

Best Practices for Online Learning: Introducing the R2D2 and TEC-VARIETY Models

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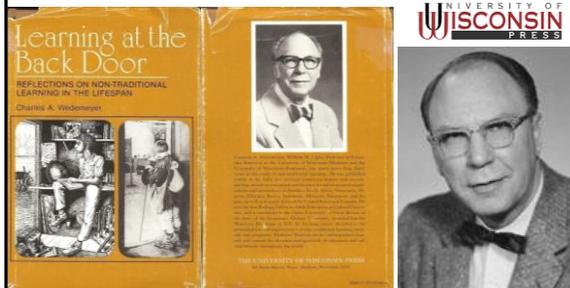
1728: 1st correspondence course advertised Boston
 (learn shorthand from Caleb Phillips thru weekly mailed lessons)
The First University Correspondence Course
 (University of London, External Program, 1858)
 1728-1990s – Generally postal system based
 1930s – phonograph and radio
 1950s and 1960s – television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



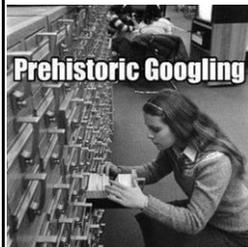
May 10, 2013
 10 ed-tech tools of the 70s, 80s, and 90s



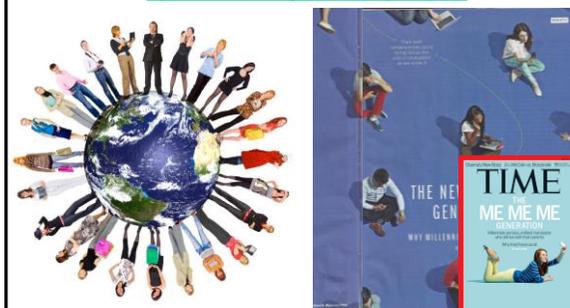
Took Correspondence & TV Courses
 (thanks to Bob Clasen and Charles Wedemeyer, the University of Wisconsin)



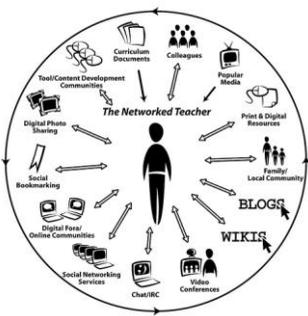
Part I. Learning is Changing
 New Technologies =
 New Delivery Methods...



May 20, 2013
 The New Greatest Generation:
 Why Millennials will Save Us All, Time, Joel Stein



The Web of Learning



We are entering a jumping off point...



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

- **W**eb Searching in the World of e-Books (i.e., Darwin)
- **E**-Learning and Blended Learning
- **A**vailability of Open Source and Free Software (e.g., Moodle)
- **L**everaged Resources and OpenCourseWare (e.g., MIT)
- **L**earning Object Repositories and Portals (i.e., shared content)
- **L**earner Participation in Open Info Communities (YouTube)
- **E**lectronic Collaboration and Interaction (sync and async)
- **A**lternate Reality Learning (Online Massive Gaming, Simulations, and Virtual Worlds; e.g., Second Life)
- **R**ead-Time Mobility and Portability (e.g., iPhone)
- **N**etworks 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



February 2014

IU Online Enrollments (at least one class online)

<http://www.cshhs.indiana.edu/online/Students/AtLeastOneOnlineClassDashboard/AtLeastOneOnlineClass/Reports/Count>

Headcount Over Time By Campus Display - Campuses

Term	Total Headcount	Bloomington (%)	IUPLU (%)	East (%)	Kokomo (%)	Northwest (%)	South Bend (%)	Southeast (%)	Columbus (%)
Fall 2010	13,728	17.0%	52.0%	18.1%	7.8%	5.5%	9.4%	0.0%	0.0%
Fall 2011	15,300	17.5%	47.0%	11.0%	5.5%	5.7%	11.4%	0.0%	0.0%
Fall 2012	16,814	16.6%	47.0%	12.4%	5.7%	6.6%	11.4%	0.0%	0.0%
Spring 2013	16,473	14.0%	45.5%	13.4%	6.6%	6.9%	11.9%	0.0%	0.0%
Fall 2013	17,969	17.0%	45.5%	12.4%	6.9%	7.7%	11.9%	0.0%	0.0%
Spring 2014	19,865	15.0%	40.0%	11.9%	7.2%	7.7%	11.9%	0.0%	0.0%

January 2014

Grade Change: Tracking Online Education in the United States, 2013, The Sloan Consortium, I. Elaine Allen & Jeff Seaman, 2013 Survey of Online Learning Report

<http://sloanconsortium.org/publications/survey/grade-change-2013>
Direct connect: <http://www.onlinelearningreports.com/reports/gradechange.pdf>

ONLINE ENROLLMENT AS A PERCENT OF TOTAL ENROLLMENT: FALL 2002 - FALL 2012

Term	Online Enrollment as % of Total Enrollment
Fall 2002	~10%
Fall 2003	~12%
Fall 2004	~14%
Fall 2005	~17%
Fall 2006	~19%
Fall 2007	~21%
Fall 2008	~23%
Fall 2009	~25%
Fall 2010	~27%
Fall 2011	~29%
Fall 2012	~31%

March 2014

Learning is More Massive

Free Courses on How to Design Learning Environments (Gilly Salmon, Swinburne University, Melbourne and Paul Kim from Stanford University)

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)

Total known sites: 84,518 (as of July 18, 2013)

Opener #4. Leveraged Resources and OpenCourseWare (OCW) (e.g., free courses from Harvard Edx, MITx, CORE, OOPS)

Saylor.org: <http://www.saylor.org/>
RedHoop: <http://redhoop.org/>

Learning is More Open

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

THE TEXAS TRIBUNE
An 80-Year-Old Graduate With an Online Marketing Degree Kept His Promise

The World is very open! (at least in Norway)



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

<http://www.deadsascrolls.org/> explore-the-archives
<http://www.deadsascrolls.org/> explore-the-archives
<http://www.deadsascrolls.org/> explore-the-archives



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

"Shaping tomorrow's innovators: Leveraging science, technology, innovation and culture for today's youth". Statement by the World Food Programme Youth Representative, Ms. Adora Svitak at the 2013 ECOSOC Youth Forum.
<http://webtv.un.org/meetings-events/economic-and-social-council/youth-representative-2013-ecosoc-youth-forum-shaping-tomorrows-innovators-leveraging-science-technology-innovation-and-culture-for-today-s-youth/2257975055001>



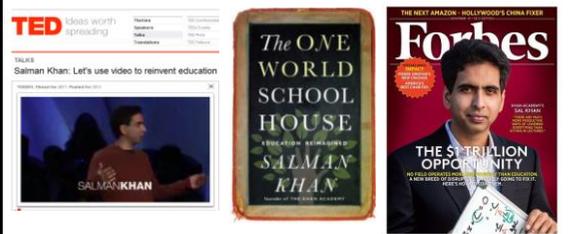
October 2010, The V-PORTAL (Bonk, IU) "Video Primers in an Online Repository for e-Teaching and Learning" V-PORTAL, TravelinEdMan (27 free/open YouTube videos)

<http://www.youtube.com/user/TravelinEdMan>

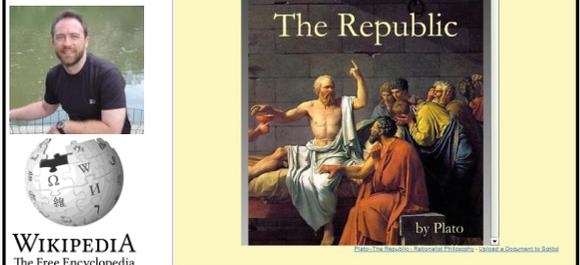


Learning is More Flipped

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/2013/11/09/one-man-one-computer-10-million-students-how-khan-academy-is-reinventing-education/>
The One World Schoolhouse (Twelve, Oct. 2, 2012)



Opener #6. Learner Participation in Open Information Communities (e.g., Wikipedia, YouTube, Scribd)



Opener #7. Electronic Collaboration and Interaction (synchronous & asynchronous)

Soliya Connect

<http://gii.georgetown.edu/#soliya>



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



Learning is More Global UC Irvine (2013 report)

Example 3: Fundamentals of Japanese

Dr. Hidemi Riggs, Fall 2012 & Winter 2013, Tech-enhanced: [EEE AdvancedWebbase \(Zoomweaver\)](#), [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)



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



Opener #9. Real-Time Mobility and Portability (e.g., iPhone, iPads, smart watches (September 4, 2013))

The Samsung Galaxy Gear smartwatch



Learning is More Mobile Open Learning on Smartphone

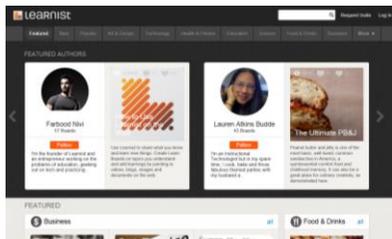
<http://blogs.coursera.org/post/69516553384/mis-holiday-season-learn-on-the-go-with-the-new>

	Beijing 2008	London 2012
Smartphones	139.3 million	657 million
Facebook	90 million	901 million
Twitter	< 1 million	300 million
Tweets / day	1.1 million	140 million
Tablets	0	54.8 million
App store downloads	300+ million	25+ billion

Sources: Nielsen, eMarketer, Forrester, Apple



Opener #10. Networks of Personalized Learning (Blogs, Podcasts, Facebook, and RSS feeds, etc.)



What about the Instructor in the Open World?



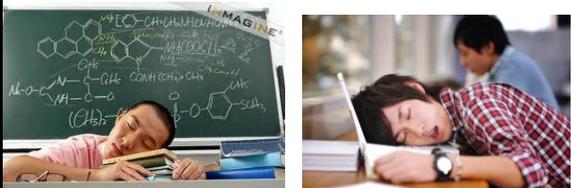
Instructor as Curator



Instructor as Concierge



Part II. Motivation and Engagement



How do we engage online?

Poll #1: 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.
3. Offer **rewards** for good/improved performance.
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 #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>



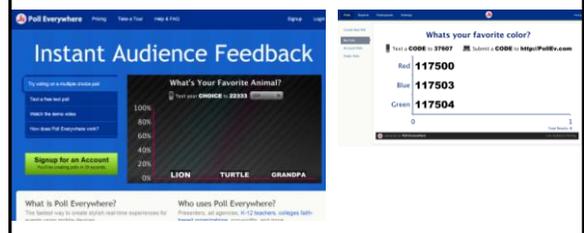
2. Encouragement, Feedback, etc.: A. Voice Feedback

Vocaroo; <http://vocaroo.com/>
<http://vocaroo.com/i/s00c4D6iUNmN> (Wed Nov 13)



2. Encouragement, Feedback, etc.: B. Blog and Website Polling (e.g., Poll Everywhere, BlogPolls, BlogPoll, MicroPoll)

<http://www.pollerywhere.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!



8. Engagement, Effort: A. Arab spring: an interactive timeline of Middle East protests, The Guardian, Garry Blight, and Sheila Pulham, July 12, 2011 <http://www.guardian.co.uk/world/interactive/2011/mar/22/middle-east-protest-interactive-timeline>



9. Tension, Challenge, etc.: A. Vocabulary Competitions (e.g., Kids learning new words at warp speed, January 14, 2014, Greg Toppo (Georgia Scurletis, Dir of Curriculum Development, for Vocabulary.com (Thinkmap) presents a banner to Marc Williams, Brooklyn Technical High School) <http://www.vocabulary.com>) Vocabulary.com: <https://www.vocabulary.com/>

10. Yields Products, Goals: A. Final Product Video Summaries

Piercarlo Abate: <http://www.youtube.com/watch?v=-TURzH00aU>
Qi Li, Gangnam: <http://www.youtube.com/watch?v=7Q429lqxZaU&feature=youtu.be>
Miguel Lara (Web 2.0 FREEDOM): <http://www.youtube.com/watch?v=8cmCFW9lW8>

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



Part III. How can technology address diverse learner needs?



Framework #3: 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. Listen to Open Access Audio Files and Podcast Shows

(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. Grammer Checkers (e.g., Grammarly, Ginger, GrammarCheck, PaperRater, and SpellCheckPlus)

<http://www.grammarly.com/>

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



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



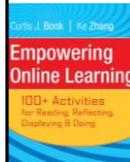
Do 4b. Uploading Mobile Books (e.g., BookRix, <http://www.bookrix.com/>)



Mobile Devices & Learning
How mobile devices are re-shaping the field of education

Poll #2: What phase of the R2D2 Method did you get the most ideas from ?

- Read (Auditory and Verbal Learners)
- Reflect (Reflective Learners)
- Display (Visual Learners)
- Do (Tactile, Kinesthetic, Exploratory Learners)



Poll #3: Do you feel "MOTIVATED" to try any of this out?

- Yes, R2D2
- Yes, TEC-VARIETY
- Yes, both
- Neither



Any Questions?

Try the R2D2 Model!
Try TEC-VARIETY too...

Slides at: TrainingShare.com

Papers: PublicationShare.com

Books: <http://worldisopen.com/>

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