Engage Number One:
This is the Next Generation

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Audience Poll #1:
Has learning technology 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.”

February 20, 2013
Star Trek-like holodeck may be closer to reality than you think
Matt Hartley, Financial Post, Canada
http://business.financialpost.com/2013/02/20/star-trek-like-holodeck-may-be-closer-to-reality-than-you-think/?__lsa=054d-d58d

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
(80-Year-Old WGU Texas Grad Keeps His Promise, November 30, 2012, Reeve Hamilton, Texas Tribune)

August 5, 2013
MOOC at UPenn; Recession Fuels Explosion of Online Learning, Peter Struck, Professor, UPenn, Mythology class to 54,000 students, AOL News, 1:33 minutes
Video: http://on.aol.com/video/recession-fuels-explosion-of-online-learning-51788587

May 20, 2013
The New Greatest Generation: Why Millennials will Save Us All, Time, Joel Stein
http://www.time.com/time/magazine/article/0,9171,2143001,00.html

Learning Portals, April 3, 2012
Google Art Project, NBC Nightly News
http://www.msnbc.msn.com/id/3032619/vp/46945508#46945508

October 16, 2013
MOOC News Item: Zombies!
'Walking Dead' comes alive in the online classroom, Patrick Ryan, USA Today
http://usatoday.com/story/life/tv/2013/10/15/society-science-survival-walking-dead-online-course/2976427/
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
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
http://designbuildsource.com.au/design-for-students-with-students

IX. Learning is More Global
Dr. Hidemi Riggs, UC Irvine’s 2013 report (http://www2.uci.edu/~hriggs/teaching/2012-2013_145.pdf)
Teaching: online, live class, live class, NetMeeting, front panel "hub" lectures (24 students maximum), 3-5 lectures (24 students maximum), 2-3 lectures (24 students maximum)
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
XV. Learning is More Flipped
One Man, One Computer, 10 Million Students:
How Khan Academy Is Reinventing Education,
Forbes, November 19, 2013, Michael Noer
http://www.forbes.com/sites/michaelnoer/2012/11/02/one
man-one-computer-10-million-students-how-khan-academy-is-reinventing-education/

The One World Schoolhouse (Twelve, Oct. 2, 2012)

Learning is Changing the World
(Book Review: Ed Tech Mag, May-June 2013)

April 20, 2013
Two Cheers for Web U!
A. J. Jacobs, New York Times

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/

The Web of Learning

Google X chief Astro Teller (left) and Project Loon’s first leader, Rich DeVaul, holding the system’s ground-based antennas.
It is very open!
(at least in Norway & the Philippines)

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 Question #2:
I’m Happy...Are you Happy?

The End of Shovelware?
My dog is content....

Who needs online and blended learning? (Katrina, August 2005; Ike, Sept 2008; Irene, August 2011; Isaac, August 2012)

Those where there are diseases and outbreaks... (SARS, 2003; H1N1, 2009-2010)

May 24, 2010
Author Nicholas Carr, The Web Shatters Focus, Rewires Brains, Wired
http://www.wired.com/magazine/2010/05/ff_nicholas_carr/
Poll #3: 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.
Intrinsic Motivation

“...innate propensity to engage one’s interests and exercise one’s capabilities, and, in doing so, to seek out and master optimal challenges (i.e., it emerges from needs, inner strivings, and personal curiosity for growth)


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](http://flipgrid.com/#429f88c5)

1. Tone/Climate: B. Video Course Intros
   [http://www.youtube.com/watch?v=1WOouyqSnKLQ](http://www.youtube.com/watch?v=1WOouyqSnKLQ)
1. Tone/Climate: C. 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, Screencast, 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)
3. Curiosity, Fun:
B. Create Cartoons, Movies, and Animations (e.g., Go Animate, xtranormal, PowToon, etc.)

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/

3. Curiosity, Fun:
C. Online Quiz Games
Jeopardy Labs
https://jeopardylabs.com/play/ganttpardy

5. Autonomy, Choice:
B. Demonstrate, Explore, and Share Websites
Commonwealth of Learning, March 2013
Poll #4:
Which of the first 5 motivational principles will you use the most?
A. Tone/Climate
B. Encouragement/Feedback
C. Curiosity/Fun
D. Variety/Novelty
E. Autonomy/Choice/Flexibility

6. Relevance, Meaningfulness:
B. Design Multimedia Glossaries
Ozgur Ozdemir, December 2012
http://r685glossary.shutterfly.com/
Umida Khikmatillaeva, Dec. 2011, P540
http://learningplanet.shutterfly.com/

7. Interactive, Collaborative:
B. Negotiate Meanings Online
(e.g., PiratePad: http://meetingwords.com/)
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/13/middle-east-protest-interactive-timeline
8. Engagement, Effort:
also: Visualizing Emancipation

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9. Tension, Challenge, etc.:
A. Game Show Final Project, April 25, 2011, Kim Seeber
Website: http://mypage.iu.edu/~kseeber/web2.0technology.swf

B. Decision-Making Scenarios (e.g., Articulate Storyline)

C. Cage Match or Debate
MOOCs at SXSWedu (Curt Bonk & Chuck Severance)
https://soundcloud.com/sxswedu/cage-match-the-massive-open

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10. Yields Products, Goals:
A. Final Product Video Summaries
Piercarlo Abate: http://www.youtube.com/watch?v=_lTuBzI0Oa4
Qi Li, Gangnam: http://www.youtube.com/watch?v=Q4XfR1PzElMfeature=youtu.be
Miguel Lara (Web 2.0 FREEDOM): http://www.youtube.com/watch?v=BcmCFW99W8
10. Yields Products, Goals:
B. Interactive Timelines
(e.g., The Big Sleep, Kate Hurd)
http://hurdinsuranceagency.com/thebigsleep/

10. Yields Products, Goals:
C. I Done This, Milestone Planner,
and 43 Things

Poll #5:
Which of the last 5 motivational principles will you use the most?
A. Relevance/Meaningfulness
B. Engagement/Effort
C. Interactive/Collab/Community
D. Tension/Challenge/Dissonance
E. Yielding Products/Goals

Commitments:
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?

The R2D2 Method
1. Read (Auditory and Verbal Learners)
2. Reflect (Reflective Learners)
3. Display (Visual Learners)
4. Do (Tactile, Kinesthetic, Exploratory Learners)

Read 1a. Collect and Listen to Interactive Stories
(e.g., Meograph: http://www.meograph.com/)
Timelines with Oral Histories, Slavery and the Making of America
Time and Place, PBS
https://www.pbs.org/wgbh/amex/timelines/1865.html

Read 1b. Listen to Open Access Podcast Shows (and write papers)

Framework #2: The R2D2 Model

1. Auditory or Verbal Learners
• Auditory and verbal learners prefer words, spoken or written explanations.
Read 1c. Grammer Checkers (e.g., Grammarly, Ginger, GrammarCheck, PaperRater, and SpellCheckPlus)
http://www.grammarly.com/

Read 1d. Twitter Fed Class Discussions

Read 1e. Online Crossword Puzzles (e.g., http://www.eclipsecrossword.com/)
Create Online Crossword Puzzles!
http://www.eclipsecrossword.com/

Read 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/)

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 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

3. Visual Learners

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

Do 4c. Singing YouTube Summaries
Daniel Halluska, P540, Fall 2011
http://www.youtube.com/watch?v=tOL7lrGsqnw
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 #7:
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

Tinker #1.
Educational Videos: TED-Ed
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/**
You Want Totally Extreme?
Apple's new 'spaceship' campus: What will the neighbors say?, Doug Gross, CNN, May 22, 2012

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)

Totally Extreme #3.
MBAs from War Zones...!

Totally Extreme #4.
Virtual Mentoring
South African teens get virtual mentoring from all over the world, By Danielle Berger, CNN, January 14, 2011

Totally Extreme #5.
Remote Animal Streaming
Remote Maine puffin colony up close on HD web cam
Clarke Canfield, The Stateman, June 27, 2012
This still frame from streaming online video, provided by explore.org, the Annenberg Foundation and the National Audubon Society, shows puffins on the shore of Seal Island, Maine, Wednesday, June 27, 2012. The island is the habitat for the largest puffin colony in the U.S.
Where are we headed?

1. Mobile Video Connections to Experts and Friends

2. Expert Access from Our Watches

3. Video Walls of Experts

4. Interactive Globes
   (e.g., NY Times Interactive Photo Globe)
   [Link to interactive globe](http://www.nytimes.com/interactive/2010/05/03/blogs/a-moment-in-time.html?_r=0)
5. Experts Apprenticeship via Our Glasses

Poll #8: 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.

Poll #9: Are you happy now?

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

Poll #10: 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