
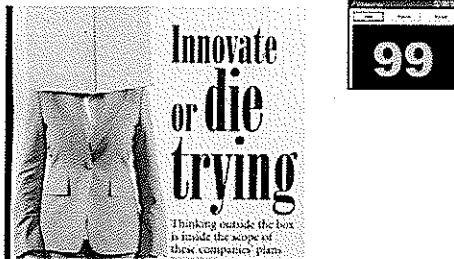


**R2D2 on the Matrix: A Galaxy of Online Learning Style, Motivational, Blended Learning and Learner-Centered Examples**

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



**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?)


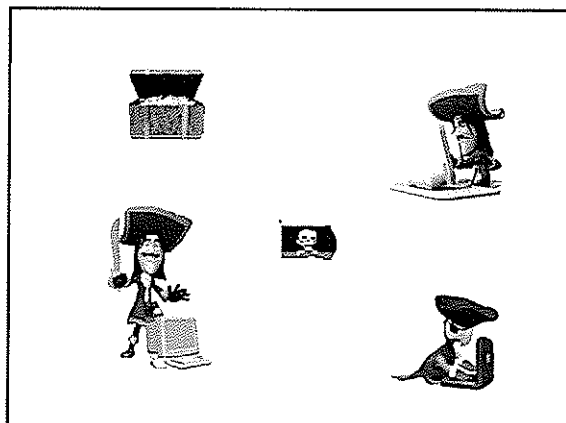
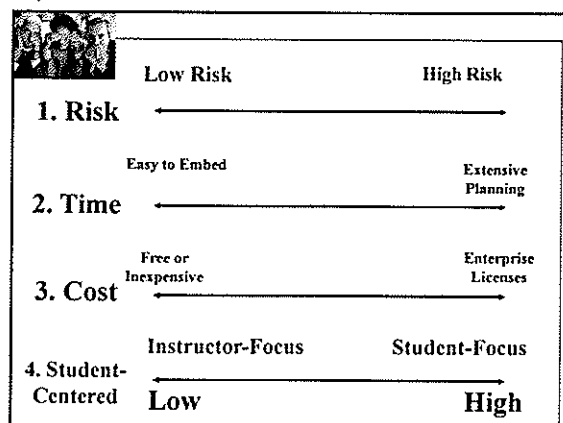


INFORMATION TECHNOLOGY



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

- Nick Currie and his girlfriend Shizu Yuasa (R) surf the internet over breakfast in Tokyo in this handout photo.
- "For my birthday, he upgraded my RAM and I thought it was incredibly romantic," writes Jess.

	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

## 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)

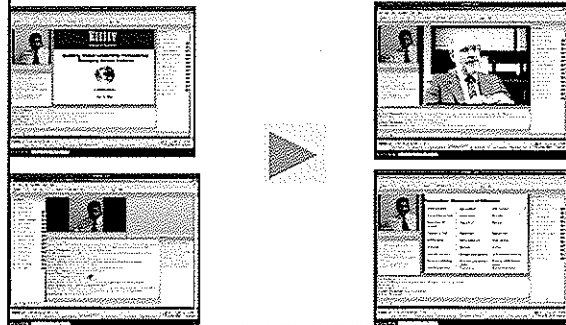
## TEC-VARIETY Model for Online Motivation and Retention

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)



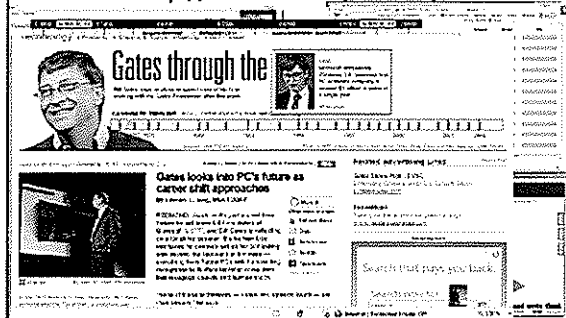
### 2. Encouragement, Feedback, etc.: A. Instructor Presentation in Synchronous Sessions (Breeze, Elluminate, WebEx, etc.)



### 3. Curiosity, Fun: A. Virtual Field Trips



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



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

**5. Autonomy, Choice: B. 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.)**

**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 (Mixer, 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.

**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**

**CBC NEWS CANADA | EDMONTON**

**Text-message course helping newcomers learn**

As Canada's population grows, so does the number of newcomers. In Edmonton, a new tool - text messages on their cellphones.

**9. Tension, Challenge, etc.:**  
**A. Asynchronous Discussion of Weekly Topics**

The image shows a screenshot of a web forum interface. At the top, there is a header with the @bel logo and the text "Library in the Digital World". Below the header, there are several discussion threads with titles and user avatars. The interface includes search bars, navigation menus, and a list of posts.

**9. Tension, Challenge, etc.:**  
**B. Electronic Guests & Mentoring**  
 (Simon Fraser University News:  
<http://www.sfu.ca/mediapris/news/2001/Sept8/hightech.htm>)

The image is a collage of three photographs. The top-left photo shows a man in a suit sitting at a desk with a computer. The top-right photo shows a group of five people standing together for a group photo. The bottom photo shows two men in suits sitting at a table, engaged in a conversation.

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

The image shows a screenshot of the JapanesePod website on the left, which features a list of podcast episodes. On the right, there is a photograph of a person sitting at a desk, looking at a computer monitor.

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

The image is a collage of several digital products. It includes a poster for "CAMPUS MOVIEFEST", a concept map or virtual timeline, and a screenshot of a digital movie player interface.

**99 seconds: What have you learned so far?**  
 • Solid and Fuzzy in groups of two to four

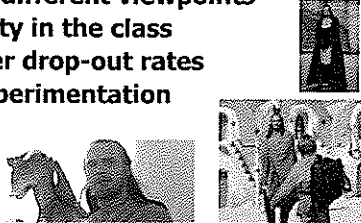
The image contains two visual elements: a shiny, metallic, cylindrical object on the left and a blurry, grayscale image of a hand on the right.

**Part IV. Addressing Learning Styles**

The image is a collage of several photographs. The central figure is Brad Pitt, surrounded by other people in various settings, including a group of people and a person in a uniform.


### 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



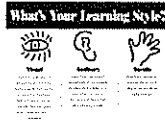
### Poll 1: Which learning style do you prefer?

- 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.







### Active Experimentation vs. Reflective Observation

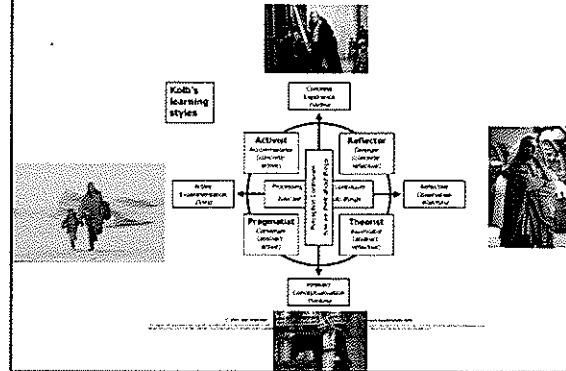
- (AE) - I often produce off-the-cuff ideas.
- (RO) - I am thorough and methodical.
- (AE) - I am flexible and open minded.
- (RO) - I am careful and cautious.
- (AE) - I am loud and outgoing.
- (RO) - I am quite and somewhat shy.



### Abstract Conceptualization vs. Concrete Experiences

- (AC) - I am rational and logical. 
- (CE) - I am practical and down to earth. 
- (AC) - I plan events to the last detail. 
- (CE) - I like realistic, but flexible plans. 

### The Blending of Learning Styles

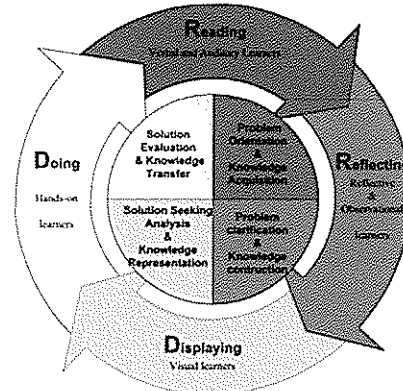


### Index of Learning Styles Questionnaire

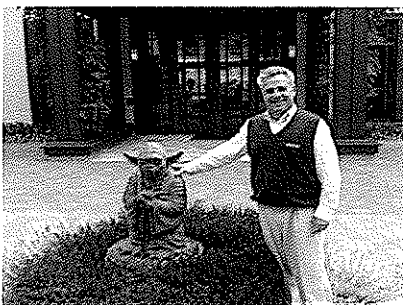
Barbara A. Solomon, North Carolina State Univ  
<http://www.engr.ncsu.edu/learningstyles/iisweb.html>



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

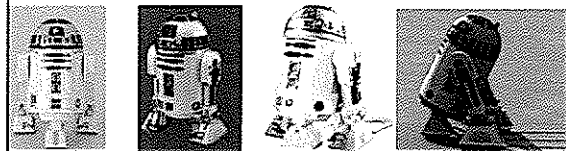


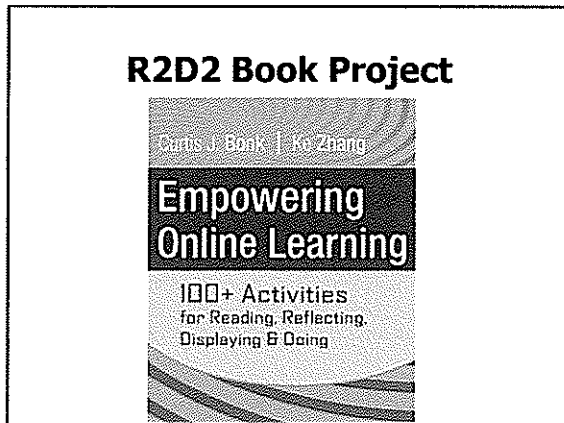
### Dean of IU School of Education



### The R2D2 Method

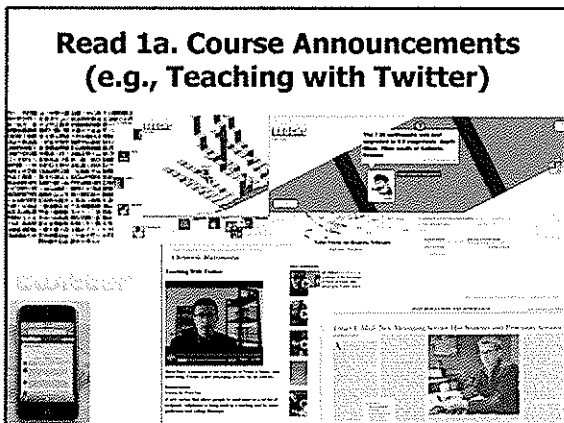
1. Read (Auditory and Verbal Learners)
2. Reflect (Reflective Learners)
3. Display (Visual Learners)
4. Do (Tactile, Kinesthetic, Exploratory Learners)



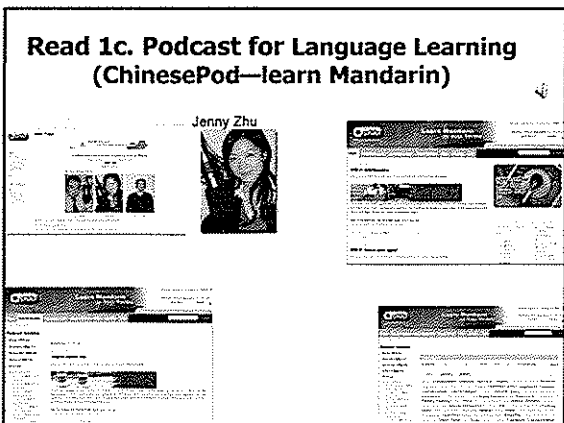


### 1. Auditory or Verbal Learners

- Auditory and verbal learners prefer words, spoken or written explanations.



### Read 1b. Podcasts for Peace (World Bridges and EdTechTalk)



### 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/>

**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)**

Order	Job	Payroll	Order	Order	Order Date
01	...	01	...	01	01/01/01 10:15 AM
02	...	02	...	02	01/01/01 10:15 AM
03	...	03	...	03	01/01/01 10:15 AM
04	...	04	...	04	01/01/01 10:15 AM
05	...	05	...	05	01/01/01 10:15 AM
06	...	06	...	06	01/01/01 10:15 AM
07	...	07	...	07	01/01/01 10:15 AM
08	...	08	...	08	01/01/01 10:15 AM
09	...	09	...	09	01/01/01 10:15 AM
10	...	10	...	10	01/01/01 10:15 AM
11	...	11	...	11	01/01/01 10:15 AM
12	...	12	...	12	01/01/01 10:15 AM
13	...	13	...	13	01/01/01 10:15 AM
14	...	14	...	14	01/01/01 10:15 AM
15	...	15	...	15	01/01/01 10:15 AM
16	...	16	...	16	01/01/01 10:15 AM
17	...	17	...	17	01/01/01 10:15 AM
18	...	18	...	18	01/01/01 10:15 AM
19	...	19	...	19	01/01/01 10:15 AM
20	...	20	...	20	01/01/01 10:15 AM

**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.

**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)

## 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.



HOW 2.0 BLOG

## Reflect 2g. Course Weblog (Bonk, 2007; Mei-Ya Liang, 2007)

1. Create a class blog site (e.g., using Blogger (<http://myliang.blogspot.com/>)) to create a sense of instructor presence and to link people from all over the world.
2. Post assignments and instructional prompts.
3. Group projects and news summaries are posted.
4. Add course related links for online materials, resources, tools, and Websites.
5. Add instructor's profile with bio and contact info.



## Reflect 2h. Reuse Blog, Chat Transcripts, Presentations

**Reflect 2i. Blogs with Critical Friends**  
 (e.g., <http://travelinedman.blogspot.com/>)

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

45. Real-time Chat is Enabled...And also More Async Questions for Bob, Erping, Julia, John, or Kira or anyone else.

**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](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))

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

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

The image shows two screenshots of an online timeline for US Presidents. The top screenshot displays a grid of small portraits of various presidents. The bottom screenshot shows a detailed profile for a specific president, including a larger portrait and biographical text.

### 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)

The image displays several screenshots from a vodcast interface. One screenshot shows an ultrasound scan. Another shows a person wearing glasses looking at a mobile device. Other screenshots show text-based content and additional ultrasound images.

### Display 3k. Concept Mapping Tools (VUE, Bubbl.us, Cmap, Freemind)

The image shows two screenshots of concept mapping tools. The top screenshot is a complex hierarchical diagram with many nodes and connecting lines. The bottom screenshot is a simpler mind map with a central node and several branches.

### Display 3l. Expert Mentoring E-Art & E-Design (COFA Online, Omnium Project, Creative Waves—online graphics and photomedia project)

The image displays a grid of screenshots from an expert mentoring interface. The central part shows a grid of project thumbnails with titles and images. To the right, there is a section titled 'COORDINATORS' with a profile picture of a woman.

### Display 3m. Explore Virtual Worlds and Online Representations (UCLAs CVRLab, Univ of Virginia, June 11, 2007)

The image shows several screenshots of virtual worlds and online representations. One screenshot shows a classical building with columns. Another shows a landscape with mountains and a river. A central screenshot shows a virtual environment with a grid floor and a building.

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

The image displays two screenshots of online history portals. The top screenshot is the 'Civil Rights Digital Library' website, featuring a 'Welcome to the Civil Rights Digital Library' message and a photo of a man. The bottom screenshot is the 'Amistad' website, showing a grid of historical images and text.

### 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)

### 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-Institutional 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

This image shows a screenshot of a YouTube search results page. The search term is 'Sonnets and Poems'. Several video thumbnails are visible, including one titled 'Sonnets and Poems' and another titled 'Sonnets and Poems'. The page layout includes the YouTube logo, search bar, and various video thumbnails with titles and view counts.

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

This image shows a screenshot of a Google Lively virtual world. The interface includes a search bar, navigation buttons, and a 3D-rendered environment with various objects and avatars. The text 'Google Lively' is visible at the top right of the interface.

### 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>

This image is a collage of several images related to virtual worlds and MMOG. It includes a screenshot of a virtual world with a car, a screenshot of a virtual world with a person, and a screenshot of a virtual world with a person. The text 'Chronicle of Higher Ed' is visible in the top right corner of the collage.

### Do 4e. Mobile Learning and Social Networking

(e.g., Mixi, Yayoi Anzai, Professor Japan)

This image is a collage of several images related to mobile learning and social networking. It includes a screenshot of a mobile learning interface, a screenshot of a social networking site, and a screenshot of a mobile learning interface. The text 'mixi' is visible in the top left corner of the collage.

### Do 4f. Cool Resource Provider

(Bonk, 2004) Capture and Videostream Lectures  
 (e.g., Apreso CourseCaster)

**Cool Stuff**

- 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.

This image is a collage of several images related to cool resource providers. It includes a screenshot of a website, a screenshot of a website, and a screenshot of a website. The text 'Cool Stuff' is visible in the top left corner of the collage.


### Do 4g. Syllabus, Glossary, etc. in wiki:

Students sign up for tasks  
 (Ron Owston, York University)

This image shows a screenshot of a wiki page. The page title is 'Syllabus, Glossary, etc. in wiki: Students sign up for tasks (Ron Owston, York University)'. The page content includes a table with columns for 'Syllabus' and 'Glossary'. The text 'Syllabus, Glossary, etc. in wiki' is visible at the top of the page.

**Next up: The MATRIX!!!!!!!!!!!!!!**

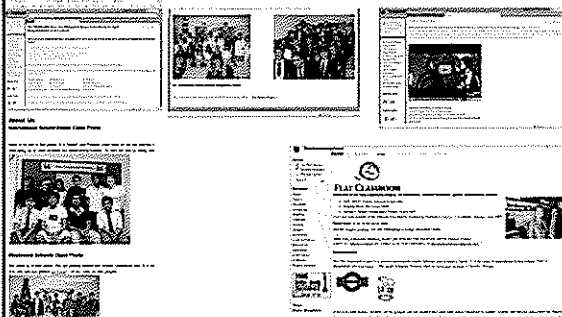
- Mobile
- Auditory
- Thought-stimulating
- Reflective/Real-World
- vIsually Interactive
- eXtremely Hands-on



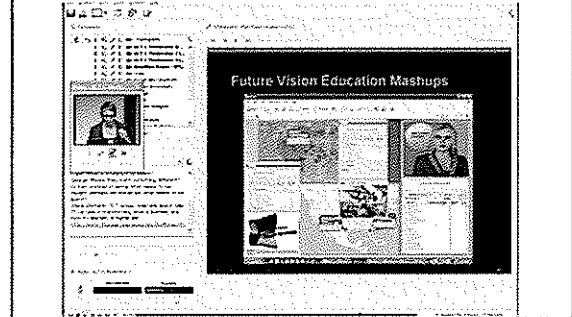
**Time for Convergence!!!  
(activities that do not fit neatly)**

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

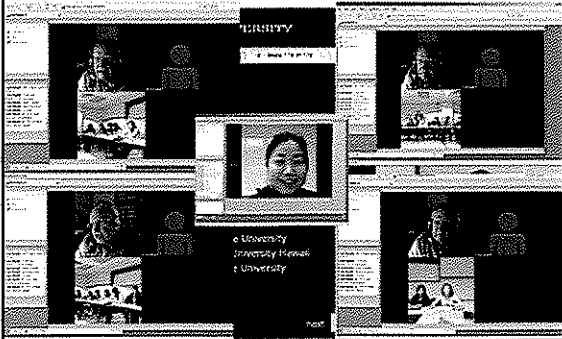
**1. Flat Schools and Flat Classroom Projects!!!**



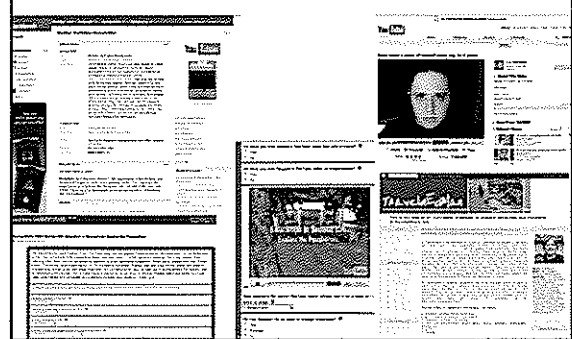
**2. Michelle Selinger, ALT-C Keynote, September 2007, Univ of Nottingham**



**3. Breeze in Higher Education**



**4. YouTube Research Group in Facebook**



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

This screenshot shows the 'Learning Trends' website. It features a prominent video player on the left, a central text area with a transcript, and a podcast player on the right. The site is designed for multi-media consumption of educational content.

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

This screenshot displays the 'Last Lecture' archive website. It includes a video player at the top, a list of lecture topics, and a sidebar with a search function. The site is a digital repository of Pausch's final lectures.

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

This collage illustrates various Web 2.0 applications. It includes a virtual avatar in a Second Life environment, a screenshot of a blog post, and a photograph of a person, demonstrating the integration of different digital media and social platforms.

**8. Indexing Sounds in Cities with Google Maps**

This screenshot shows a Google Maps interface with several sound indexing markers overlaid on a city map. The markers represent different audio recordings taken from various locations in the city, demonstrating a geospatial audio indexing system.

**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)**

This collage features a cluster map showing user interactions, a photograph of a person, and a book cover titled 'Learning Theories'. It represents data visualization and educational content related to learning theories and user engagement.

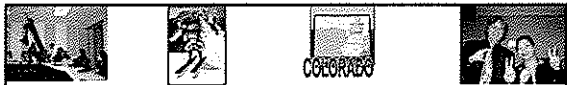
**10. Vlogging (Video Blogging)**  
**e.g., Andy Calvin's Waste of Bandwidth**  
**Michael L. Wesch, Kansas State, The Machine is Using Us**

This collage includes several video player thumbnails, a photograph of a person, and a book cover titled 'The Machine is Using Us'. It highlights the concept of vlogging and its application in educational contexts.






**Poll #3: 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: \_\_\_\_\_



Experience. The difference.