R2D2 to the Matrix: A Galaxy of Online Learning Style, Motivational, Blended Learning and Learner-Centered Examples

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Let's Think Outside the Box!
(For 99 Seconds—what technologies that you might not think about using for learning, might students today prefer to use?)
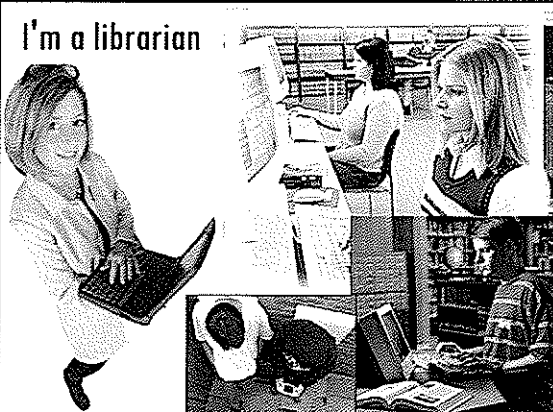
Innovate or **die** trying

99

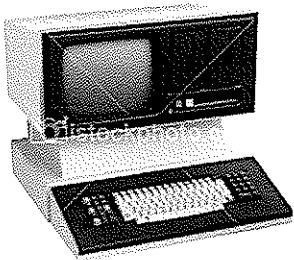## Poll #1: How many ideas did you write down?

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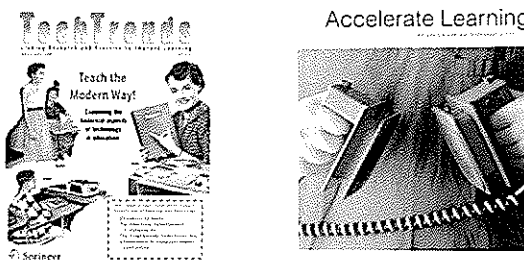e. 6-10
f. Higher than I can count!

I'm a librarian

Technology of the 1980s

Constantly hit on the head about integrating technology...

Accelerate Learning

21st Century Technology: Podcasts and Wikis and Blogs, Oh My!!!!

Nature AND Nurture: Pedagogy

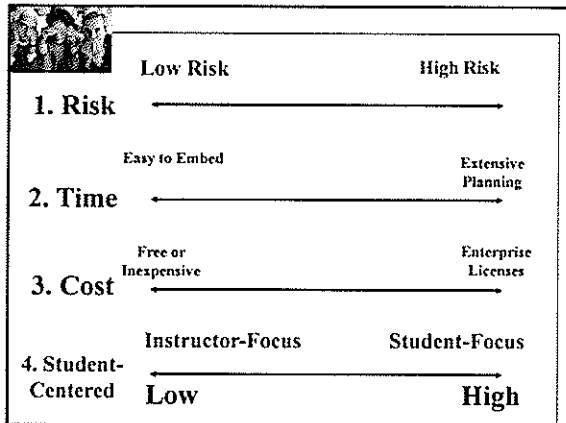Technology — Pedagogy

People, Society, Culture, etc.

Megan Casady, 17, sends instant messages, watches TV and listens to music while doing biology homework.
Photo Credit: By Katherine Frey -- The Washington Post, Feb 26, 2007
Related Article: Teens Can Multitask, But What Are Costs?, page A01

Yahoo News
Love me, love my blog," as Netorati couple-surf
BY SARA LEDWITH Thu Aug 3, 8:30 AM ET

- "For my birthday, he upgraded my RAM and I thought it was incredibly romantic," writes Jess.


Poll #2: Bonk's Web Addiction Questionnaire

1. Who has 2 or more cell phones with Internet access?
2. Who has 2 or more laptop computers with wireless connections?
3. Who is on email in the morning? At noon? Who does it at night?
4. Who suffers from nervous tension when you cannot get on email?
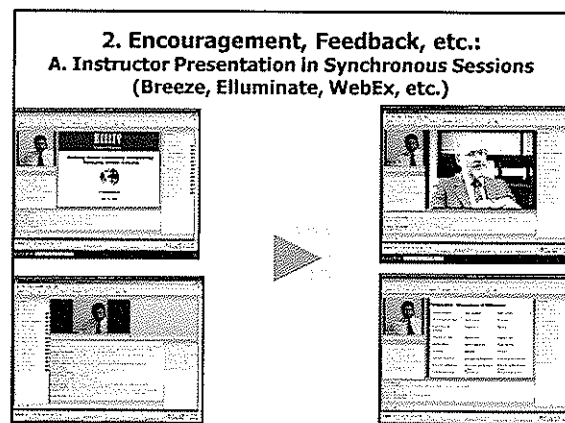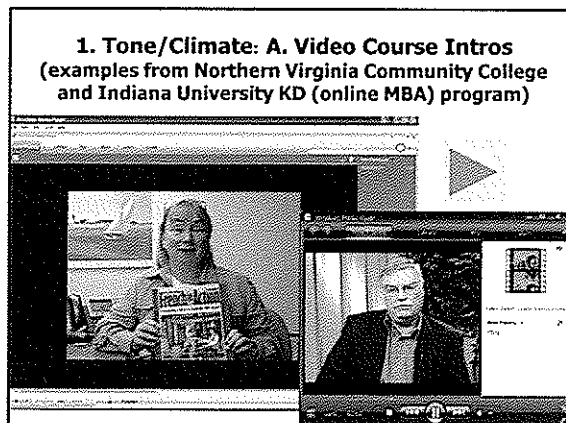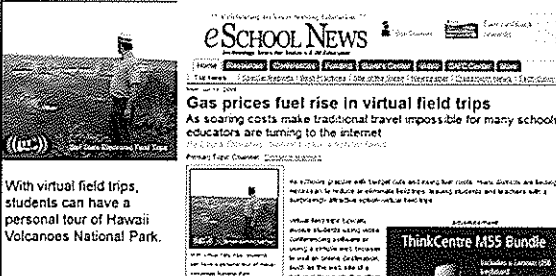5. Who is on the Web right now?

	Low Risk	High Risk
1. Risk	←	→
2. Time	Easy to Embed	Extensive Planning
	←	→
3. Cost	Free or Inexpensive	Enterprise Licenses
	←	→
4. Student-Centered	Instructor-Focus	Student-Focus
	←	→
	Low	**High**

Task

- **Ideas definitely Can Use (Circle or write down)**
- **Ideas you might use (check off or write down in a separate column)**
- **Ideas you cannot use (cross off or put at the bottom)**

Ok, Million Dollar Question: How do you motivate online learners?
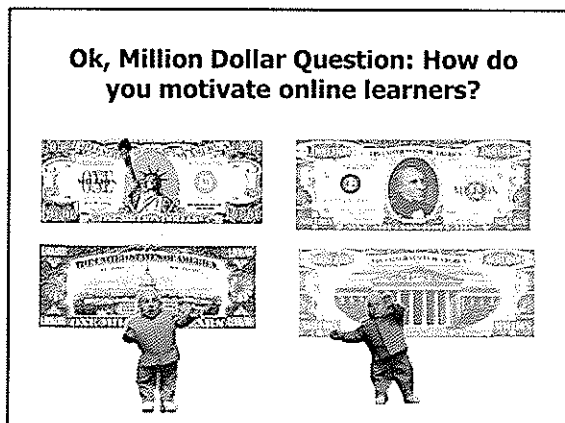
TEC-VARIETY Model for Online Motivation and Retention

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

1. Tone/Climate: A. Video Course Intros
(examples from Northern Virginia Community College and Indiana University KD (online MBA) program)

2. Encouragement, Feedback, etc.:
A. Instructor Presentation in Synchronous Sessions (Breeze, Elluminate, WebEx, etc.)

3. Curiosity, Fun:
A. Virtual Field Trips

With virtual field trips, students can have a personal tour of Hawaii Volcanoes National Park.

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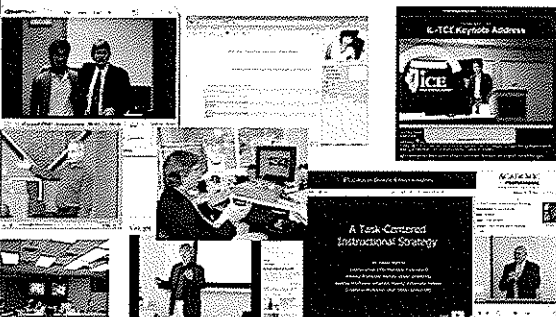
3. Curiosity, Fun:
B. Exploration and Demonstration:
Virtual Tours and Timelines (HyperHistory)
http://simile.mit.edu/timeline/

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4. Variety, Novelty:
A. Video Streamed Lectures & Expert Commenting
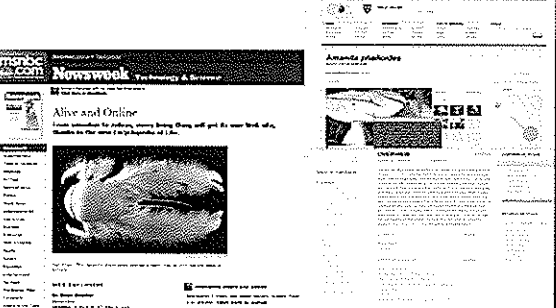

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5. Autonomy, Choice: A. Online Literature Search (Class Google Jockeys)
The Electronic Literati, in Search of a Voice, June 1, 2007, Chronicle of Higher Education, Jeffrey Young (links to text, soundtracks, video clips, etc.)

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5. Autonomy, Choice:
B. Online Portal Explorations

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5. Autonomy, Choice:
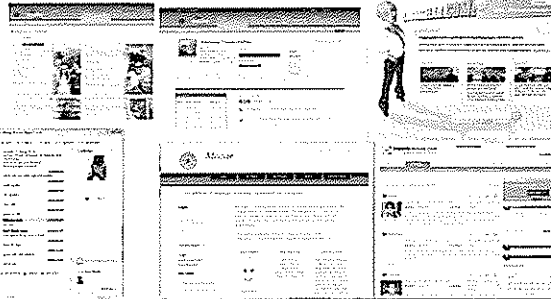### C. Volunteer Technology Demos (Bonk, 1997)

- Take students to a computer lab.
- Have students conduct a technology demonstration that relates to something from the class (replaces an assignment).
- Include handout
- Debrief

6. Relevance, Meaningfulness:
A. Mobile News (New York Times): A new way to take your news with you on the iPhone and iPod touch

7. Interactive, Collaborative:
A. Online Language Learning
(Mixxer, Livemocha, Friends Abroad)

7. Interactive, Collaborative:
B. Peer Mentoring Sessions
(Bonk, 1996)

1. Have students sign up for a chapter wherein they feel comfortable and one that they do not.
2. Have a couple of mentoring sessions in class.
3. Debrief on how it went.

7. Interactive, Collaborative:
C. Electronic Guests & Mentoring
(Simon Fraser University News: http://www.sfu.ca/mediapr/sfnews/2001/Sept/hightech.html)

7. Interactive, Collaborative:
D. Discussion: Starter-Wrapper (Hara, Bonk, & Angeli, 2000)

1. Starter reads ahead and starts discussion and others participate and wrapper summarizes what was discussed.
2. Start-wrapper with roles--same as #1 but include roles for debate (optimist, pessimist, devil's advocate).

E. Alternative: Facilitator-Starter-Wrapper (Alexander, 2001)
Instead of starting discussion, student acts as moderator or questioner to push student thinking and give feedback

7. Interactive, Collaborative:

F. Panels of Experts: Be an Expert/Ask an Expert: Have each learner choose an area in which to become expert and moderate a forum for the class. Require participation in a certain number of forums (choice)

G. Press Conference: Have a series of press conferences at the end of small group projects; one for each group)

H. Symposia of Experts

I. Structured Controversy

8. Engagement, Effort:
A. Text Messaging

Students at the Mennonite Centre for Newcomers are testing mobile learning - downloading an English grammar lesson, then answering a series of multiple choice, or true or false questions. (Edmonton)
Friday, February 9, 2007, CBC News

CBCnews   **CANADA | EDMONTON**

Text-message course helping newcomers learn

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8. Engagement, Effort:
B. Just-In-Time Syllabus
(Raman, Shackelford, & Sosin) http://ecedweb.unomaha.edu/jits.htm
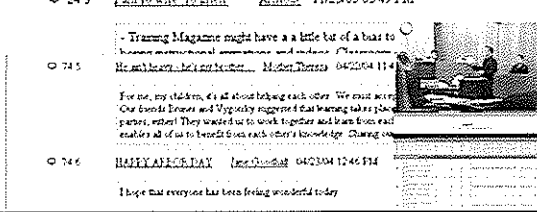http://ecedweb.unomaha.edu/jits.htm

Syllabus is created as a "shell" which is thematically organized and contains print, video, and web references as well as assignments. (Goals = critical thinking, collab, develop interests)

e.g., To teach or expand the discussion of supply or elasticity, an instructor might add new links in the Just-in-Time Syllabus to breaking news about rising gasoline prices.

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9. Tension, Challenge, etc.:
A. Online Role Play of Famous People, Mock Trial, Debates, etc.

– Enroll famous people in your course
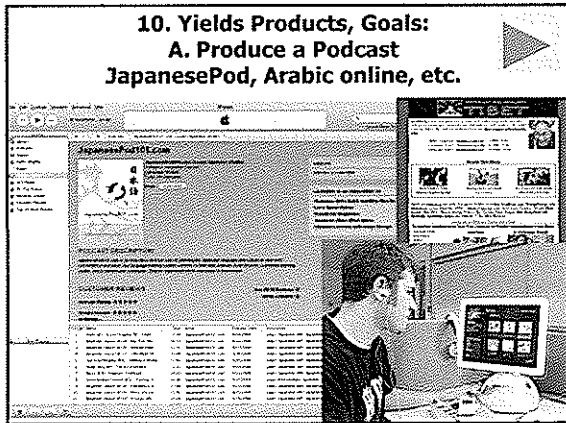– Students assume voice of that person for one or more sessions

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9. Tension, Challenge, etc.:
B. Mock Trials with Occupational Roles
(L = Cost, H = Risk, M/H = Time)

a. Create a scenario (e.g., school reform in the community) and hand out to students to read.
a. Ask for volunteers for different roles.
b. Perhaps consider having key person on the pro and con side of issue make a statement.
c. Discuss issues from in role (instructor is the hired moderator or one to make opening statement; he/she collects ideas on document camera or board).
d. Come to compromise.

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10. Yields Products, Goals:
A. Produce a Podcast
JapanesePod, Arabic online, etc.

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10. Yields Products, Goals:
B. Concept Maps, Video Papers, Virtual Timelines, Digital Movies

10. Yields Products, Goals: C. Student Podcast (in schools—kids have power!)
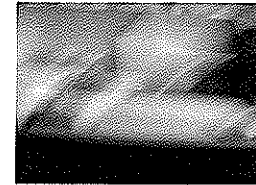
"Just the word 'podcast' scares a lot of teachers away," Ms. Schrock said. "There are a lot of misconceptions."
"All you need is a computer, access to the Internet and a microphone that you can buy at Toys 'R' Us," Mr. Warlick said. "I listen to podcasts on my computer." (NY Times, Jan 25, 2006)
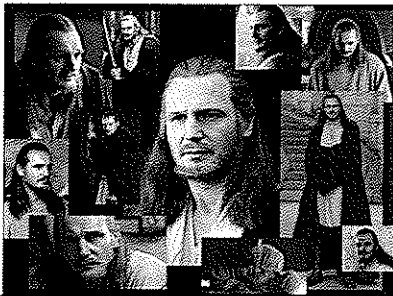

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99 seconds: What have you learned so far?

- **Solid and Fuzzy in groups of two to four**

Part IV. Addressing Learning Styles

Why Address Learning Styles?

- Promotes reflection on teaching
- Move from just one mode of delivery
- View from different viewpoints
- Offer variety in the class
- Might lower drop-out rates
- Fosters experimentation

Poll 3: Which learning style do you prefer?

a. Read (Auditory and Verbal Learners)
b. Reflect (Reflective Learners)
c. Display (Visual Learners)
d. Do (Tactile, Kinesthetic, Exploratory Learners)

VARK learning styles (Fleming & Mills (1992a, 1992b): Four types of learners and learning styles:

(1) visual;
(2) auditory;
(3) reading/writing;
(4) kinesthetic, tactile, or exploratory,
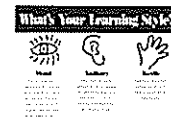
VARK learning styles (Fleming & Mills (1992a, 1992b). Four types of learners and learning styles

1. Visual learners prefer diagrams, flowcharts, graphics (they do not mention video, film, Webcasts, or PowerPoint presentations).
2. Auditory learners prefer to hearing directions, lectures, or verbal information.
3. Reading and writing learners prefer text passages, words, and written explanations.
4. Tactile or kinesthetic learners learn best by connecting to reality through examples, practices, or simulations.
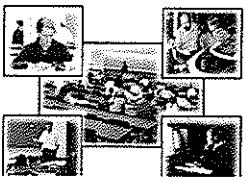
Kolb (1984)

- **According to Kolb, effective learning involves four phases:**
  - from getting involved (Concrete Experience) to
  - listening/observing (Reflective Observation) to
  - creating an idea (Abstract Conceptualization) to
  - making decisions (Active Experimentation).
- **A person may become better at some of these learning skills than others; as a result, a learning style develops.**
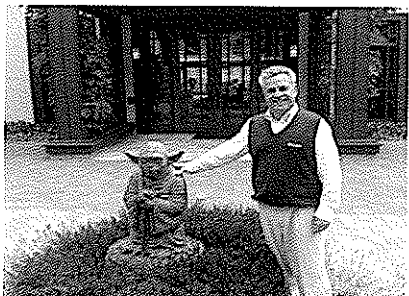
The Blending of Learning Styles
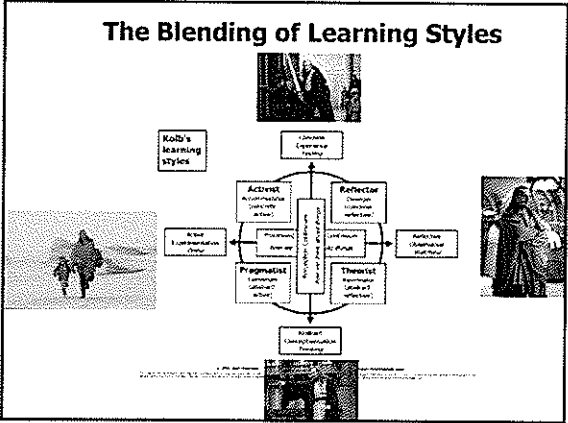
Index of Learning Styles Questionnaire
Barbara A. Soloman, North Carolina State Univ
http://www.engr.ncsu.edu/learningstyles/ilsweb.html

6. If I were a teacher, I would rather teach a course
   ○ (a) that deals with facts and real life situations
   ○ (b) that deals with ideas and theories

7. I prefer to get new information in
   ○ (a) pictures, diagrams, graphs, or maps
   ○ (b) written directions or verbal information
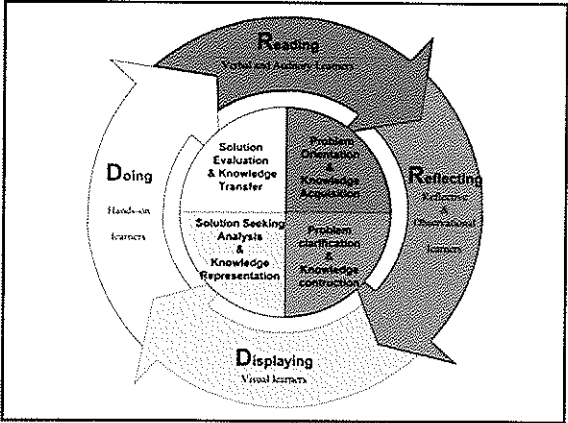
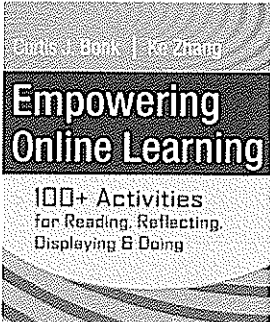# Dean of IU School of Education

The R2D2 Method

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

R2D2 Book Project

Curtis J. Bonk | Ke Zhang

Empowering Online Learning

100+ Activities for Reading, Reflecting, Displaying & Doing

1. Auditory or Verbal Learners

- Auditory and verbal learners prefer words, spoken or written explanations.
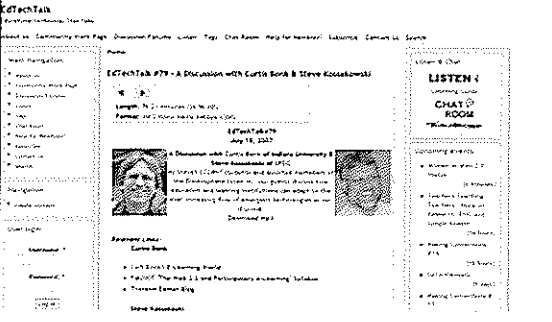
Read 1a. Course Announcements
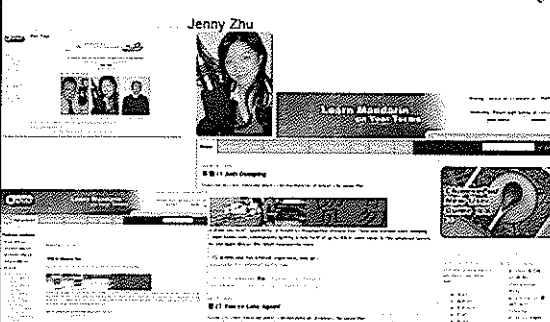(e.g., Teaching with Twitter, USA Today, July 21, 2008)

Read 1b. Podcasts for Peace
(Jeff Lebow, World Bridges and EdTechTalk)

Read 1c. Podcast for Language Learning
(ChinesePod—learn Mandarin)

Jenny Zhu

## Read 1d. Educational Applications of Podcasting (Essex, 2006, Leftwich, 2007)

1. Recordings of lectures (Coursecasting)
2. Supplemental textbook or entire book
3. Student projects
4. Interviews
5. Language lessons
6. Oral reports
7. K-12 classroom interactions
8. Downloadable library of resources
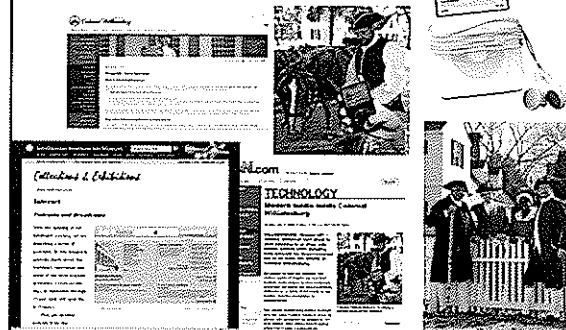9. Recordings of performances

Read 1e. Referenceware and Terminology
Exercises Online (e.g., Websters, Visual Thesaurus)
http://www.visualthesaurus.com/
($2.95/month; $19.95/year)
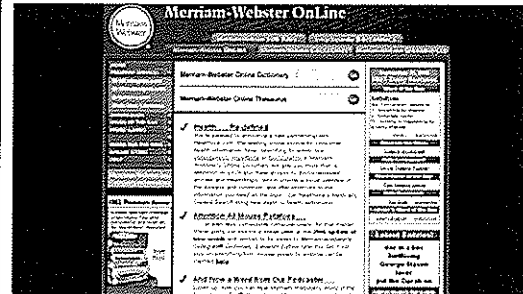
Read 1f. Wiki Steps on How to do Something: Wikihow
http://www.wikihow.com/
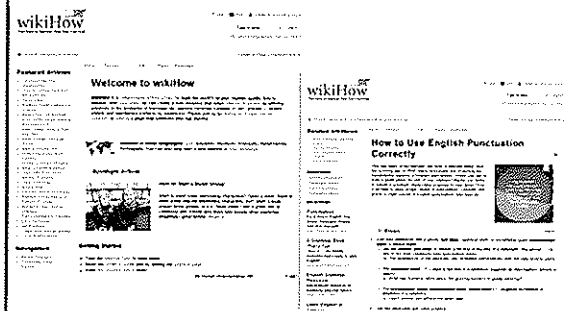
Read 1g. Podcasts of Art and History Exhibits

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. ORL or Library Day
(L = Cost, M = Risk, M/H = Time)
(Bonk, 1999)

- Have students spend a day in the library or online finding and summarizing a set number of articles.
- Have them bring to class or post abstracts to an online forum.
- Share in small groups interested in similar topics.
- Perhaps give each student 1-2 minutes to describe what found in a chat.

Reflect 2b. Reflection Papers: Individual Reflections or Super Summaries of what learned in the course (3-4 page)

- Learning journeys/Super Summaries:
  - Have students reflect on their learning journeys in a course.
  - Have them reflect and compare the concepts that they have learned to others.
  - Perhaps compare to sample papers from previous semesters.

LEARNING JOURNEYS
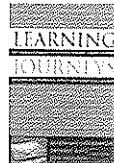
Reflect 2c. Paired Weblog Critiques
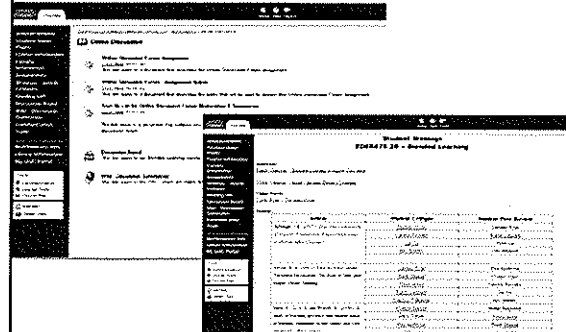
Reflect 2d. Six Hats (Role Play):
(from De Bono, 1985; adopted for online learning by Karen Belfer, 2001, Ed Media)

- White Hat: Data, facts, figures, info (neutral)
- Red Hat: Feelings, emotions, intuition, rage...
- Yellow Hat: Positive, sunshine, optimistic
- Black Hat: Logical, negative, judgmental, gloomy
- Green Hat: New ideas, creativity, growth
- Blue Hat: Controls thinking process & organization

Reflect 2e. Partner & Team Blogs (especially English writing class)

1. Instructor or Tutor blog: resources, information, space to chat
2. Learner blog: reflections, sharing links and pics, fosters ownership of learning
3. Partner blog: work on team projects or activities
4. Class blog: international exchanges, projects, PBL
5. Revision: review and explode sentences from previous posts, add details
6. Nutshell: summarize themes or comments across blogs
7. Blog on blog: reflections on feelings, confusions, and experiences with blogs

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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 2f. Personal Learner Weblog
(Bonk, 2007; Mei-Ya Liang, 2007)

1. Create personal learner blogs.
2. Note online learning materials found or read (e.g., online news sites, Web search engines, online dictionaries, etc.)
3. Outline of key points of readings.
4. Write reflections on news stories.
5. Record results of group activities in news sites and text chat rooms.
6. Provide peer comments on blogs.

Small Things Considered

HOW 2.0 BLOG

Reflect 2g. Reuse Blog, Chat Transcripts, Presentations

Reflect 2h. Blogs with Critical Friends (e.g., http://travelinedman.blogspot.com/)

Reflect 2i. Practitioner Feedback: Asynchronous Threaded Discussion plus Sync Expert Chat (e.g., Starter-Wrapper + Sync Guest Chat) (L/M = Cost, M = Risk, M = Time)

Half-Way...Brief Intermission Please Share Best Idea so far with neighbor

3. Visual Learners

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

Display 3a. Pubcasts! (videos of scientific papers and science)

NSF, the Public Library of Science, and the San Diego Supercomputing Center created a YouTube for scientists to help demystify important research papers. See SciVee http://www.scivee.tv/

Display 3b. Online Historical Document
(e.g., Turning The Pages, British Library)
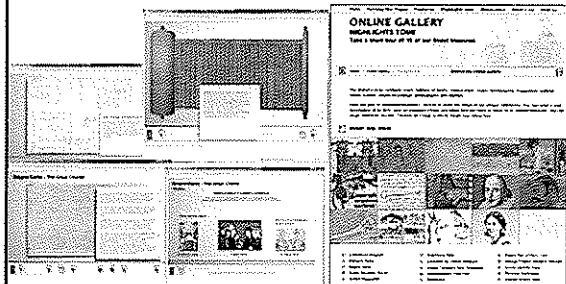
Display 3c. Shared Online Video Demonstrations (e.g., Monkey See, doFlick)
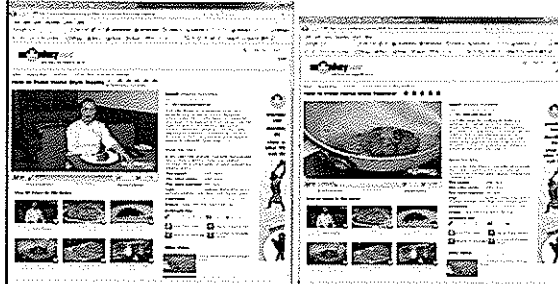
Display 3d. Visual Resources (e.g., Periodic Table of Visualization; Visual Thesaurus
http://www.visualthesaurus.com/; http://www.visual-literacy.org/periodic_table/periodic_table.html)

A PERIODIC TABLE OF VISUALIZATION METHODS

Display 3e. Adventure Blogging
(Ben Saunders, Mark Fennell, Andrew Revkin)

Display 3f. Online Video (e.g., geography classes; YouTube, TeacherTube, CurrentTV)
CHARLES McGRATH, Published: July 8, 2008, A Private Dance? Four Million Web Fans Say No, The New York Times
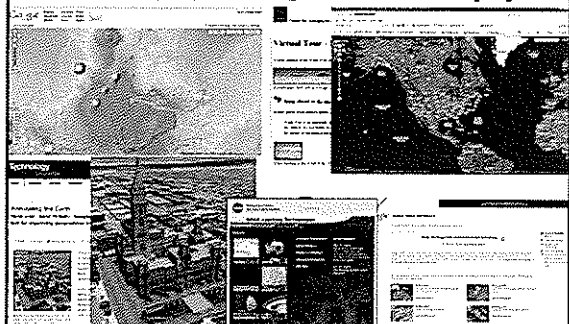

Display 3g. Anchored Instruction (find anchoring event (YouTube, CNN, BBC, TeacherTube, CurrentTV)
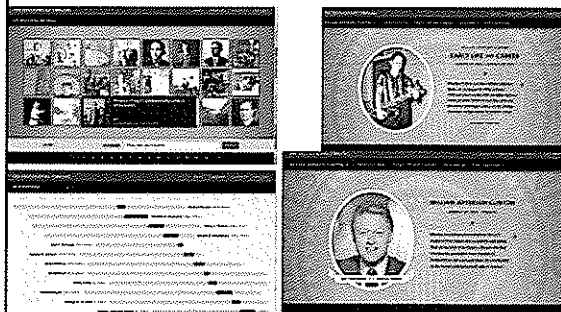
- In a synchronous lecture interrupt it with a summary video (could be a movie clip) explaining a key principle or concept.
- Refer back to that video during lecture.
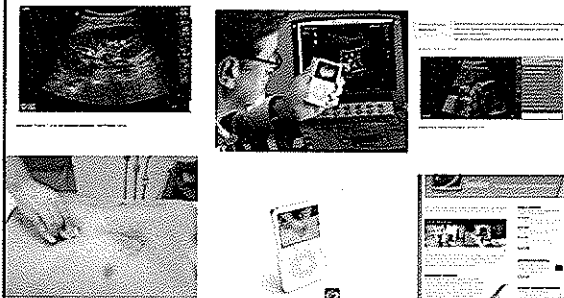- Debrief on effectiveness of it.

13
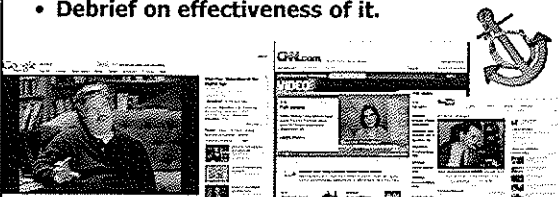
**Display 3h. Electronic Cameras and Maps (e.g., Google Earth/Maps)**

**Display 3i. Online Timelines**
(US Presidents)

Display 3j. Vodcast for Medical Training
(e.g., "SonoSite on the small screen: The Bothell-based company uses podcasts for its ultrasound scanner training," *By Eric Fetters, Herald Writer*, Everett, WA, Sept 25, 2006)
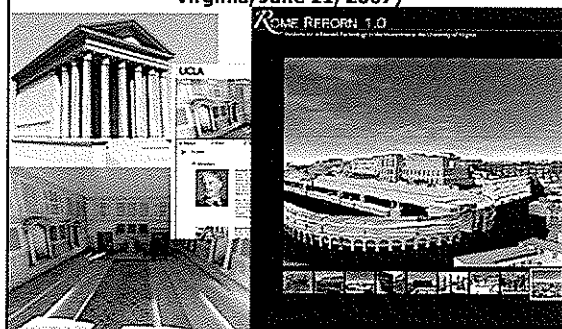
Display 3k. Concept Mapping Tools
(VUE, Bubbl.us, Cmap, Freemind)
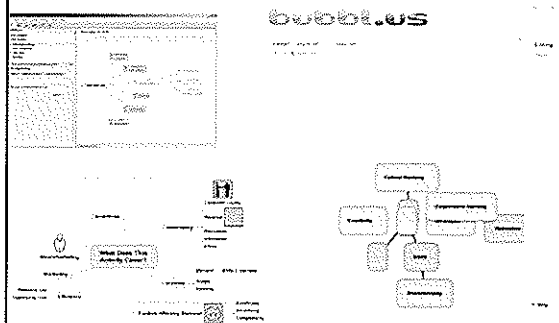
Display 3l. Expert Mentoring E-Art & E-Design
(COFA Online, Omnium Project, Creative Waves—online graphics and photomedia project)
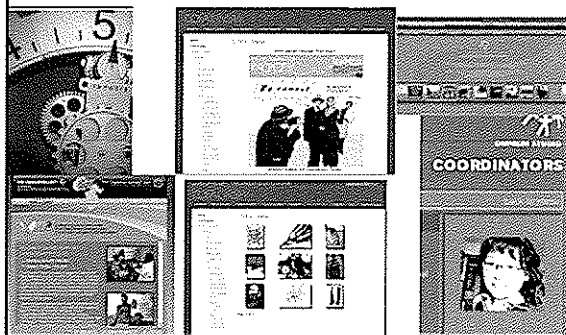
Display 3m. Explore Virtual Worlds and Online Representations (UCLAs CVRLab, Univ of Virginia, June 11, 2007)

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

Display 3p. Math Representation

Display 3q. Online Research Channels
(Research Channel, UChannel)

Display 3r. OpenCourseWare Video Browser (New Ways to Find Lectures)

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

Display 3t. Video Scenario Learning (Option 6, Bloomington, IN)

Display 3s. Animations with Flash, 3-D Visualization, & Laboratory Software

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. Wikibooks: Cross-Institional Collaboration (Web 2.0 and Emerging Learning Technologies (The WELT) and POLT)

Do 4b. Using Online Video (e.g., YouTube) to Memorize Sonnets and Poems

Do 4c. Virtual Worlds (limited programming skill; e.g., Google Lively)

Do 4d. Virtual Worlds/Virtual Reality/MMOG
Wednesday, August 30, 2006
Harvard Law School (Charles & Rebecca Nesson)
Chronicle of Higher Ed (open to the public)
http://chronicle.com/daily/2006/08/2006083001t.htm

Do 4e. Mobile Learning and Social Networking
(e.g., Mixi, Yayoi Anzai, Professor Japan)

Do 4f. Cool Resource Provider
(Bonk, 2004) Capture and Videostream Lectures
(e.g., Apreso CourseCaster)

- 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 via synchronous meeting or asynchronous discussion post.

Do 4g. Syllabus, Glossary, etc. in wiki:
Students sign up for tasks
(Ron Owston, York University)

Do 4h. Virtual Crime Scene:
Explore Murder Evidence
(Arjuna Multimedia, Bloomington, IN)

Do 4i. Online Warm-ups Activities
Just-In-Time-Teaching (JiTT)
http://webphysics.iupul.edu/jitt/jitt.html

Do 4j. Educational Simulations
(e.g., Medical Traumas from TD Magazine, August 2006;
Intel IT Manager Game, peacekeeping simulations)
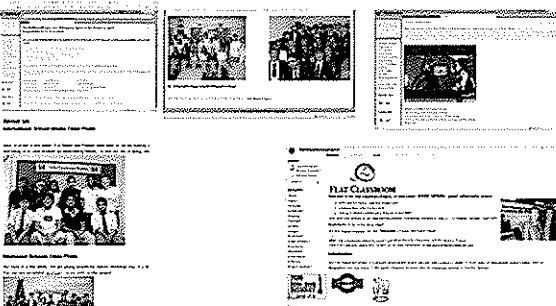
Next up: The MATRIX!!!!!!!!!!!

- Mobile
- Auditory
- Thought-stimulating
- Reflective/Real-World
- vIsually Interactive
- eXtremely Hands-on

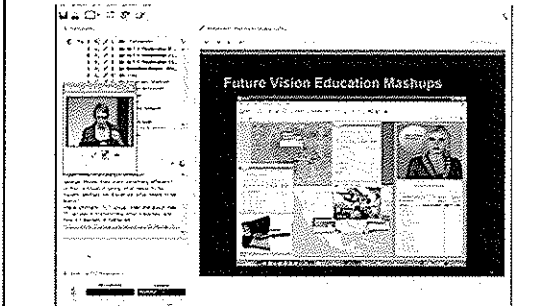## Time for Convergence!!! (activities that do not fit neatly)

Combining Web 2.0 and Other Online Technology Trends (Twelve Examples)

1. Flat Schools and Flat Classroom Projects!!!

2. Michelle Selinger, ALT-C Keynote, September 2007, Univ of Nottingham

3. Breeze in Higher Education

4. YouTube Research Group in Facebook

5. Elliott Masie, Podcast + Video + Transcript
Learning TRENDS by Elliott Masie

6. Archive Last Lectures
(Randy Pausch, Carnegie Mellon University)

7. Combining The Web 2.0 (e.g., Second Life, Blogging, and Photo Posting) Stephen Mandelbrot

8. Indexing Sounds in Cities with Google Maps

9. Cluster Maps (who is reading your blog or using your product); Blog of Will Richardson, famous K-12 blogger (left) and Learning Theories Book of Michael Orey, Univ of Georgia (right)
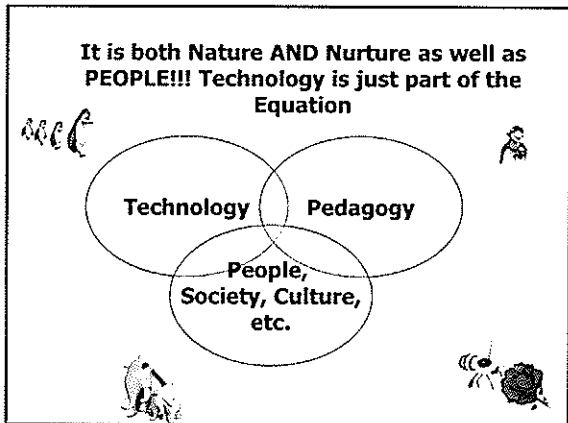

10. Vlogging (Video Blogging) e.g., Andy Calvin's Waste of Bandwidth Michael L. Wesch, Kansas State, The Machine is Using Us

11. Serious Games Blog with video of Wikipedia and Mahalo Founders and Google scanning people in background

12. You Ustreamed my Ustream: Now that's a Twitter of an Idea

It is both Nature AND Nurture as well as PEOPLE!!! Technology is just part of the Equation

Technology | Pedagogy
People, Society, Culture, etc.

Poll #4: How many ideas did you get from today?

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!

Try the R2D2 Method!!! Try TEC-VARIETY!!!

Sample papers at: http://www.publicationshare.com/
Archived talks at: http://www.trainingshare.com/

Stand and Share Ideas

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

Boring e-Learning

Experience. The difference.