My Our Learning World Has Changed: Now WE-ALL-LEARN with R2D2 and Beyond

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

I. Learning is More Open
New Technologies = New Delivery Methods…

Prehistoric Googling

I. Learning is More Open
(80-Year-Old WGU Texas Grad Keeps His Promise, November 30, 2012, Reeve Hamilton, Texas Tribune)
II. Learning also is More Collaborative
Collaboration and Discussion in Google Hangouts or with iPad, Jan. 28, 2013
(Carrie Gong from Beijing Normal University)

III. Learning is More Mobile

IV. Learning is More Video-Based
Adora Svitak, WFP Youth Representative - 2013
ECOSOC Youth Forum, March 27, 2013

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

VI. Learning is More Personal
iPotty Aims To Entertain Toddlers During Toilet Training, Mashable, Kate Freeman (January 10, 2013)

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

IX. Learning is More Global
UC Irvine (2013 report)
Example 3: Fundamentals of Japanese
Dr. Hidemi Riggs, Fall 2012 & Winter 2013, Tech-enhanced: EEE AdvancedWebspace (Dreamweaver), Skype video conferencing tool, Active Learning, Format: 5-1A lectures (24 students maximum); 3-2A lectures (24 students maximum); 2-3A lectures (24 students maximum)

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

XI. Learning is More Instantaneous
April 9, 2013
HER Computer fashions face social test: Can wearable computers fit in? Scott Martel, USA Today (i.e., magnify moles or injuries, see vital signs, live stream surgeries, access previous PT sessions, access research and drug info, etc.)
http://www.fiercemobilehealthcare.com/story/google-glasses-could-have-strong-potential-healthcare-use/2013-03-18

XII. Learning is More Technology-Based
April 15, 2013
World will soon be “Webified”
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.

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

The Web of Learning

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!!!
Opener #1. Web Searching (e.g., Google, MSN, Yahoo!) in the World of e-Books (i.e., Darwin, Shakespeare, etc.)

Opener #2. E-Learning and Blended Learning

Why I spent 10th grade online. Sophia Pink, Washington Post, August 23, 2013

Why I spent 10th grade online

More than six million post-secondary students are taking online classes in the USA; growing by 10% per year.

Opener #3. Availability of Open Source and Free Software Moodle
(July 18, 2013: 72 million users in 237 countries, 84,518 sites, 7.6 million courses)
Opener #4. Leveraged Resources and OpenCourseWare (OCW) (e.g., free courses from Harvard Edx, MITx, CORE, OOPS)

Opener #5. Online Learning Object Repositories and Portals (shared content)

Online Encyclopedias (e.g., the Encyclopedia of Earth: http://www.eoearth.org/) http://en.wikipedia.org/wiki/Encyclopedia_of_Earth

October 2010, The V-PORTAL (Bonk, IU) "Video Primers in an Online Repository for e-Teaching and Learning" V-PORTAL, TravelinEdMan (27 free/open YouTube videos) http://www.youtube.com/user/TravelinEdMan

Opener #6. Learner Participation in Open Information Communities (e.g., Slashdot, Digg, Wikipedia, YouTube)
Opener #7. Electronic Collaboration and Interaction (synchronous & asynchronous)
Soliya Connect
http://sili.georgetown.edu/#soliya

Google Hangouts Class Sync Collaboration and Discussion (Spring, 2013)

April 15, 2013 Guest Speakers
Sara de Freitas and Jim Hensman
Jay Cross

Opener #8. Alternate Reality Learning (Online Massive Gaming, Simulations, and Virtual Worlds; e.g., Second Life)

September 5, 2013 Video games may improve brain power in older adults

Opener #9. Real-Time Mobility and Portability (e.g., iPhone, iPads, smart watches (September 4, 2013))
Opener #10. Networks of Personalized Learning
(Blogs, Podcasts, Facebook, and RSS feeds, etc.)

May 22, 2013
Video Walls of Experts (IQ Wall)
Indiana University unveils high-tech classroom
The Herald-Times, Mike Leonard
http://www.indianaeconomicdigest.net/main.asp?SectionID=31&SubSectionID=135&ArticleID=69980

What about the Instructor in the Open World?
Instructor as Conductor

Instructor as Curator

Instructor as Concierge

How can technology address diverse learner needs?

Framework #1: 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/)
Timelines with Oral Histories, Slavery and the Making of America
Time and Place, PBS
http://www.pbs.org/wnet/slavery/timeline/1857.html

Read 1b. Follow on Twitter
http://venture-lab.org/education
https://twitter.com/electricians

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/
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)

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**
Mintian Guo (April 2013): [http://myapp.is/r685final](http://myapp.is/r685final)

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**Poll #2: What phase of the R2D2 Method do you like best?**
A. Read (Auditory and Verbal Learners)
B. Reflect (Reflective Learners)
C. Display (Visual Learners)
D. Do (Tactile, Kinesthetic, Exploratory Learners)

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**Do you ever sleep through your classes?**

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**What did Jean-Luc Picard say?**

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**That’s right, Engage!**

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**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 #2: 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]

2. Encouragement, Feedback, etc.: A. Voice Feedback
   Vocaroo; [http://vocaroo.com/]
   [http://vocaroo.com/i/s01g2uGFCZ4S (NCTU)]
3. Curiosity, Fun:
A. Something in the News
(e.g., Fauja Singh, 101, finishes last race, February 24, 2013)

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/

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

7. Interactive, Collaborative:
A. 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!

7. Interactive, Collaborative:
B. Combining Asynchronous and Synchronous Events (flipping classes)
http://www.guardian.co.uk/world/interactive/2011/nov/22/middle-east-protest-interactive-timeline

also: Visualizing Emancipation

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

10. Yields Products, Goals: A. Final Product Video Summaries
Piercarlo Abate: http://www.youtube.com/watch?v=_TURzHO0aU
Qi Li, Gangnam: http://www.youtube.com/watch?v=7Q429pZxZaU&feature=youtu.be
Miguel Lara (Web 2.0 FREEDOM): http://www.youtube.com/watch?v=8cmCFW0rW8

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

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

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