
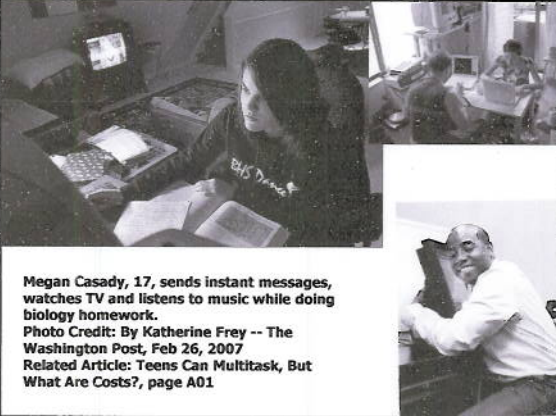


R2D2 to the Matrix: An Online Galaxy of Blended Learning, Motivational, and Learning Style Ideas

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





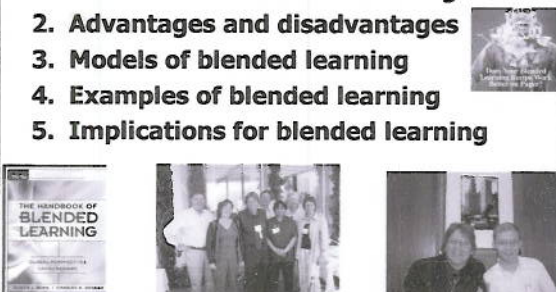
Megan Casady, 17, sends instant messages, watches TV and listens to music while doing biology homework.
 Photo Credit: By Katherine Frey -- The Washington Post, Feb 26, 2007
 Related Article: Teens Can Multitask, But What Are Costs?, page A01

Poll #1: 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?

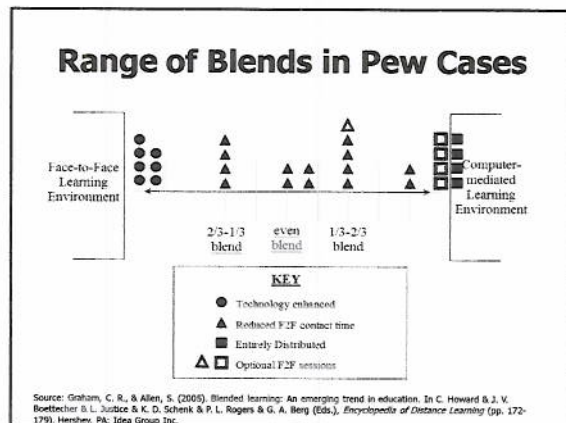
Part I of this the talk will cover:

1. Definitions of blended learning
2. Advantages and disadvantages
3. Models of blended learning
4. Examples of blended learning
5. Implications for blended learning



The Sloan Consortium (2003). Sizing the Opportunity: The Quality and Extent of Online Education in the U.S., 2002 and 2003
http://www.sloan-c.org/resources/sizing_opportunity.pdf

Proportion of content delivered online	Type of Course	Typical Description
0%	Traditional	Course with no online technology used - content is delivered in writing or orally.
1 to 29%	Web facilitated	Course which uses web-based technology to facilitate what is essentially a face-to-face course. Might use Blackboard or WebCT to post the syllabus and assignments, for example.
30 to 79%	Blended/Hybrid	Course that is a blend of the online and face-to-face course. Substantial proportion of the content is delivered online, typically uses online discussions, typically has some face-to-face meetings.
80+	Online	A course where the vast bulk of the content is delivered online. Typically has no face-to-face meetings.



Blending Online and F2F Instruction

- “Blended learning refers to events that combine aspects of online and face-to-face instruction” (Rooney, 2003, p. 26; Ward & LaBranche, 2003, p. 22)

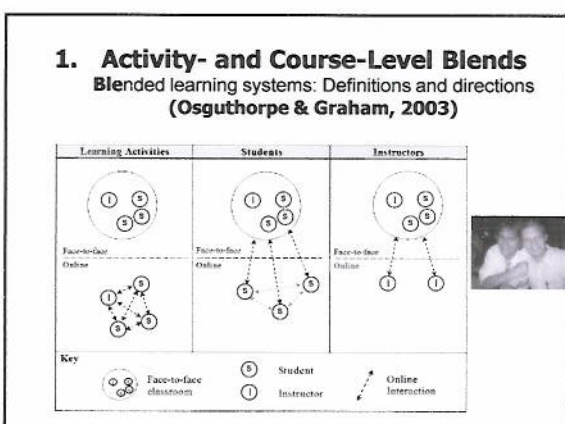
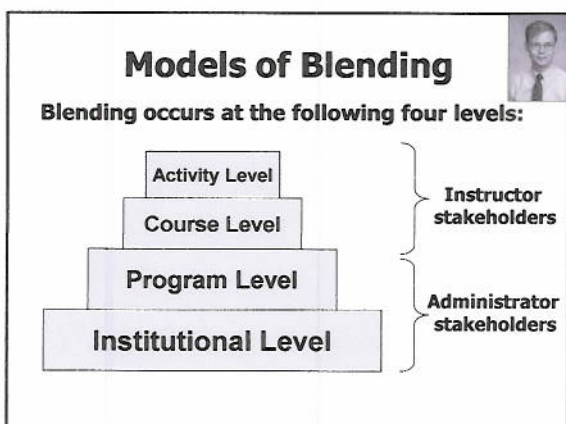
Where is Blended Beneficial?

<http://www.center.rpi.edu/PewGrant/ProjDesc.html>

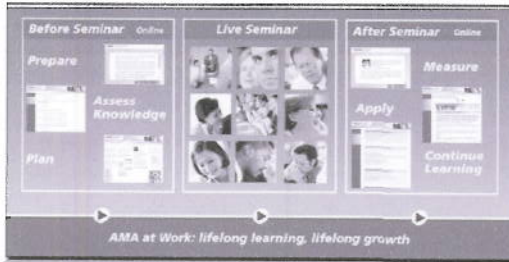
- Large Classes (spanish, intro psych, algebra, elementary statistics, biology)
- Classes with working students
- Students spread over a distance
- Classes with certification
- Classes with need for standardization
- New requirements for a profession
- Writing intensive classes
- Theory classes

Fully Online and Blended Learning Advantages

1. Increased Learning (better papers, higher scores)
2. More effective pedagogy and interaction
3. Course access at one’s convenience and flexible completion (e.g., multiple ways to meet course objectives)
4. Reduction in physical class or space needs, commuting, parking
5. Increased opportunities for human interaction, communication, & contact among students
6. Introverts participate more

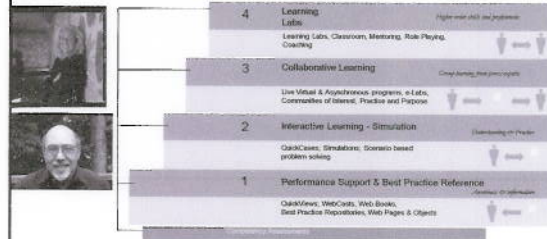


AMA Special Report, Effectively Implementing a Blended Learning Approach (Steven Shaw & Nicholas Igneri, 2006)



Source: American Management Association, AMA at Work

The IBM Four Tier Learning Model (2006) Blending Learning for Business Impact – IBM's case for learning success, 2006 Handbook of Blended Learning, Nancy Lewis, VP, & Peter Orton, IBM



Institutional-level Blending (Brian Linquist, 2006)

Example 2: University of Phoenix

- Completely online courses
- Residential F2F courses
- Blended Courses
 - *Local Model* = 5 week courses with first and last week F2F
 - *Distance Model* = 5 week courses with half first and half last week F2F (the last meeting of one course is coordinated to be back-to-back with the first meeting of the next 5 week course)



Problem Situation #1: Brief FTF Experiences

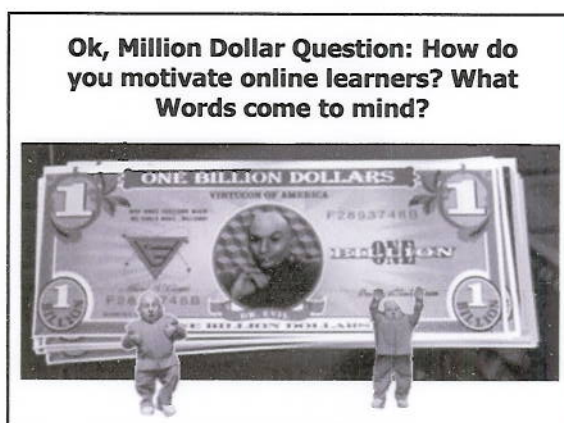
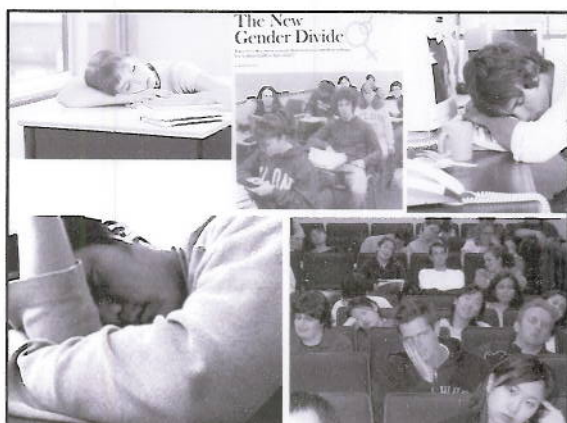
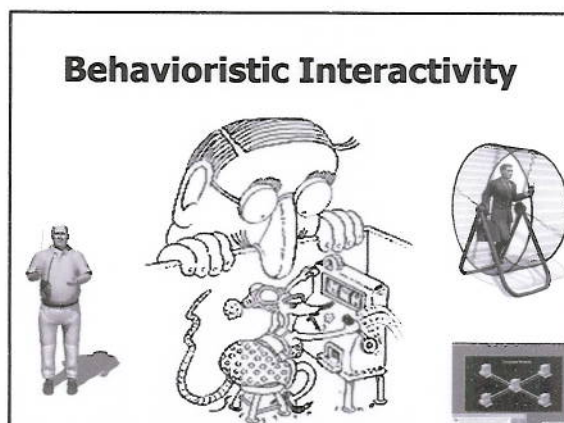
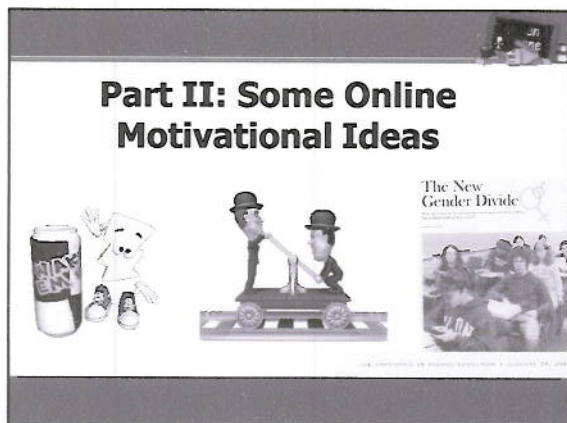
- Face-to-face (FTF) experiences are brief, one-week journeys. Need to need to build self-confidence, create social supports, teams, camaraderie, etc.

Blended Solution #1+. Sample Activities for Brief Meetings

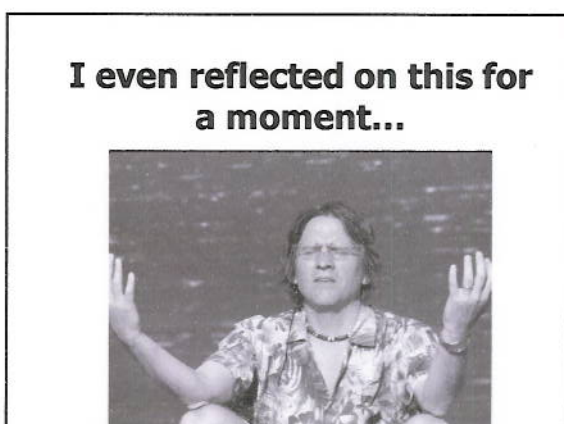
1. Assign web buddies, email pals, critical friends based on interests, confidence, location, etc.
2. Ice breakers—paired introductions, corners.
3. Solve case in team competitions with awards.
4. Test technology in a lab.
5. Assign teams and exchange info for small teams using text messaging.
6. Library (digital and physical) scavenger hunt.
7. Do a podcast documenting the meeting.
8. Have everyone create a blog on the experience.
9. Open an e-portfolio for each student
10. Brainstorm how might use technology in program.

Implications and Challenges for Blended Learning

1. Faculty and students are more mobile.
2. Students more choices.
3. Student expectations rise.
4. Greater self-determined learning.
5. More corporate university partnerships.
6. Courses increasingly modular.
7. Less predefined schedules.
8. When teaching less clear; when learning less clear.



- ### Motivation Research Highlights (Brophy)
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, interact with peers.
 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.




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: Social Ice Breakers


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



B. Favorite Websites

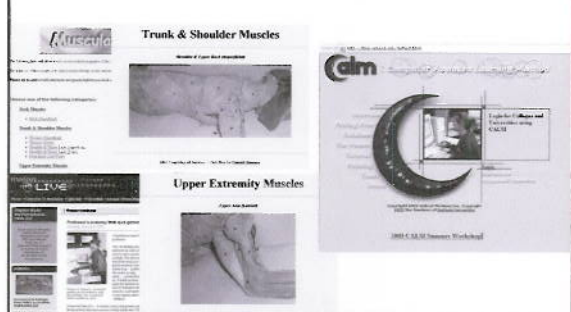
1. **Everyone posts 1-2 of their favorite Websites and explain why.**
2. **Peers comment on or rate them.**

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



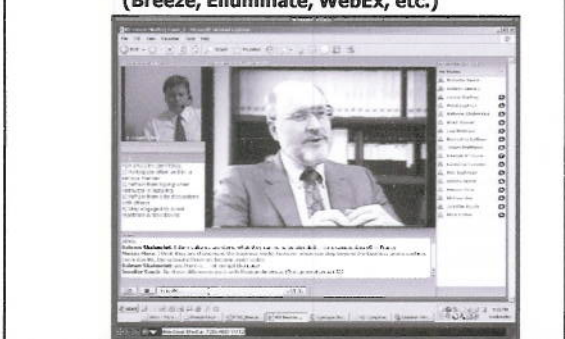
2. Encouragement, Feedback, etc.:

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



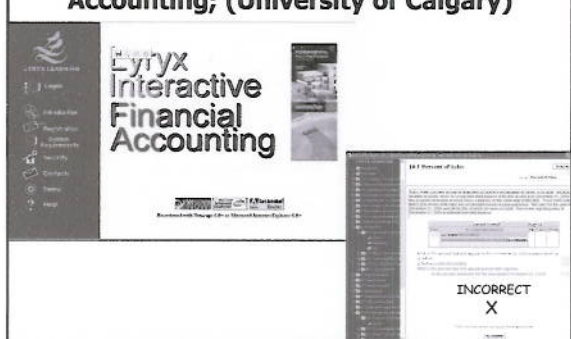
2. Encouragement, Feedback, etc.:

B. Instructor Presentation in Synchronous Sessions
 (Breeze, Elluminate, WebEx, etc.)



2. Encouragement, Feedback, etc.:

c. Online Simulation: Financial Accounting; (University of Calgary)



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

4. Variety, Novelty:
A. Supplementing Course with Health Resources (portals, referatories, & repositories)

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.)

5. Autonomy, Choice:
B. Clickers; Innovation is but one click away...


5. Autonomy, Choice:
C. Online Portal Explorations

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


6. Relevance, Meaningfulness: B. Authentic Data Analysis

Jeanne Sept, IU, Archaeology of Human Origins; Components: From CD to Web

- A set of research q's and problems that archaeologists have posed about the site
- A complete set of data from site
- Students work collab to interpret age of site
- Interpret of ancient environments
- Analyze artifacts/fossils from site




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

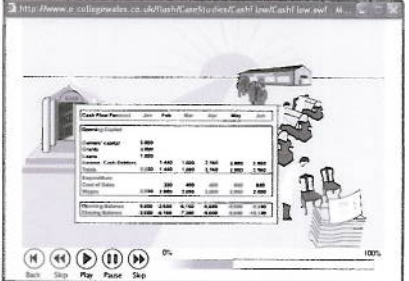


7. Interactive, Collaborative: B. Google Docs, Ning, Google Groups, MSN Groups, Yahoo Groups, Diigo, etc.

Ning in Education
Using Ning for Educational Social Networks



7. Interactive, Collaborative: C. Flash, 3-D Visualization, & Laboratory Software




Category	2000	2001	2002	2003	2004
Current Capital	1,000	1,000	1,000	1,000	1,000
Current Cash	1,000	1,000	1,000	1,000	1,000
Current Cash Balance	1,000	1,000	1,000	1,000	1,000
Current Cash Flow	1,000	1,000	1,000	1,000	1,000
Current Cash Balance	1,000	1,000	1,000	1,000	1,000
Current Cash Flow	1,000	1,000	1,000	1,000	1,000
Current Cash Balance	1,000	1,000	1,000	1,000	1,000
Current Cash Flow	1,000	1,000	1,000	1,000	1,000

8. Engagement, Effort: A. Just-In-Time Syllabus

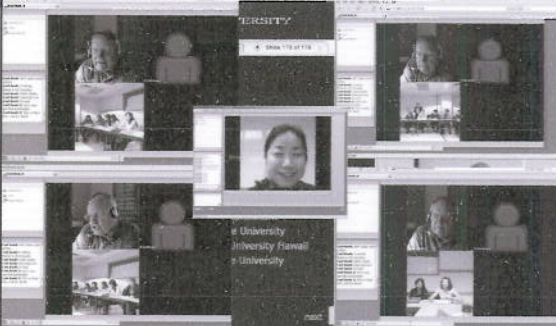
(Raman, Shackelford, & Sosin) <http://ecedweb.unomaha.edu/jits.htm>
<http://ecedweb.unomaha.edu/jits.htm>

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.




8. Engagement, Effort: B. Breeze + Video + Forum + Online Papers



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



243 I am so wise, go listen. Anotole 11/25/03 05:49 PM

745 He ain't heavy - he's my brother. Mother Theresa 04/22/04 11:4

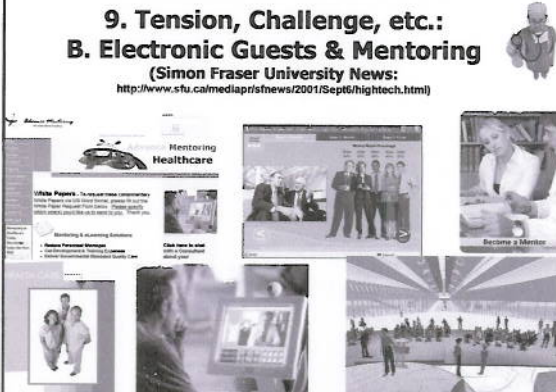
746 HAPPY AEROE DAY Jane Goodall 04/23/04 12:46 PM

I hope that everyone has been feeling wonderful today.

9. Tension, Challenge, etc.:

B. Electronic Guests & Mentoring

(Simon Fraser University News: <http://www.sfu.ca/mediaprivnews/2001/Sept/hightech.html>)




9. Tension, Challenge, etc.:

C. Ethical Medical Debates

Students to protest human body exhibit

Maggie Ybarra
Issue date: 3-5-06 Section: News



Flattened human corpses will be on display inside Cascade Center through May.

But a group of UBC medical students

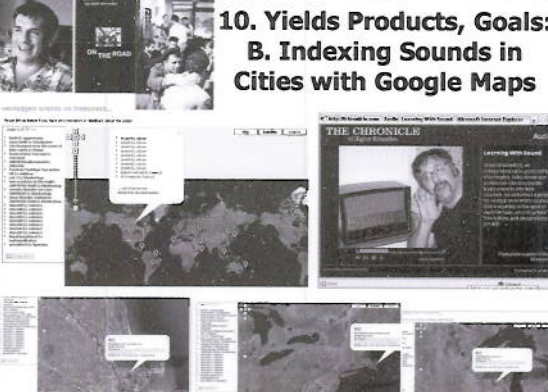
10. Yields Products, Goals:

A. Movie Festivals, Concept Maps, Video Papers, Virtual Timelines, Digital Movies




10. Yields Products, Goals:

B. Indexing Sounds in Cities with Google Maps


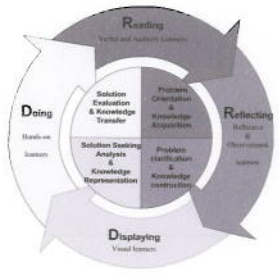


99 seconds: What have you learned so far?

- Solid and Fuzzy in groups of two to four



Part III. Addressing Learning Styles

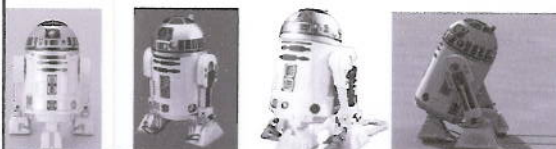
Curtis J. Bonk | Ke Zhang

Empowering Online Learning

100+ Activities for Reading, Reflecting, Displaying & Doing

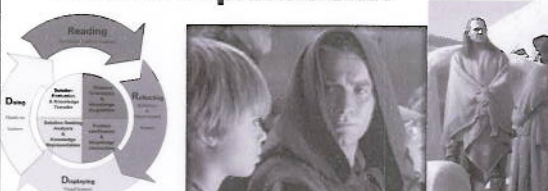
The R2D2 Method

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. Publishing in Open Access Journals (e.g., PLOS)



Read 1b. Course Announcements (e.g., Teaching with Twitter)



Read 1c. University Podcast Shows
(School of Dentistry, Univ of Michigan) Educause Quarterly, 29(3), 2006




Presenting Stanford on iTunes

INFORMATION TECHNOLOGY

Lectures Gone in 60 Seconds


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. Blogs Uses
(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



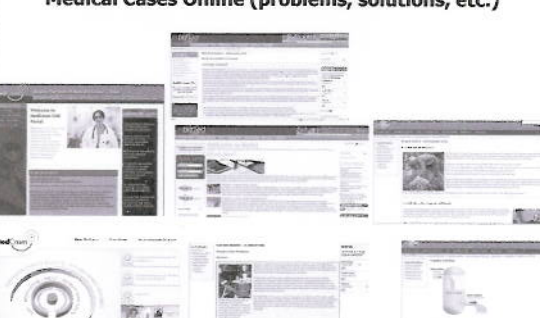
Reflect 2b. Expert and Domain Specific Blogs (Health Blogs)



Reflect 2c. Watch or Listen to Online Conferences
(2nd Int'l Online Medical Conference, March 14-15, 2009)



Reflect 2d. Community of Learners: Business and Medical Cases Online (problems, solutions, etc.)



Reflect 2e. Basic Acoustics of Musical Instruments 2005 MERLOT Classics Award

The image shows a screenshot of a MERLOT course page. The title is 'Reflect 2e. Basic Acoustics of Musical Instruments' and it has won the '2005 MERLOT Classics Award'. The page includes a navigation menu, a list of resources, and a small video player. A photo of a woman is visible in the bottom right corner of the screenshot.

3. Visual Learners

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

The image features a circular diagram with arrows pointing clockwise, containing the words 'Displaying', 'Assessing', 'Planning', and 'Delivering'. To the right is a black and white photo of a child wearing a helmet, possibly in a classroom or laboratory setting.

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/>

The image is a screenshot of the SciVee website. It features a header with the SciVee logo and navigation links. Below the header are several video thumbnails with titles and descriptions, representing scientific papers and research.

Display 3b. Online Historical Document (e.g., Turning The Pages, British Library)

The image shows a screenshot of an online historical document viewer. The main content is a page from the Magna Carta, titled 'Magna Carta - The Great Charter'. It includes a timeline and an 'ONLINE GALLERY' section with various historical images and documents.

Display 3c. Visual Resources (e.g., Periodic Table of Visualization; Visual Thesaurus)

<http://www.visualthesaurus.com/>; http://www.visual-literacy.org/periodic_table/periodic_table.html


The image is a 'PERIODIC TABLE OF VISUALIZATION METHODS'. It is a grid of boxes, each containing a different visualization method. The methods are categorized into 'Data Visualization', 'Image Visualization', 'Text Visualization', and 'Complex Visualization'. The table includes methods like 'Bar Chart', 'Pie Chart', 'Line Graph', 'Map', 'Diagram', etc.

Display 3d. Animations, Video Clips, Audio, Pictures, Web Resources, etc. (e.g., DNA from the Beginning)


The image is a screenshot of a video player. The video is titled 'RNA was the first genetic molecule.' and is from the series 'DNA from the Beginning'. The video content shows a woman speaking and a diagram of a DNA double helix structure.

Display 3e. 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.




Display 3f. Medical Animations and Videos (find anchoring event (YouTube, CNN, BBC, TeacherTube, CurrentTV))



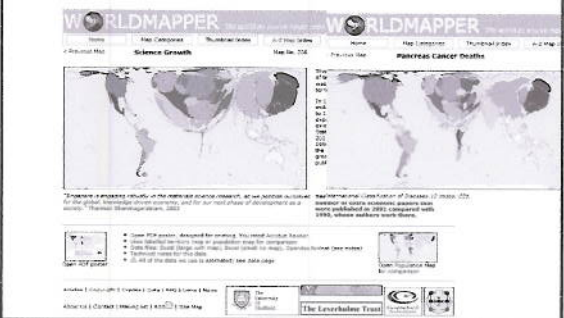
Display 3g. Online Timelines (US Presidents)



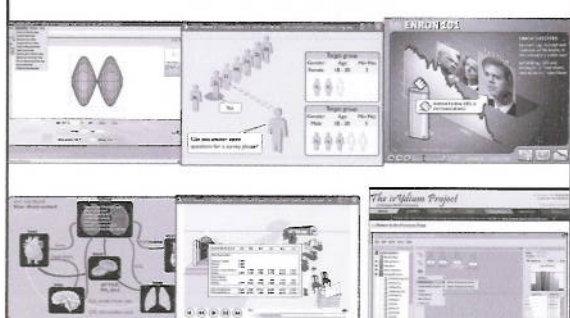
Display 3h. Concept Mapping and Timeline Tools (VUE, Bubbl.us, Cmap, Freemind, Gliffy, Mindmeister, or Mindomo)



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



Display 3j. Flash, 3-D Visualization, & Laboratory Software



Display 3k. Video Streamed and Webcast Lectures

Integrative Biology 131 - Lecture 02: Skeletal System

UC Berkeley
 August 25, 2007
 Integrative Biology 131: General Human Anatomy, Fall 2006
 Professor Robert Campbell: The functional anatomy of the human body as revealed by gross and microscopic dissection. The Department of

Rate: ★★★★★ Views: 66,230

Display 3l. Videos of the Periodic Table

THE PERIODIC TABLE OF VIDEOS

THE PERIODIC TABLE OF VIDEOS

THE PERIODIC TABLE OF VIDEOS

THE PERIODIC TABLE OF VIDEOS

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

POSTCARDS FROM THE ARCTIC

Ben Saunders

Science

Testing the Tundra

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

UCLA Cultural VR Lab

UCLA Cultural VR Lab

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

CIVIL RIGHTS DIGITAL LIBRARY

WELCOME TO THE CIVIL RIGHTS DIGITAL LIBRARY

FROM THE CIVIL RIGHTS

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.

Doing

Diversity

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

Web 2.0 and Emerging Learning Technologies
From Wikibooks, the open-content textbooks collection

The image shows a screenshot of the Wikibooks page for 'Web 2.0 and Emerging Learning Technologies'. It features a 'Table of Contents' with sections like 'Part I: Introduction', 'Part II: The Practice of Learning Theories', and 'Part III: Overcoming the Digital Divide'. There are also icons for a play button, a Wi-Fi signal, and an '@' symbol.

Do 4b. Survey Research and Market Analysis (e.g., WebSurveyor, Zoomerang, SurveyShare, SurveyKey)

This block contains four screenshots of different online survey platforms. From top-left to bottom-right: SurveyShare.com (showing a survey form), Surveyor (with the tagline 'Online Surveys without Limits'), SurveyCensale (showing a survey interface), and Zoomerang (with the tagline 'Create Surveys & Get Feedback').

Do 4c. Online Warm-ups Activities Just-In-Time-Teaching (JITT)

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

The image shows a screenshot of the 'Just-In-Time Teaching' (JITT) website. The main heading reads 'JUST-IN-TIME TEACHING'. To the right is a photograph of a man, likely the creator, Ron Owston, holding a book. Below the photo is a map of the United States.

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>

The image is a screenshot of a virtual world environment. It shows a large, open space with a grid floor, a bright sun or moon in the sky, and several avatars of people. There are some structures and a large screen or projection in the background.

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

This block shows a screenshot of a wiki page for a syllabus. The title is 'GS/EDUC 5 5860 3.0 Sec A (Summer 2006-07)'. The page content includes a 'Course syllabus' section and a 'Blended learning' section. The text describes the course structure and learning objectives.

Do 4f. Educational Simulations (Medical Traumas from TD Mag, August 2006, Cells Alive)

This block contains two screenshots of educational simulations. The top one shows a virtual medical simulation environment with several avatars in a clinical setting. The bottom one shows a woman wearing a headset, likely participating in a simulation or training exercise.

Do 4g. Cross-Class Collab (Indiana University and Open U of Malaysia; Univ of Illinois Tourism class)

The screenshot shows a university website with a 'news bureau' sidebar on the left and a main content area with a 'LIVE PREVIEW FOR NEW JOURNAL' article. The website header includes navigation links like 'HOME', 'ABOUT US', and 'CONTACT US'.

Do 4h. Real World Problems (PBL online): Real-time Cases

The screenshot displays a 'REAL TIME CASE STUDY' webpage. The main heading reads 'Supercharging the case method, making it more realistic and engaging'. It features a video player showing a woman speaking and a profile for 'Professor Susan Thomas, Dean Professor of Entrepreneurship, University of Massachusetts, Amherst'. A copyright notice at the bottom reads '© copyright 2007 Jason Tenbrun, All rights reserved.' and the website is identified as 'www.tec.com'. Navigation links include 'ABOUT ARTICLES TOUR PRIVATE CONTACT'.

Do 4i. Video Scenario Learning (Option 6, Bloomington, IN)

A collage of six video player thumbnails. The scenes include a man and woman in a professional setting, a woman in a room, a man in a suit, and other scenes from a video scenario.

Do 4j. Wiki: Romantic Poetry Project (Professor Mike Phillipson, English at Bowdoin College)

The screenshot shows a website for 'THE LIFE AND WORK OF JOHN KEATS 1795-1821'. It features a portrait of John Keats and text describing it as 'A COLLECTION OF RESOURCES DEDICATED TO THE SECOND GENERATION ROMANTIC POET'. A button at the bottom says 'ENTER THE WEBSITE'. The website also includes a 'Wiki on a Similiar Site' section.

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

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

The collage includes a character in a trench coat (Neo), a character in a black suit (Morpheus), and a character in a black suit (Trinity).

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

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

The collage features a sign that says 'The Future NEXT EXIT' with an arrow pointing right. Other images show people in a room and a person in a dark setting.