A Five-Part Masterclass for Technology-Enhanced Teaching and Learning: Sampling across a Scrumptious Smorgasbord

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Technology of the 1980s

Radio Shack TRS-80 Model III

Introduced:	July 1980
Price:	US $599 base model US $2495 w/ 32K, dual drives
CPU:	Zilog Z-80, 2.03 MHz
RAM:	4K, 48K max
Ports:	Cassette tape, expansion, serial
Display:	12-inch BW monitor, 64 X 16 text
Storage:	0, 1, or 2 internal 170K floppy drives External cassette @ 500 / 1500 baud
OS:	BASIC in ROM, TRS-DOS on disk

Things That Became Obsolete This Decade

December 11, 2009, Silicon Alley Insider

Gadgets that Changed Everything This Decade

December 9, 2009, Jay Yarow, Silicon Alley Insider

New technologies hit us everyday!

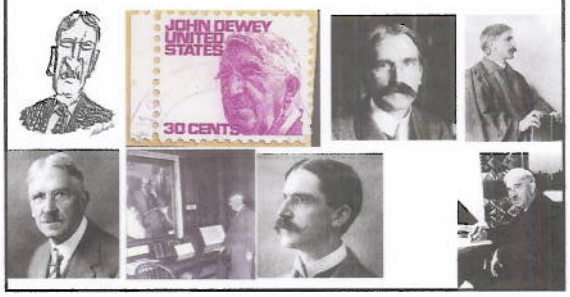
So much to keep track of!

Poll #1: Who finds it hard to keep track of all the technology-related changes today???

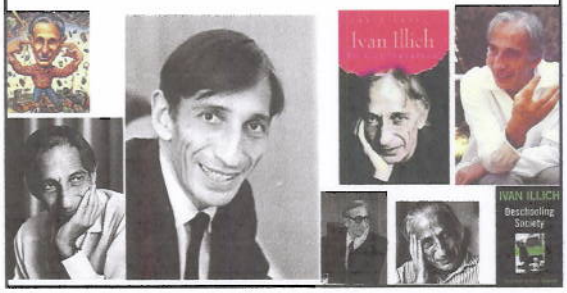
It's Nature (i.e, technology) and Nurture (i.e., pedagogy)!

Old Models of Interactivity

John Dewey (Author of "How We Think" and "Democracy and Education")



Ivan Illich (author of "Deschooling Society")



Seymour Papert, MIT Media Lab

Shephen Heppell (co-developer of Notschool.net and the ULTRALAB)

John Seely Brown (author of "Minds on Fire" and The Social Life of Information)

Masterclass Part 1: The Rise of Shared Online Video, the Fall of Traditional Learning

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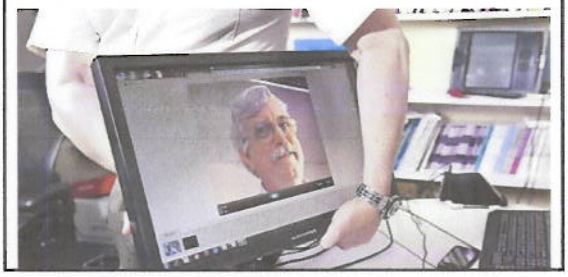
July 24, 2010
Reaching the Last Technology Holdouts at the Front of the Classroom,

Jeffrey Young, Chronicle of Higher Education
http://chronicle.com/article/Reaching-the-Last-Technology/123659/



Why Use Video?

1. **Importance of shared online video: educational psychologists such as David Ausubel (1978) argued that knowledge was hierarchically organized.**
2. **New learning concepts and ideas to be subsumed under or anchored within prior learning experiences.**

Why Use Video?

3. **Ausubel suggested that new info is going to be meaningful if it is anchored (i.e., attached or related) to what learners already know and understand.**
4. **Advance Organizers: Provide a context, richer learning, can be replayed for key concepts, bring students to the real world, discussion, reflection, common experience, and the potential for higher order thinking skills.**

Why Use Video?

5. Dual coding theory (learning information verbally and visually is more richly stored): Alan Paivio.
6. Anchored instruction and macrocontexts: John Bransford and colleagues.
7. Multimedia theory: Richard Mayer.

Which of these video sharing sites do you use?

1. BBC News Video and Audio
2. CNN.com Video
3. MSNBC.com
4. Google Video, Yahoo Video
5. Current TV
6. Fora TV
7. MIT World
8. YouTube, YouTube Edu
9. TeacherTube
10. Link TV, Explore, Global Pulse, Latin Pulse
11. Howcast, Big Think, WonderHowTo, Explo.TV, NASA TV, ClipChef, TV Lesson, BookTV, Edutopia videos, MonkeySee, doFlick, the Research Channel, iVideosong

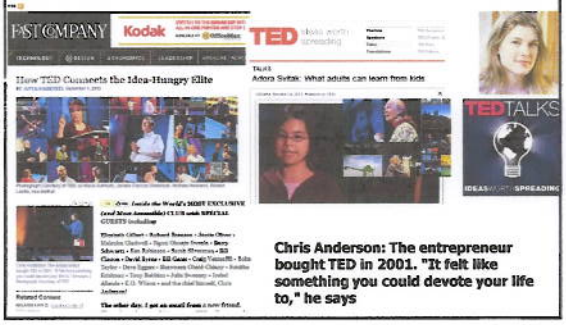
TeacherTube and WatchKnow

The Khan Academy

(videos on math, bio, trig, chemistry, money and banking, economics, statistics, etc.)

How TED Connects the Idea-Hungry Elite, Fast Company, *Anya Kamenetz*, September 1, 2010

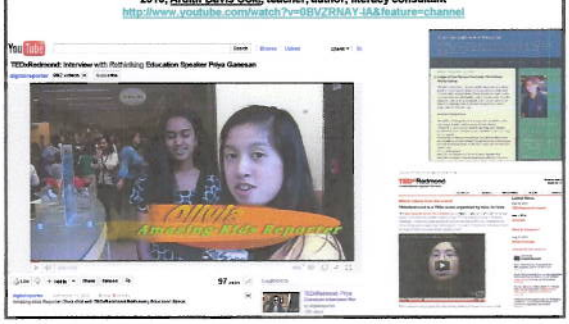
http://www.fastcompany.com/magazine/148/how-ted-became-the-new-harvard.html



Chris Anderson: The entrepreneur bought TED in 2001. "It felt like something you could devote your life to," he says

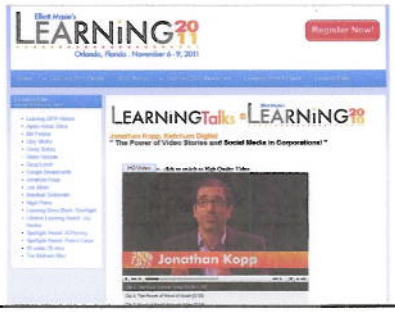
TEDxRedmond: Interview with Rethinking Education Speaker Priya Ganesan, November 24, 2010, Ardith Davis Cole, teacher, author, literacy consultant

http://www.youtube.com/watch?v=0BVZRNAY-IA&feature=channel



Academic Earth

LearningTalks - a series of short, free, video interviews on learning. The MASIE Center.
http://www.learning2010.com/Videos/jonathankopp.htm



Shared Online Video
(e.g., YouTube and the Royal Channel)

TV Lesson (expert videos)

Pubcasts! (videos of scientific papers and science; e.g., SciVee) NSF, the Public Library of Science, and the San Diego Supercomputing Center created a YouTube for scientists to help demystify important research papers.

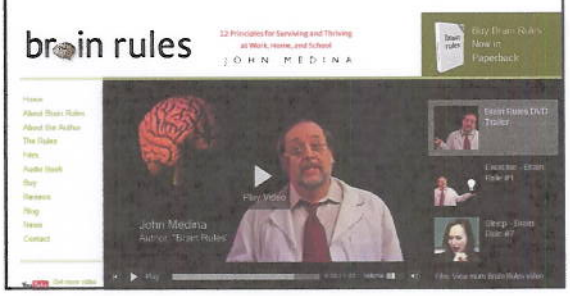
Topical Lectures from Famous People (e.g., Big Think; Academic Earth)

Videos of the Periodic Table

Medical Animations and Videos
(e.g., YouTube, CNN, BBC)

Life of a Scientist or Famous People Website
(e.g., Brian J Ford, independent scientist)
http://www.youtube.com/user/tellymonitor#p/a/u/1/1hGeApsKiar

Videos on Book Websites
(e.g., Brain Rules, John Medina)

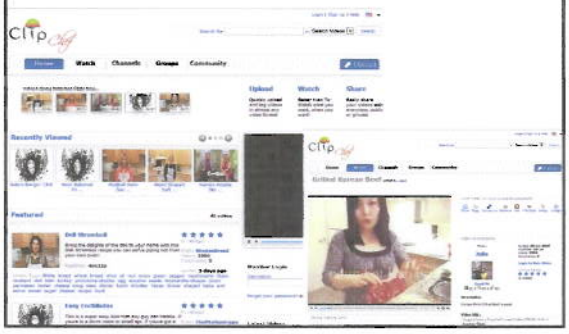


Fora TV
(Howard Gardner and Michelle Rhee)
http://fora.tv/2009/07/05/Transforming_the_System_An_Interview_with_Michelle_Rhee

YouTube as Class

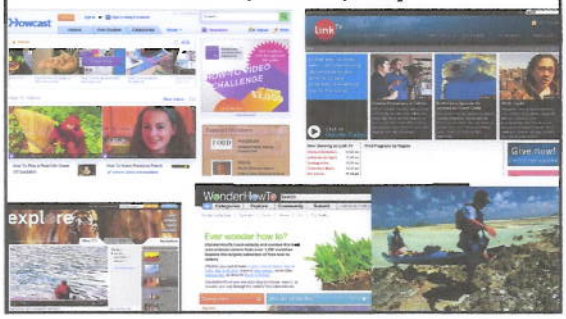
More and More Shared Online Video (e.g., Link TV, TED Conference, Edutopia Videos)

ClipChef



Still More Shared Online Video

(e.g., Howcast, WonderHowTo, Clip Chef, Link TV, Fora TV, etc.)



Five Anchors and Enders: Instructor Centered

1. Online Video Anchoring

Online videos are used as an anchor or advance organizer of a class lecture.

Learning and Memory Videos

Anchored Instruction (find anchoring event (YouTube, CNN, BBC, TeacherTube, CurrentTV)

- In a synchronous lecture interrupt it with a summary video (could be a movie clip) explaining a key principle or concept.
- Refer back to that video during lecture.
- Debrief on effectiveness of it.

2. Online Video Ender

Online videos are used after discussion and activities as a class "ender" or capstone event.

3. Online Class Previews and Discussions

The instructor(s) finds videos and then posts them to the course management system for students to watch prior to or after class. If students participate in an online discussion based on such videos, the instructor should be clear about the length of post (e.g., two paragraphs) and how many comments of peers to respond to.

4. Pause and Reflect

The instructor(s) plays a portion of a YouTube video and pauses for reflections and then continues playing the video which is followed by still more class reflection.

RSA Animate - Drive: The surprising truth about what motivates us

http://www.youtube.com/watch?v=u6XAPnuFjJc

5. Key Concept Reflections

Instructor shows the YouTube video and asks students to reflect on concepts embedded in it. He may replay the video 1-2 more times while prompting the class for certain key concepts. He might ask students to say "pause" when they see a concept from a particular chapter or unit displayed.

Five Anchors and Enders: Student Centered

1. Course Resource Provider Handouts

Students find videos and show them in class and discussion unfolds. Students assigned as the cool resource providers for the week are asked to create a handout for the videos and other course resources selected.

2. Anchor Creators

Students create their own YouTube videos to illustrate course concepts.

3. Anchor Archives

An archive is created of videos from previous years and students are asked to update them.

4. Video Anchor Debates

Students are asked to find YouTube or other online video content on the pro and con sides of a key class issue and then use them in face-to-face or online discussions and debates.

5. Anchor Creator Interviews

Students find YouTube videos relevant to course concepts and email interview the creator about the purpose and potential uses of the video or perhaps request that the creator join the class in a synchronous chat.

Karl Fisch, Did You Know? Shift Happens—Globalization, Information Age

Advice and Guidelines

1. Length of video for activities should be less than 10 minutes and preferably under 4 minutes.
2. Instead of finding all course videos, offer the student the chance to find and show 1-2 free online videos.

Advice and Guidelines

3. Test videos online (or, if FTF, in the room you will use) to check for link rot or video removal.
4. Have back-up videos in case do not work or are taken down.

Poll: How many ideas did you get from this talk?

a. None—you are an idiot.
b. 1 (and it is a lonely #).
c. 2 (it can be as bad as one).
d. 3-5
e. 6-10
f. Higher than I can count!

Now for 2 Minutes: Share your ideas with someone next to you and agree on three things maximum per category.

Masterclass Part 2: Online Motivation with the TEC-VARIETY Model

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

What if students minds were on fire for learning? i.e., Jumbo Movitation!

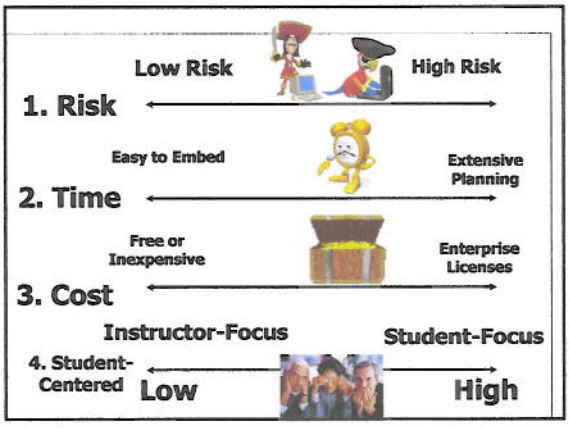
Ok, Million Dollar Question: How do you motivate online learners? What Words come to mind?

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

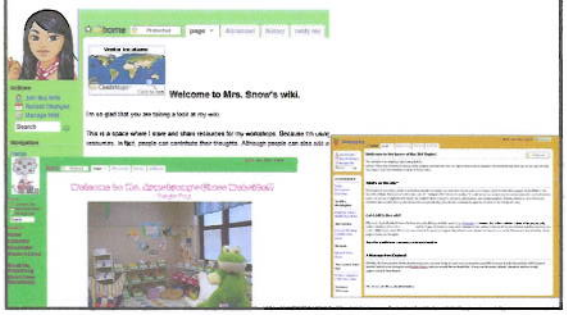
Magic #1: TEC-VARIETY Model for Online Motivation and Retention

1. **T**one/Climate: Psych Safety, Comfort, Belonging
2. **E**ncouragement, Feedback: Responsive, Supports
3. **C**uriosity: Fun, Fantasy, Control

   …
4. **V**ariety: Novelty, Intrigue, Unknowns
5. **A**utonomy: Choice: Flexibility, Opportunities
6. **R**elevance: Meaningful, Authentic, Interesting
7. **I**nteractive: Collaborative, Team-Based, Community
8. **E**ngagement: Effort, Involvement, Excitement
9. **T**ension: Challenge, Dissonance, Controversy
10. **Y**ields Products: Goal Driven, Products, Success, Ownership



1. Tone/Climate: (open, inviting)
A. Create a Class Wiki (Wikispaces)

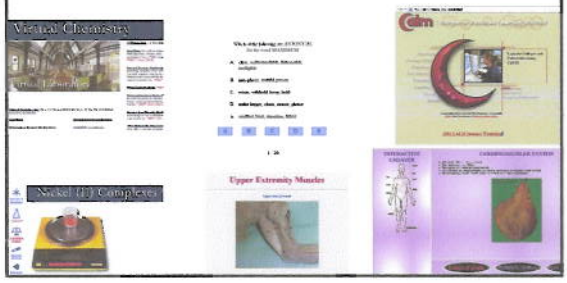


1. Tone/Climate: B. Video Course Intros from Instructors.

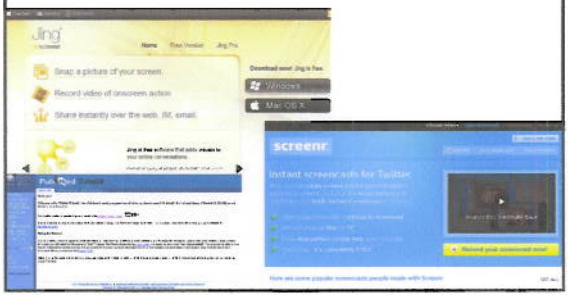
(examples from Northern Virginia Community College and Indiana University KD (online MBA) program) Yun Yun Chow, Open U Malaysia, Making Art Lessons Come Alive with Web 2.0

http://www.youtube.com/watch?v=BO9rqJD1GXo

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



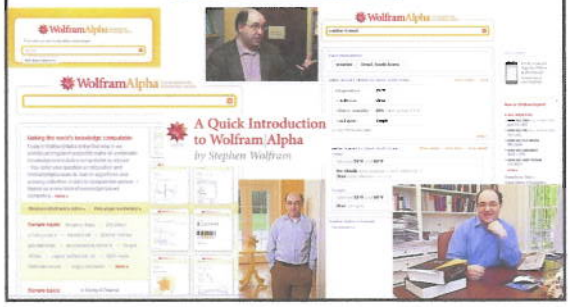
2. Encouragement, Feedback, etc.:
B. Tutorials with Screen Capture (e.g., Jing, Screenr)



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

3. Curiosity, Fun: B. WolframAlpha (access knowledge)

http://www.wolframalpha.com/



3. Curiosity, Fun: C. Online Experiments (e.g., psychology)

3. Curiosity, Fun: D. Adventure Learning (e.g., GeoThentic, GoNorth, Polar Husky, Nat'l Geographic; Aaron Doering, U of Minnesota)

3. Curiosity, Fun: E. Videoconference

(e.g., Global Nomads Group, Int'l Studies for Indiana Schools (i.e., ISIS); Mandarin Chinese, Niger, Sudan, Life in Eastern Europe Today (Bulgaria), History and Culture of Mexico)

3. Curiosity, Fun: F. Live Science (e.g., Ice Stories)

3. Curiosity, Fun: G. Oceanographer touts deep sea web surfing (e.g.,

Nautilus Live allows people to not only learn about the expeditions but watch them live and listen to the scientists in the control rooms as discoveries are made, eSchool News, June 2010, Deep-sea images reveal colorful life on ocean's floor, Sept 2010

4. Variety, Novelty:

A. Cool Resource Provider or Tech Demos

- Have students sign up to be a cool resource provider once during the semester.
- Have them find additional paper, people, electronic resources, etc.
- Share and explain what found with class.

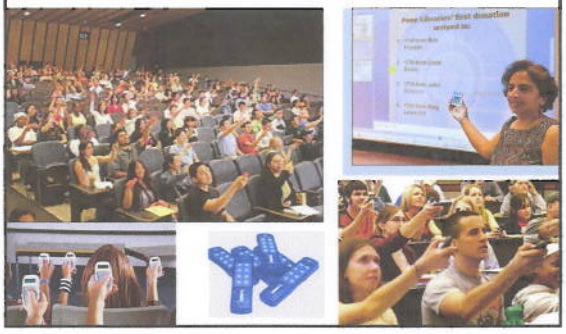
4. Variety, Novelty: B. Bridges to World of Expert and Practitioners (e.g., Watch or Listen to Online Conferences, Expert blogs, chats, interviews)

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. Clickers/Student Response Systems



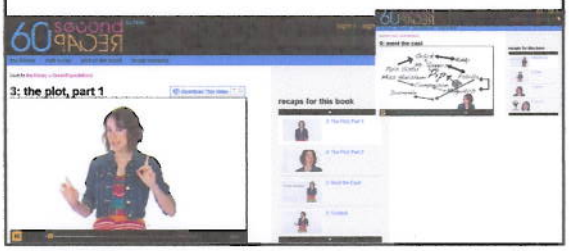
5. Autonomy, Choice: C. Famous Person Web Explorations, Searches, Twitter Tracking, and Interviews Continued (e.g., famous Australian actors)

5. Autonomy, Choice:
D. Online Cases (e.g., Mark Braun, IU)

6. Relevance, Meaningfulness:
A. 60 Second Recap, Jenny Sawyer

http://www.60secondrecap.com/

Actress to students: Lend me your earbuds!
English major, 24, rambunctiously recaps the classics in 60-second Web videos; By Greg Toppo; USA TODAY, September 2009

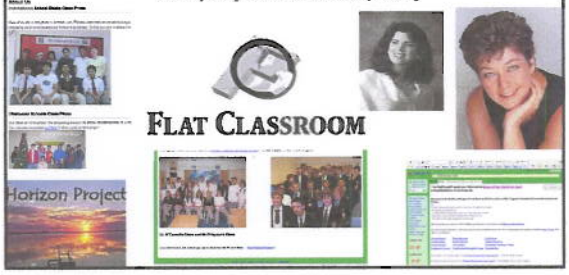


6. Relevance, Meaningfulness:
B. Tour an Online Oil Drilling Site or Role Play Situations (i.e., BP)

7. Interactive, Collaborative:
C. Global Collaboration (e.g., EPals and iEARN (Int'l Education and Resource Network))

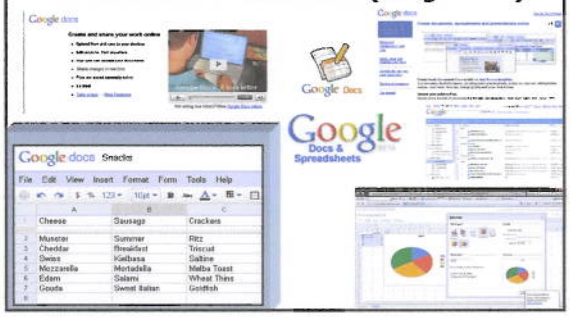
7. Interactive, Collaborative:
D. Create an Online Community in Ning, Google Groups, or Yahoo Groups.

7. Interactive, Collaborative:
E. Horizon and Flat Classroom Projects (combine blogs, videoconferencing, chat, async discussion, etc.)



7. Interactive, Collaborative:
F. Online Language Learning
(Skype, MSN, ECpod, Mixxer, Livemocha, Babbel, KanTalk etc.)

7. Interactive, Collaborative:
G. Collaborative Documents (Google Docs)



8. Engagement, Effort:
A. Video Scenario Learning Accounting Interviews and Preparatory Course Review Modules (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

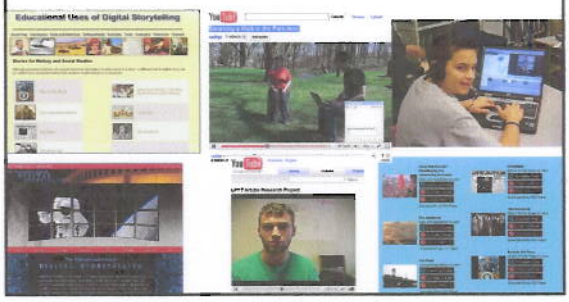
8. Engagement, Effort:
B. Synchronous and Asynchronous Events (e.g., Breeze + Video + Online Forum + Online Papers)

8. Engagement, Effort:
C. Tour a Museum (e.g., British Museum, Smithsonian, Louvre)

9. Tension, Challenge, etc.:
A. Controversial Science (e.g., Ida (a transitional species) *47-Million-Year-Old Darwinius Masillae Fossil the Missing Link?* (wowOwow, May 20, 2009)

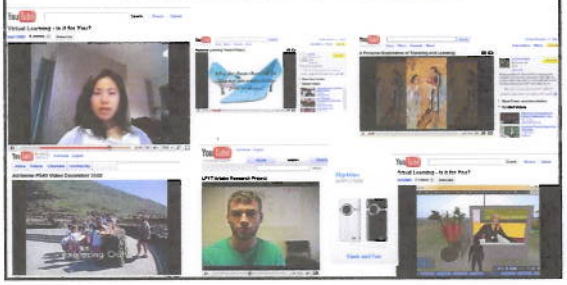
9. Tension, Challenge, etc.:
B. Ethical Debates

10. Yields Products, Goals:
A. Movie Festivals, Virtual Timelines, Digital Movies



10. Yields Products, Goals:
B. Student YouTube Products

http://www.youtube.com/watch?v=xiwSIryPzsQ
http://www.youtube.com/watch?v=x3FJyi4Pn_E
http://www.youtube.com/watch?v=eD1awpaSuP0



10. Yields Products, Goals:
C. Video Blogs

10. Yields Products, Goals:
D. Photo Festivals and Competitions (e.g., COFA at UNSW, Scrapblog, flickr, etc.)

TEC-VARIETY Model for Online Motivation and Retention

Tone/Climate
Encouragement, Feedback
Curiosity

Variety
Autonomy
Relevance
Interactive
Engagement
Tension
Yields Products



Poll #1: 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.
7. More than 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: Addressing Learning Styles and Diverse Learners with the R2D2 Model

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Magic #2: The R2D2 Model

Curtis J. Bonk | Ke Zhang
Empowering Online Learning
100+ Activities
for Reading, Reflecting, Displaying & Doing



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.

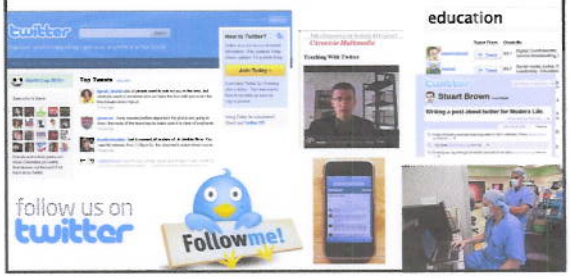



Read 1a. Art and History Podcasts



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

Read 1c. Course Announcements (e.g., Teaching with Twitter; Course announcements and following people (e.g., microblogging)



Poll 2: Podcast Questions

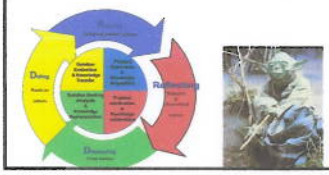
a. Who has listened to a podcast?
b. Who listens to a certain podcast on a regular basis?
c. Who has created a podcast?
d. Who has created a vodcast?
e. Who thinks podcasting is simply more talking heads?

Read 1d. Podcast Paper Reflections

Read 1e. Wiki Steps on How to do Something: Wikihow http://www.wikihow.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



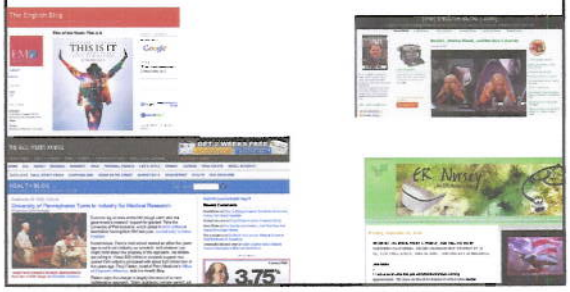
Blogging Questions

1. Who has a blog?
2. Who regularly reads other people's blogs?
3. Who assigns blogging tasks?
4. Who has created a video blog?
5. Who thinks it is an utter waste of time to blog?

Reflect 2a. Kids Blogs

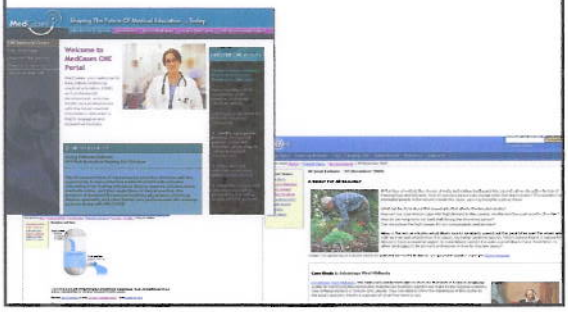
Reflect 2b. Teacher Classroom Blogs

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/)

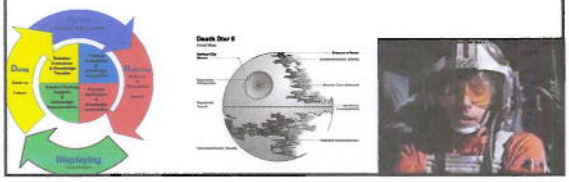
Reflect 2e. Analyze Online Cases (problems, solutions, etc.)



Reflect 2f. Workplace, Internship, and Field Reflections

3. Visual Learners

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



Display 3a. Find Open Source Photography (e.g., Flickr, Everystockphoto.com; courses on Winter Olympics, photography, motivation, geography, culture, meteorology, physics, etc)

Display 3b. Concept Mapping and Timeline Tools (VUE, Bubbl.us, Cmap, Freemind, Gliffy, Mindmeister, or Mindomo)

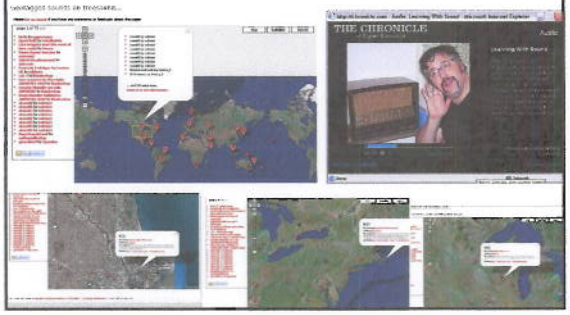
Display 3c. World Trends and Indices (e.g. Worldmapper)

Display 3d. 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.)

Display 3e. Download and Use Online 3D Sketches (Google SketchUp; download http://sketchup.google.com/3dwarehouse)

Display 3f. Indexing Sounds in Cities with Google Maps

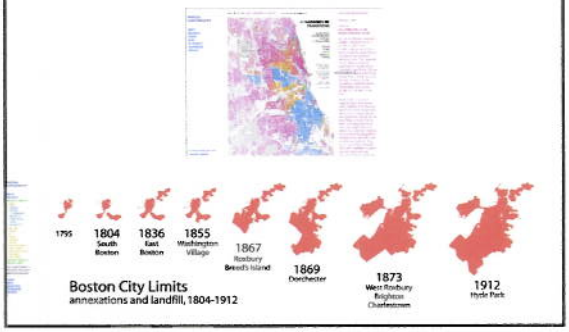


Display 3g. Timeline Tools

(e.g., SMILILE from MIT, Learning Tools from UBC)

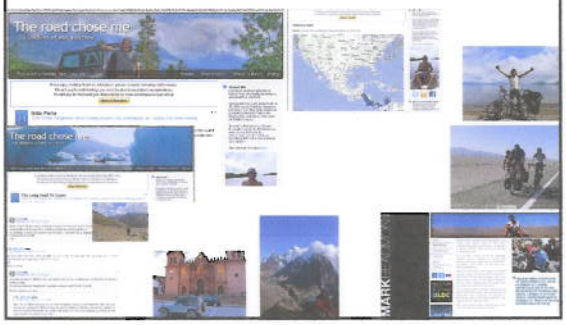
Display 3h. Radical Cartography

http://www.radicalcartography.net/index.html?chicagodots

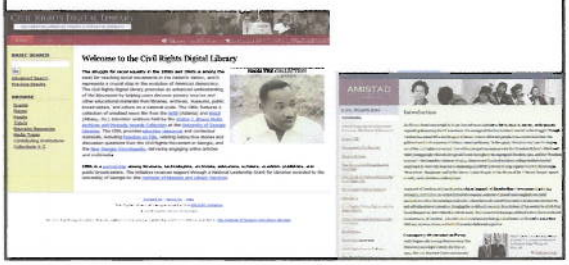


Display 3i. Adventure Learning (bikes and cars), Dan Grec and Mark Beaumont

http://dangrec.com/

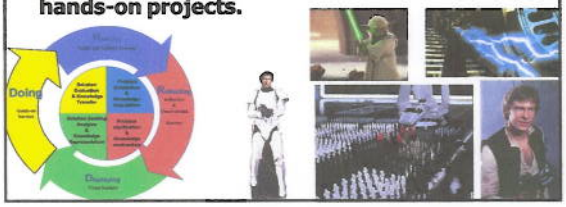


Display 3j. Online History Portals and Resources (Civil Rights Digital Library and Amistad)



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.



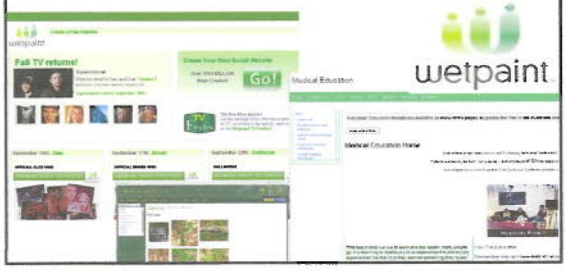
Wiki Questions

1. Who regularly reads Wikipedia articles just for fun?
2. Who regularly reads Wikibooks?
3. Who seeks Wikipedia for content?
4. Who has edited or written new articles on Wikipedia or Wikibooks?
5. Who thinks it is ok for college students to cite from Wikipedia?

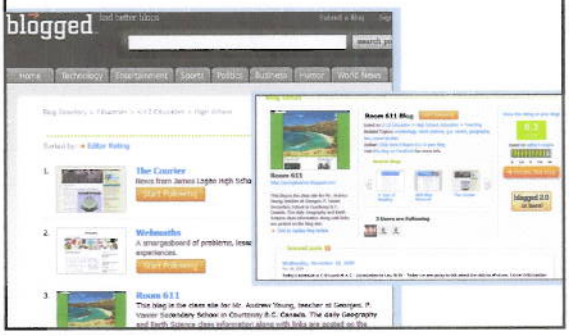


Do 4a. Student Work in a Wiki

(e.g., Wet Paint, a free wiki tool for online collaboration; e.g., medical education)



4b. Learner Blogging



Read 1c. Learner Podcasts

Do 4d. Online Performances Virtual Worlds and Podcasts

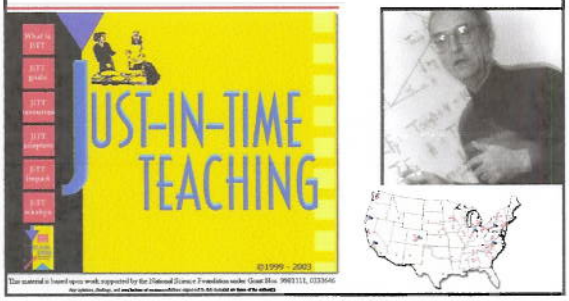
(e.g.,Shakespeare plays reenacted)

Do 4e. Class Developed Wikibooks

(and Wikibooks Junior)

Do 4f. Online Warm-ups Activities Just-In-Time-Teaching (JiTT)

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



Do 4g. International and Global Education and Competitions

(e.g., Global Game Jams, online role play, Global Videoconferencing, computer war games)