**

**Tinker #1.** Educational Videos: TED-Ed

[http://education.ted.com/](http://education.ted.com/)

**Tinker #2.** Video Animations and Simulations

**Tinker #3.** Online Experiments (e.g., psychology)

[Tottering](#)
Totter #1. Combining Asynchronous and Synchronous Events (flipping classes)

Totter #2. Uploading Mobile Books (e.g., BookRix, http://www.bookrix.com/)

Totter #3. Student Collaborative Knowledge Building and Sharing (e.g., Popplet: http://popplet.com/)


Totally Extreme #1. Blogging Field Archeology Research (e.g., Lily Henry Roberts, UCLA digging in Hope, BC, Stó:lō First Nation people from 12,000 years ago)

Totally Extreme #2. Virtual High School Learning by Boat (e.g., Bridey Fennell and her family sailing and learning in the Caribbean)
Poll #4: How many new ideas did you get?

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.

Stop and Share:
Three Words from Today’s Session!

Poll #5: Any Questions?
Try the R2D2 Model!
Try TEC-VARIETY too...

Slides at: TrainingShare.com
Papers: PublicationShare.com
Book: http://worldisopen.com/
Dr. Curt Bonk – CJBonk@Indiana.edu

DON’T JUST WISH FOR A GREAT 2013,
MAKE IT SO.