Addressing Diverse Online Learner Needs with the R2D2 and TEC-Variety Models (+Bonus on Shared Online Video Ideas)

Dr. Curtis J. Bonk, cjbonk@indiana.edu
Professor, Indiana University

Timeline of Technology for Teaching, NY Times, September 15, 2010

http://www.nytimes.com/interactive/2010/09/19/magazine/classroom-technology.html?ref=magazine

Technology of the 1980s

Things That Became Obsolete This Decade

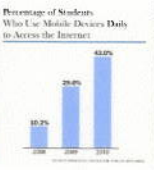
December 11, 2009, Silicon Alley Insider

Gadgets that Changed Everything This Decade

December 9, 2009, Jay Yarow, Silicon Alley Insider

As the Web Goes Mobile, Colleges Fail to Keep Up, Chronicle of Higher Ed, Josh Keller, January 23, 2011

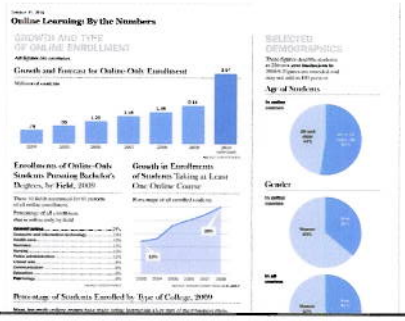
http://chronicle.com/article/Colleges-Search-for-Their/126016/



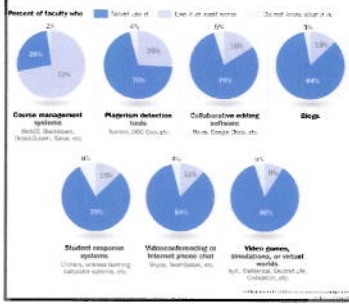
"I used it to sign up for classes. I used it to check e-mails," says Laura Patterson, a junior at Nevada State College, about her iPhone. "I used it all the time, for everything."More than 40 percent of all college students, like Nevada State's Laura Patterson, used mobile devices to get on the Internet every day last year, compared with 10 percent in 2008.

Online Learning: By the Numbers, Chronicle of HE, Oct 31, 2010

http://chronicle.com/article/Online-Learning-Enrollment/125202/

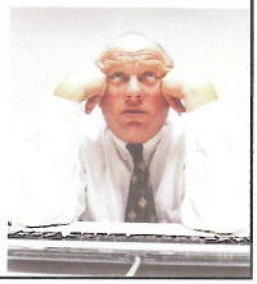


July 25, 2010, Professors' Use of Technology in Teaching, Jeffrey Young, Chronicle of Higher Education



New technologies hit us everyday!

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)!

Masterclass Part 1: Online Motivation with the TEC-VARIETY Model

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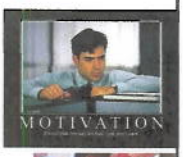
We are not motivating students with the technologies that they love!



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

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.

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

Magic #1: TEC-VARIETY Model 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

Low Risk — High Risk
1. Risk

Easy to Embed — Extensive Planning
2. Time

Free or Inexpensive — Enterprise Licenses
3. Cost

Instructor-Focus — Student-Focus
4. Student-Centered: Low — High

1. Tone/Climate: Social Ice Breakers

A. Public Commitments: Have students share how they will fit the coursework into their busy schedules

B. Favorite Websites

1. Everyone posts 1-2 of their favorite Websites and explain why.
2. Peers comment on or rate them.

1. Tone/Climate: C. Video Course Intros

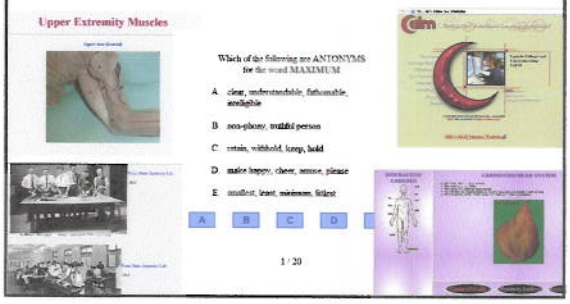
(examples from Northern Virginia Community College and Indiana University KD (online MBA) program)

Yun Yun Chow, Open U Malaysia, Making Art Lessons Come Alive with Web 2.0

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

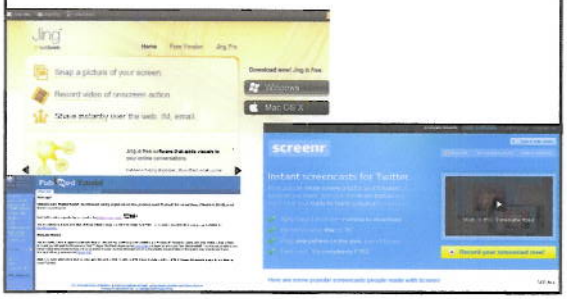
2. Encouragement, Feedback, etc.:

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



2. Encouragement, Feedback, etc.:

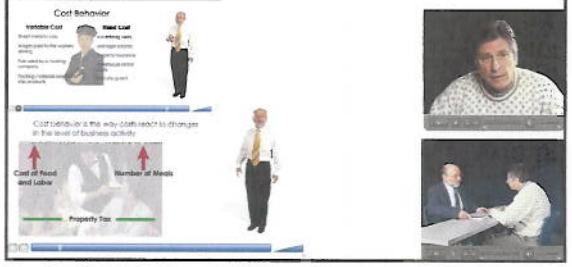
B. Tutorials with Screen Capture (e.g., Jing, Screenr)



2. Encouragement, Feedback, etc.:

C. 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



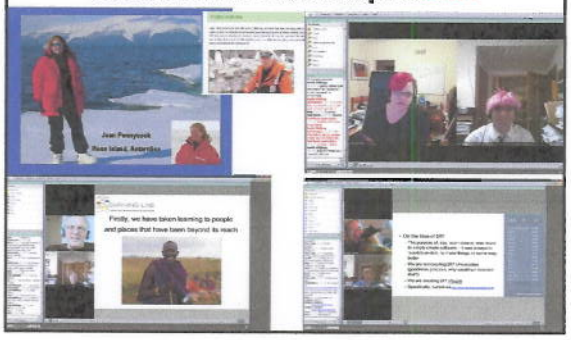
3. Curiosity, Fun:
A. Online News
(Giant jellyfish, Tiny T. rex, and Ardi)

3. Curiosity, Fun: B. 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)

4. Variety, Novelty:
A. Cool Resource Provider or Tech Demos...MM

- 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. Synchronous Session with Guest Expert...MM



Arlington Racetrack

Jockey's are Important

5. Autonomy, Choice: A. Online Literature Search (Class Google Jockeys)
(links to text, soundtracks, video clips, etc.)

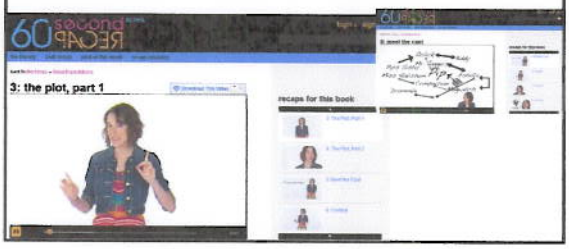
5. Autonomy, Choice: B. Online Cases (e.g., Mark Braun, IU)

5. Autonomy, Choice: C. Explore Online Museums, Zoos, Library Exhibits

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

http://www.60secondrecap.com/

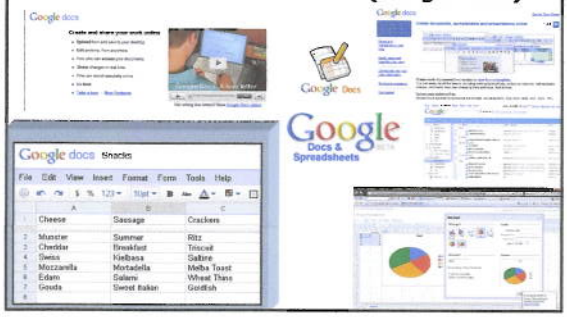
Actress to students: Lend me your earbuds!
English major, 24, rambunctiously recaps the classics in 60-second Web videos; By Greg Toppo; USA TODAY, September 2009



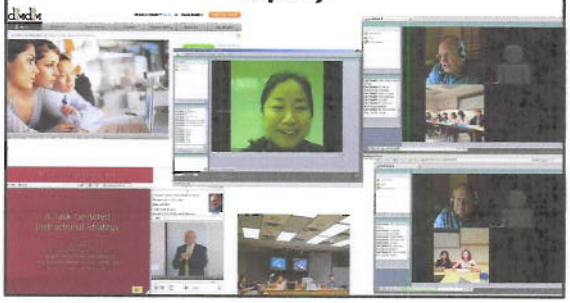
6. Relevance, Meaningfulness: B. Tour an Online Oil Drilling Site or Role Play Situations (i.e., BP)

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

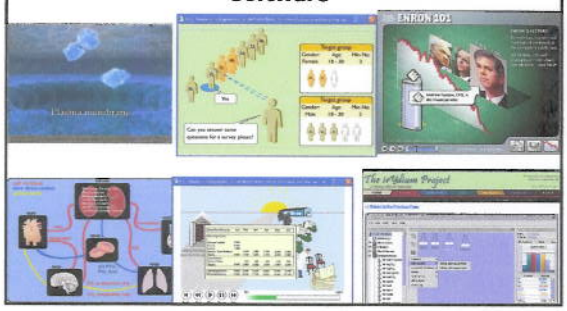
7. Interactive, Collaborative:
B. Collaborative Documents (Google Docs)



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



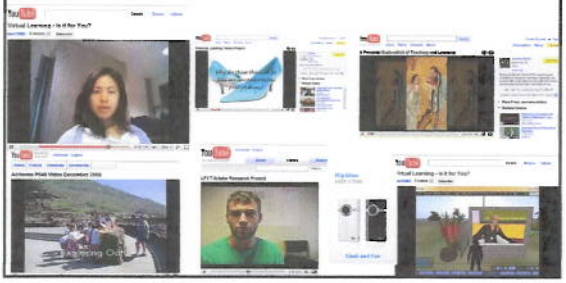
8. Engagement, Effort:
B. Flash, 3-D Visualization, & Laboratory Software



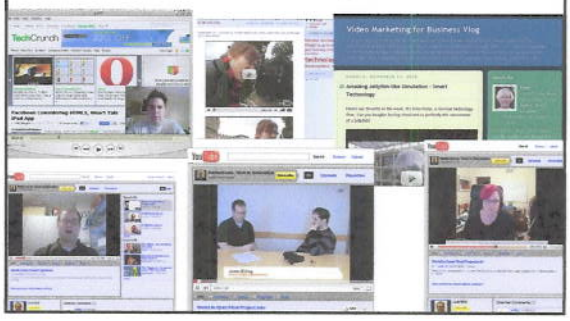
9. Tension, Challenge, etc.:
A. Ethical Debates

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

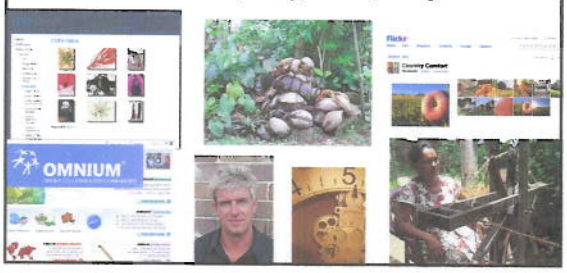
http://www.youtube.com/watch?v=xiwSIryPzsQ
http://www.youtube.com/watch?v=x3FJyi4Pn_E
http://www.youtube.com/watch?v=eD1awpaSuP0



10. Yields Products, Goals:
B. Video Blogs...MM



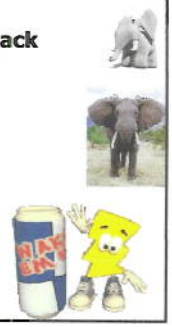
10. Yields Products, Goals: C. Photo Festivals and Competitions (e.g., COFA at UNSW, Scrapblog, flickr, etc.)



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

Masterclass Part 2: Addressing Learning Styles and Diverse Learners with the R2D2 Model

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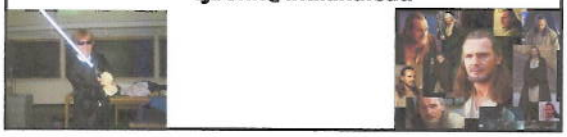
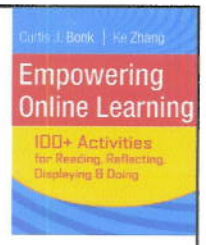
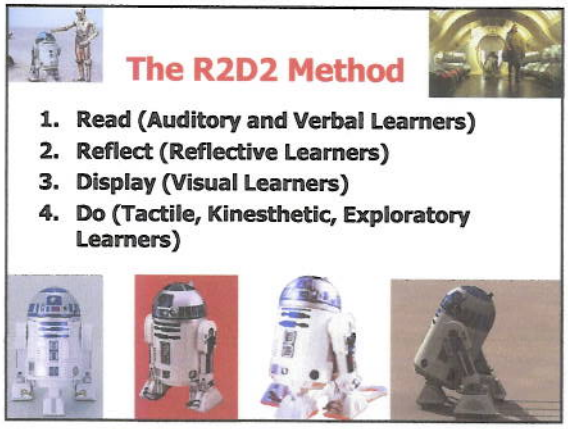
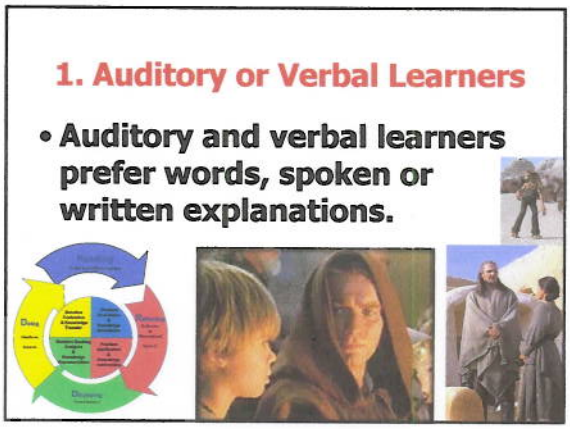
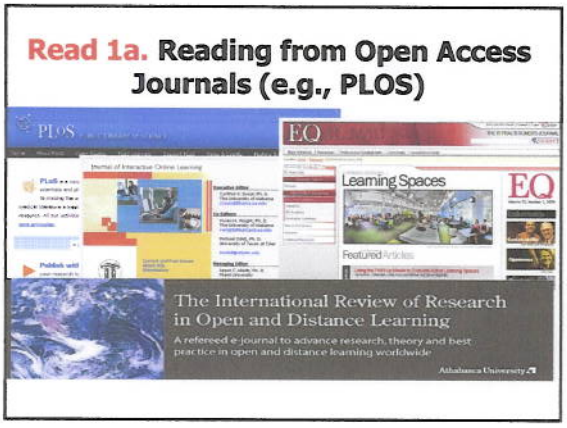


Magic #2: The R2D2 Model




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. Reading from Open Access Journals (e.g., PLOS)
PLOS
EQ
Learning Spaces
Featured Articles
The International Review of Research in Open and Distance Learning
A refereed e-journal to advance research, theory and best practice in open and distance learning worldwide
Athabasca University


Read 1b. Course Announcements (e.g., Teaching with Twitter; Course announcements and following people (e.g., microblogging)
twitter
education
follow us on twitter
Followme!


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?
PODCASTING


Read 1c. Podcast Paper Reflections
UND
Medcast
CVMD
The Cardiovascular
NursingShow.com
ENGLISH IN THE REAL WORLD
weekly podcasts
STAT!

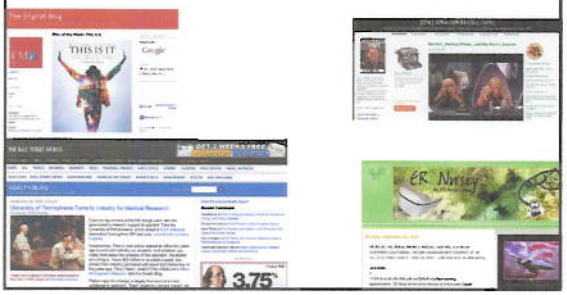
2. Reflective and Observational Learners

- Reflective and observational learners prefer to reflect, observe, view, and watch learning; they make careful judgments and view things from different perspectives



Reflect 2a. Critical Friend Blog Postings...MM

Reflect 2b. Expert and Domain Specific Blog Reflections (English, Health, Business, etc. blogs)

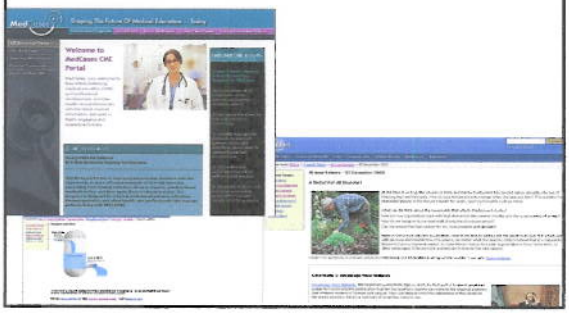


Reflect 2c. Cultural Blogs (e.g., Dr. Kim Foreman, San Fran State University, Come and See Africa Blog; http://comeandseeafrica.blogspot.com/)

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?

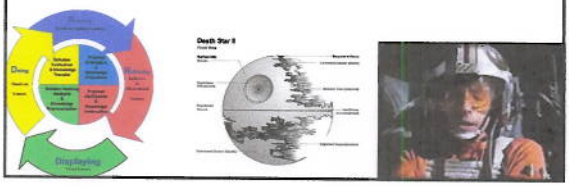
Reflect 2d. Analyze Online Cases (problems, solutions, etc.)



Reflect 2e. Workplace and Field Reflections...MM

3. Visual Learners

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

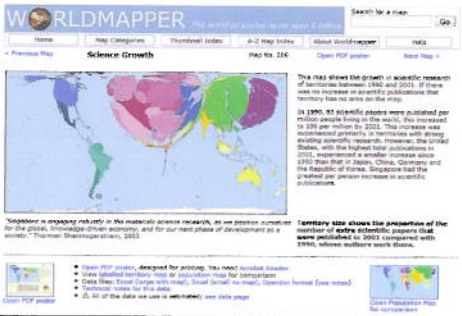


Display 3a. Scenario Learning

(Option 6, Bloomington, IN)

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

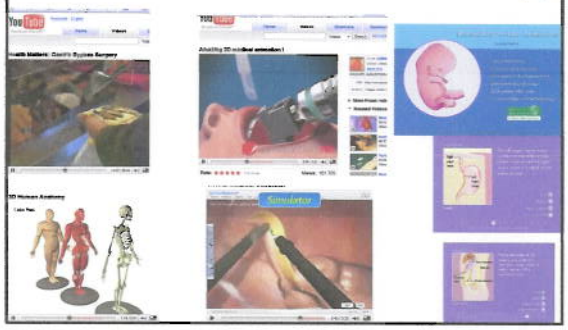
Display 3c. World Trends and Indices (e.g. Worldmapper)



Display 3d. Online Portals of Rich Data

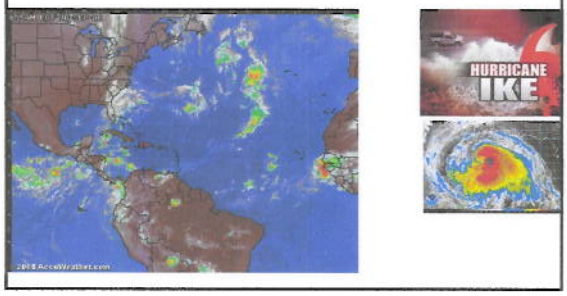
United Nations Opens World Digital Library, Turning the Pages from the British Library, etc. (history, culture, literature, writing, art, etc.)

Display 3e. Medical Animations and Videos (e.g., YouTube, CNN, BBC)

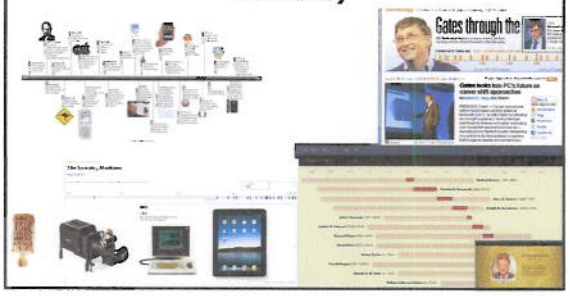


Display 3f. Download and Use Online 3D Sketches (Google SketchUp; download http://sketchup.google.com/3dwarehouse)

Display 3g. Weather-Related Visuals and Animations



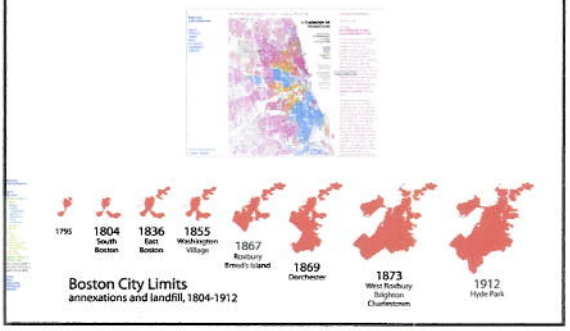
Display 3h. Timeline Tools (e.g., SMILILE from MIT, Learning Tools from UBC)



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

Display 3j. Radical Cartography

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



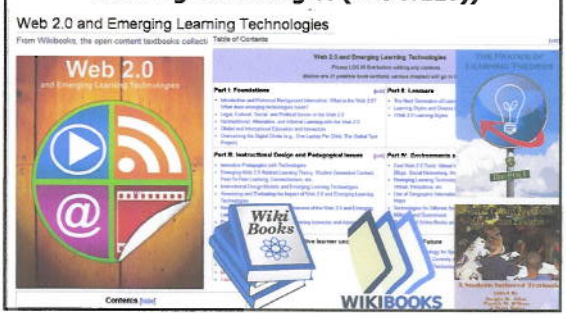
4. Tactile/Kinesthetic Learners

- 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.

Poll: Wiki Questions

a. Who regularly reads Wikipedia articles just for fun?
b. Who regularly reads Wikibooks?
c. Who seeks Wikipedia for content?
d. Who has edited or written new articles on Wikipedia or Wikibooks?
e. Who thinks it is ok for students to cite from Wikipedia?

Do 4a. Wikibooks: International Collaboration (Web 2.0 and Emerging Learning Technologies (The WELT))



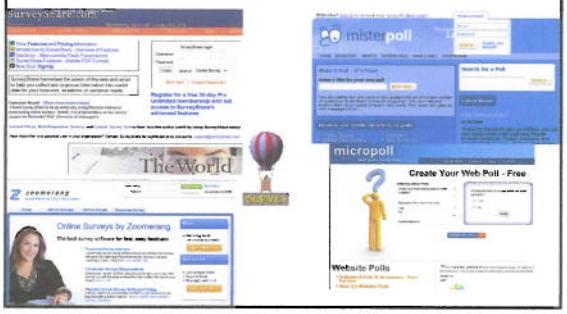
Do 4b. Paired Article Critiques in Blogs

- Students sign up to give feedback on each other's article reviews posted to their blogs.

Article	Student Critique	Student Peer Review
Arbaugh, J.B. (2007). *Does the Community of Inquiry Framework Predict Outcomes in Online MBA Courses?*	Stephen Moses	Lorraine Ryan
	Carolyn Pawelko	Karen Leppard
	Lin Yu	Flora Lin
	Alex Brierley	Lori Atkinson
Meyer, K.A. (2003). Face-to-Face versus Threaded Discussions: The Role of Time and Higher-Order Thinking	Lorraine Ryan	Paul Anderson
	Harjit Dhanjal	Yvonne Toney
	Neera Arora	Carolyn Pawelko
	Karen Leppard	Lin Yu
	Francica Wilkinson	Alex Brierley
Shea, P., Li, C.S. and Pickett, A. (2006). A study of teaching presence and student sense	Heather Barnett	Stefan Rasporich
	David Wilson	Neera Arora

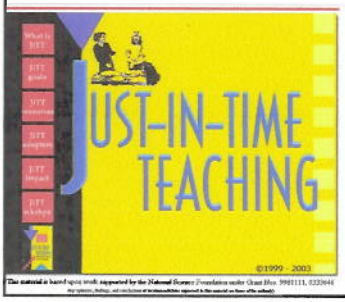
Do 4c. Survey Research and Market Analysis

(e.g., Mister Poll, MicroPoll, Zoomerang, SurveyShare)



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

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



Do 4e. Podcast Productions and Virtual Performances for students of pronunciation class (e.g., Tzu-Su Chen, Taiwan)

Do 4f. Medical Simulations in YouTube and Second Life

Do 4g. International and Global Education and Competitions

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

99 Seconds Stop and Share and Stand: Top Three Things you can use!

Masterclass Part 3: The Rise of Shared Online Video, the Fall of Traditional Learning

Dr. Curtis J. Bonk
Professor, Indiana University
President, SurveyShare, Inc.
http://mypage.iu.edu/~cjbonk/
cjbonk@indiana.edu

Skype for iPhone adds two-way video calling

cnet Reviews, December 20, 2010
http://reviews.cnet.com/8301-19512_7-20026803-233.html

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.

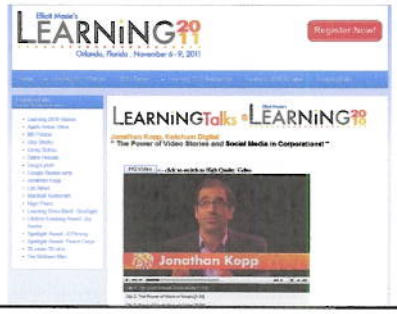
Which of these video sharing sites do you use?

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

Academic Earth

LearningTalks - a series of short, free, video interviews on learning. The MASIE Center.

http://www.learning2010.com/Videos/jonathankopp.htm



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

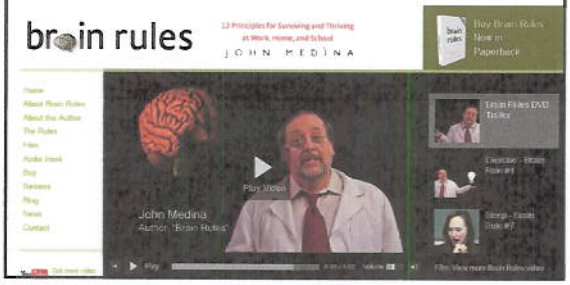
Life of a Scientist or Famous People Website

(e.g., Brian J Ford, independent scientist)

http://www.youtube.com/user/tellymonitor#p/a/u/1/LhGeAqsKjaar

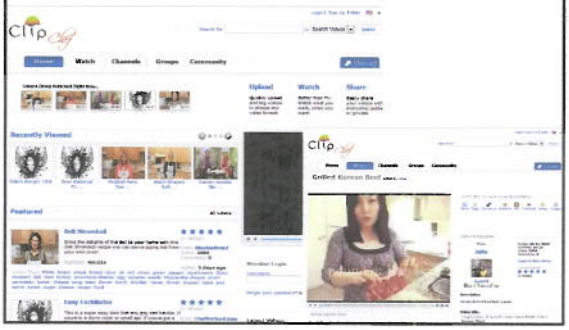
Videos on Book Websites

(e.g., Brain Rules, John Medina)



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

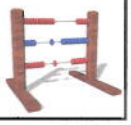
1. Length of video for activities should be less than 10 minutes and preferably under 4 minutes.
2. Instead of finding all course videos, offer the student the chance to find and show 1-2 free online videos.

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 the second part of 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!



Stand and Share Ideas

- Will Work: _____
- Might Work: _____
- No Way: _____

Try the R2D2 Method!
Try TEC-VARIETY!
And hope for some magic!!!

Note: Bonk papers and talks at:
Slides at: TrainingShare.com
Papers: PublicationShare.com
Book: http://worldisopen.com/