
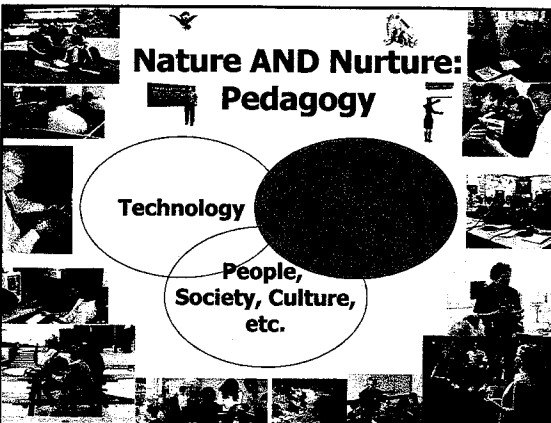


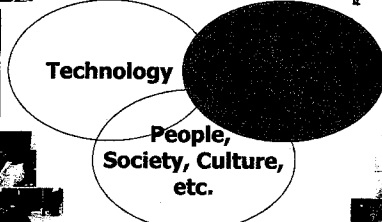
Active Learning with Technology: Myths, Magic, and Mucho Motivation



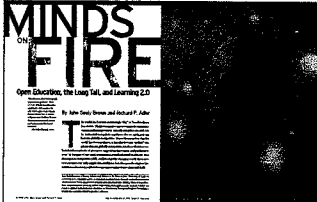
Dr. Curtis J. Bonk
Professor, Indiana University
President, SurveyShare, Inc.
<http://mypage.iu.edu/~cjbok/>
cjbok@indiana.edu



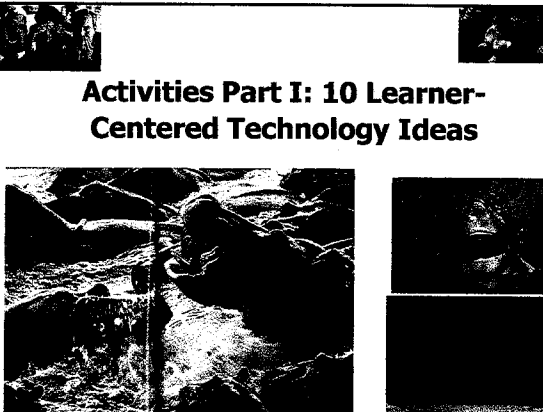
Nature AND Nurture: Pedagogy



What if our minds were on fire for learning?




MINDS ON FIRE: OPEN EDUCATION, THE LONG TAIL, AND LEARNING 2.0. JOHN SEELY BROWN AND RICHARD ADLER, EDUCAUSE REVIEW, JANUARY-FEBRUARY, 2008.
<http://connect.educause.edu/Library/EDUCAUSE+Review/MindsonFireOpenEducation/45823>



Activities Part I: 10 Learner-Centered Technology Ideas

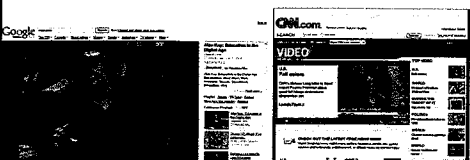

Learner-Centered and Active Learning Principles



1. Authentic/Raw Data
2. Student Autonomy/Inquiry
3. Make Relevant/Meaningful/Interests
4. Link to and Build on Prior Knowledge
5. Provide Choice and Challenge
6. Act as a Facilitator and Co-Learner
7. Foster Social Interaction and Dialogue
8. Embed Problem-Based and Student Generated Learning and Inquiry
9. Encourage Multiple Viewpoints and Perspectives
10. Foster Collab, Negotiation, & Reflection

1. Anchored Instruction (find anchoring event (CTGV, 1990?) (L/M = Cost, M = Risk, M = Time)


- 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. Cool Resource Provider Cool Stuff

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

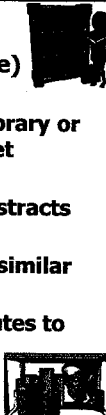
- Have students sign up to be a cool resource provider once during the semester.
- Have them find additional paper, people, electronic resources, etc.
- Share and explain what found with class via synchronous meeting or asynchronous discussion post.



3. ORL or Library Day

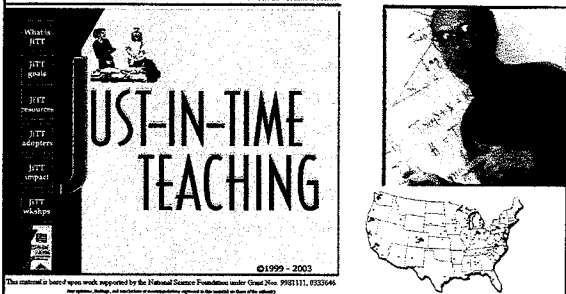
(L = Cost, M = Risk, M/H = Time) (Bonk, 1999)

- 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.

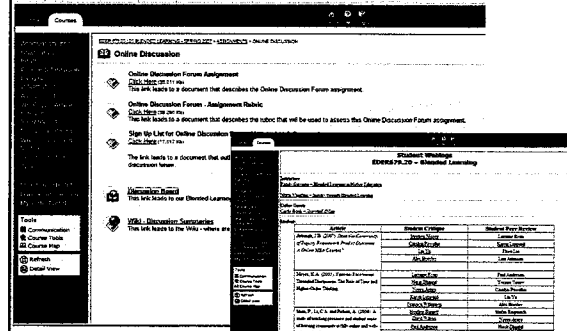


4: Online Warm-ups Activities Just-In-Time-Teaching (JiTT)

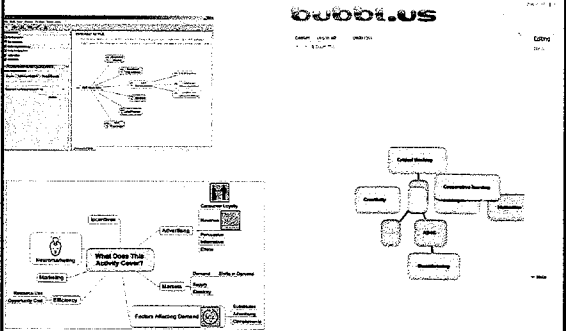
<http://webphysics.iupui.edu/jitt/jitt.html>



5. Paired Weblog Critiques

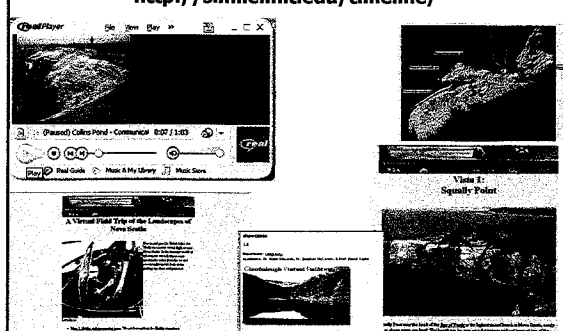


6. Concept Mapping Tools (VUE, Bubbl.us, Cmap, Freemind)

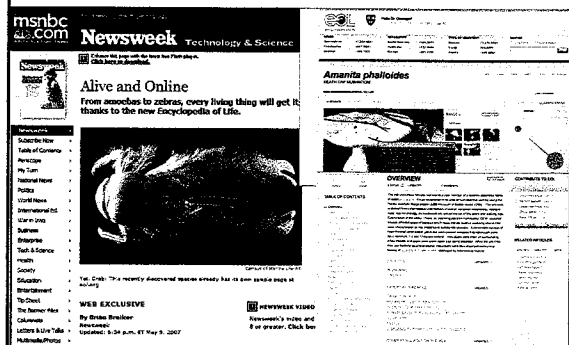


7. Exploration and Demonstration: Virtual Fieldtrip, Tours, Timelines

<http://simile.mit.edu/timeline/>



8. Online Portal Explorations

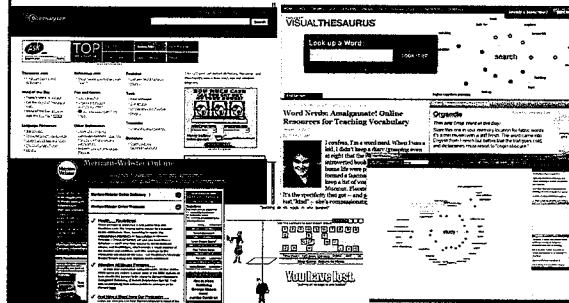


9. Online Apprenticeship: Electronic Guests & Mentoring

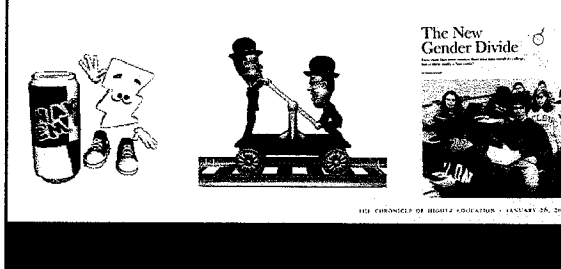
(Simon Fraser University News: <http://www.sfu.ca/mediaprts/news/2001/Sept6/higtech.html>)



10. Referenceware and Terminology Exercises Online (e.g., Websters, Visual Thesaurus) <http://www.visualthesaurus.com/> (\$2.95/month; \$19.95/year)



Activities Part II. Motivational Ideas



Three Most Vital Skills

The Online Teacher, TAFE, Guy Kemshal-Bell (April, 2001)

- Ability to engage the learner (30)
- Ability to motivate online learners (23)
- Ability to build relationships (19)
- Technical ability (18)
- Having a positive attitude (14)
- Adapt to individual needs (12)
- Innovation or creativity (11)



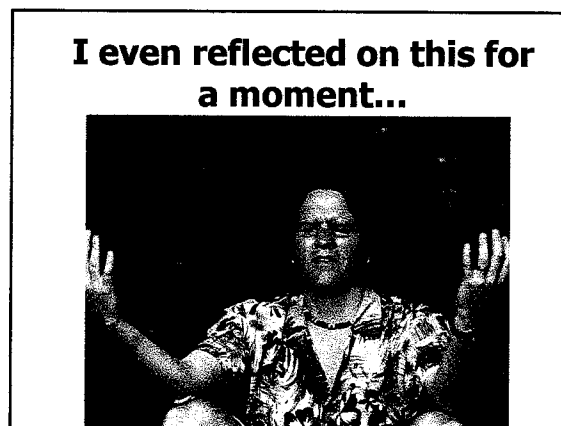
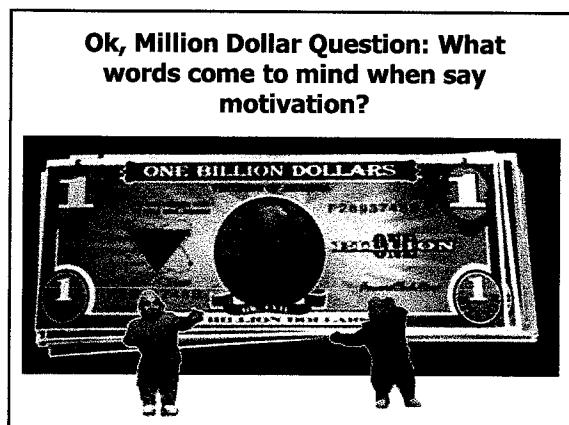
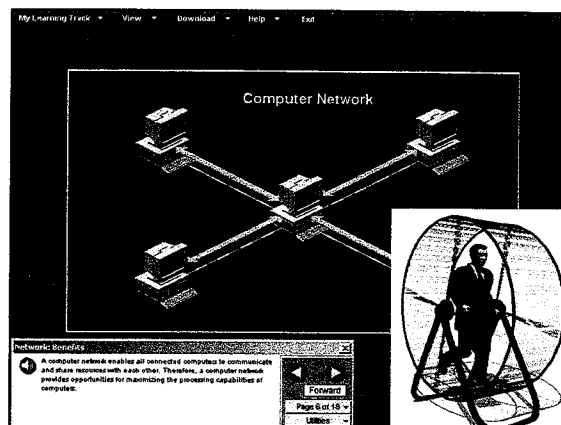
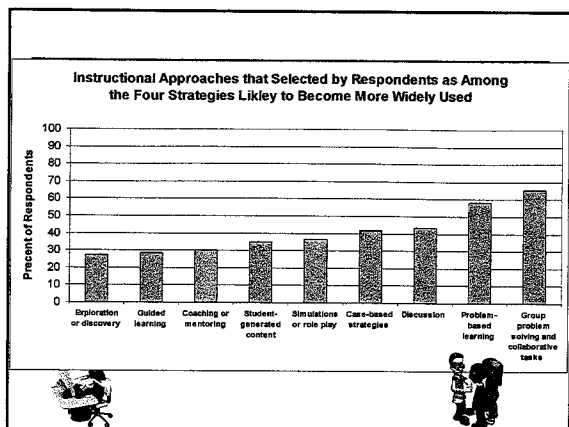
Intrinsic Motivation

"...innate propensity to engage one's interests and exercise one's capabilities, and, in doing so, to seek out and master optimal challenges

(i.e., it emerges from needs, inner strivings, and personal curiosity for growth)

See: Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. NY: Plenum Press.





- 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. Coffee House Expectations**
 1. Have everyone post 2-3 course expectations
 2. Instructor summarizes and comments on how they might be met
 - B. Public Commitments: Have students share how they will fit the coursework into their busy schedules**
-

**2. Encouragement, Feedback, etc.:
A. Critical/Constructive Friends, Email Pals...**

Blackboard Course Page: Applying Technology to Teaching and Learning

John Becker and Debra Levin

- 3. Lee Ezzam (OSU) Tue, Dec 26, 2000, 17:38
- 57. Mike Becker (OSU) Fri, Feb 16, 2001, 15:23
- 61. Chai Zhai (OSU) Sun, Feb 18, 2001, 21:00
- 228. Dana Levin (OSU) Fri, Mar 31, 2001, 23:59
- 229. Dana Levin (OSU) Sat, Mar 31, 2001, 01:54
- 230. John Becker (OSU) Thu, Apr 5, 2001, 13:29
- 243. Dana Levin (OSU) Thu, Apr 5, 2001, 05:49
- 253. Dana Levin (OSU) Sat, Mar 31, 2001, 02:02

Nancy Hudson and Candy Nicosco Feedback

- 4. Lee Ezzam (OSU) Tue, Dec 26, 2000, 12:56
- 104. Nancy Hudson (OSU) Thu, Mar 8, 2001, 12:56
- 123. Chai Zhai (OSU) Thu, Mar 18, 2001, 20:03
- 138. Candy Nicosco (OSU) Wed, Mar 21, 2001, 18:25
- 40. Nancy Hudson (OSU) Thu, Mar 22, 2001, 07:07
- 144. Candy Nicosco (OSU) Thu, Mar 22, 2001, 02:09
- 155. Nancy Hudson (OSU) Fri, Mar 23, 2001, 14:13
- 156. Nancy Hudson (OSU) Wed, Mar 29, 2001, 12:25

Josanna Schmidt and Kim Heston Feedback

- 7. Lee Ezzam (OSU) Tue, Dec 26, 2000, 17:38
- 76. Josanna Schmidt (OSU) Fri, Feb 23, 2001, 15:08
- 83. Kim Heston (OSU) Mon, Feb 26, 2001, 0:35

**2. Encouragement, Feedback, etc.: B.
Thinking About the Readings (TARS) JIIT;
Claude Cookman, IU, Photography Class**

TARS

Assignment 1

In addition to developing your critical thinking these TARS assignments are also intended to help you develop an interest with the goal of having you produce better research papers by the end of the semester. Therefore, the standards for this and all future TARS assignments are good academic writing. That is, we expect correct spelling, punctuation, grammar and neatness. In addition, write in complete sentences and craft well developed paragraphs. I strongly encourage you to rewrite and refine your writing. Never stop in the first draft. Don't forget to proofread.

Assigned readings

I encourage you to read all the short essays relating to the Photoblog period in history, but the questions are based on the following six readings:

- 20. 30-32. Shaffer, "Photoblog: Photography"
- 30-32. O'Neil, "Aesthetics of Individual Experience"
- 30-32. Hermans, "The Influence of Artistic Photography in Literacy"
- 30-32. 33. Hermans, "What Remains?"
- 30-32. 34. Beck, "Is Photography a New Art?"
- 30-32. 35. Freeman, "The Photography Revolution 1839-1840"

Change the format, all the entries come during the period of Photoblog, roughly from the 1830s through the middle of the 1900s. All were, more or less,

**2. Encouragement, Feedback, etc.: B.
Online Language Learning
(Mixer, Livemocha, Friends Abroad)**

Collage of screenshots from online language learning platforms including Mixer and Livemocha.

**3. Curiosity, Fun: A. Games
e.g., Online Jeopardy Game
Games2Train: The Challenge; Thiagi.com**

Collage of screenshots from online games including Jeopardy and Games2Train.

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

Collage of screenshots showing video streamed lectures and expert commenting.

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

Advertisement for Iclicker, a two-way RF polling system. Includes text: "Interactive tech transforms the cl..." and "Iclicker A two-way RF polling system".

5. Autonomy, Choice: B. Multiple Topics

- Generate multiple discussion prompts and ask students to participate in 2 out of 3
- Provide different discussion "tracks" (much like conference tracks) for students with different interests to choose among
- List possible topics and have students vote (students sign up for lead diff weeks)
- Have students list and vote.

6. Relevance: Meaningfulness: A. 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. 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)
- B. Press Conference:** Have a series of press conferences at the end of small group projects; one for each group
- C. Symposia of Experts**

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

8. Engagement: 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)

CBCNEWS CANADA | EDMONTON

Story Tools: E-MAIL | PRINT | Text Size: S M L XL | REPORT TYPO | SEND YOUR FEEDBACK

Text-message course helping newcomers learn English

LAN JOURNAL: Friday, February 2, 2007 2:16 PM EST

A pen and paper aren't necessary in an Edmonton classroom where students are learning English with a tool — text messages on their cellphones.



8. Engagement: B. Student Self-Testing (e.g., Calm Chemistry)

Give the following substance:

- SOE (Tetrahedral shape)
- PF₅ (Trigonal bipyramidal shape)
- SO₂ (Bent shape)
- SO₃ (Trigonal planar shape)
- None of the above.

Which of these are associated with the depicted shape?

Tetrahedral shape:

SOE

PF₅

SO₂

SO₃

None of the above

Submit

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 one or more sessions

○ 24.3. [I am so wise...so listen](#) Aristotle 11/25/03 05:49 PM

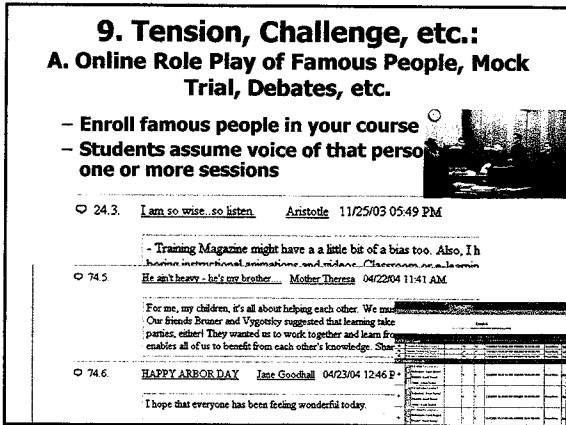
- Training Magazine might have a little bit of a bias too. Also, I have seen instructional animations and videos. Classroom as a learning

○ 74.5 [He ain't heavy... he's my brother](#) Mother Theresa 04/22/04 11:41 AM

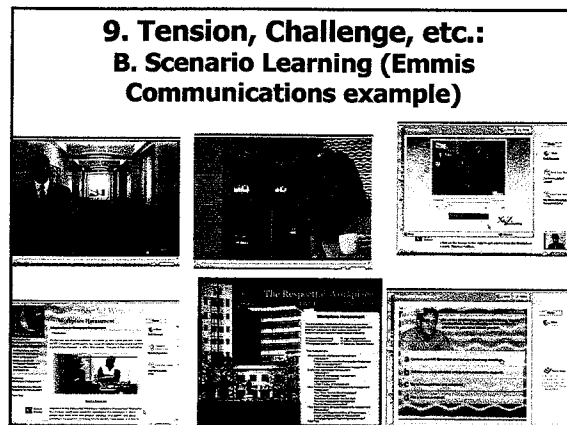
For me, my children, it's all about helping each other. We must. Our friends Bruner and Vygotsky suggested that learning takes parties, either! They wanted us to work together and learn from each other to benefit from each other's knowledge. One

○ 74.6 [HAPPY ARBOR DAY](#) Jane Goodall 04/23/04 12:46 P

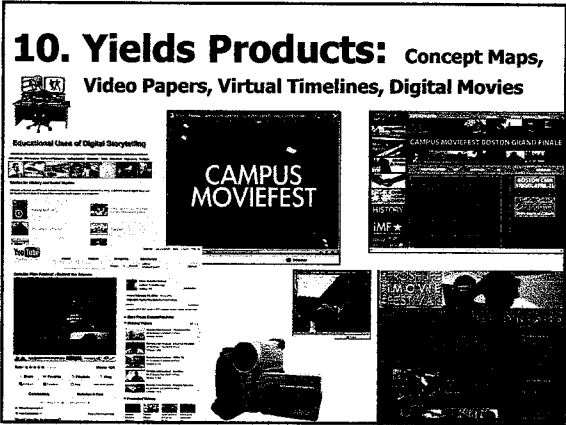
I hope that everyone has been feeling wonderful today.



9. Tension, Challenge, etc.:
B. Scenario Learning (Emmis Communications example)

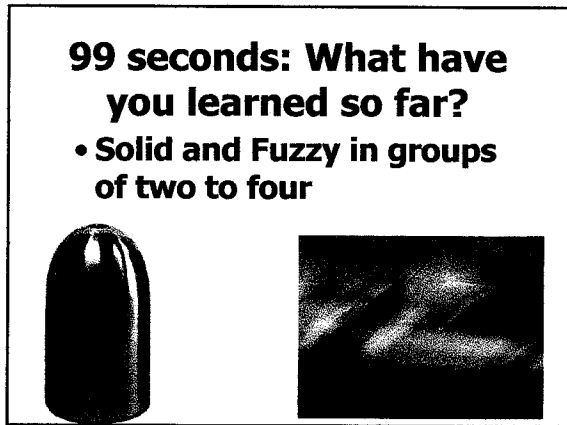


10. Yields Products: Concept Maps, Video Papers, Virtual Timelines, Digital Movies

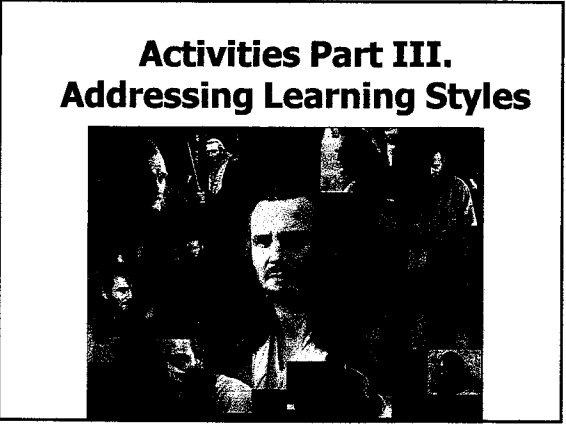


99 seconds: What have you learned so far?

- Solid and Fuzzy in groups of two to four

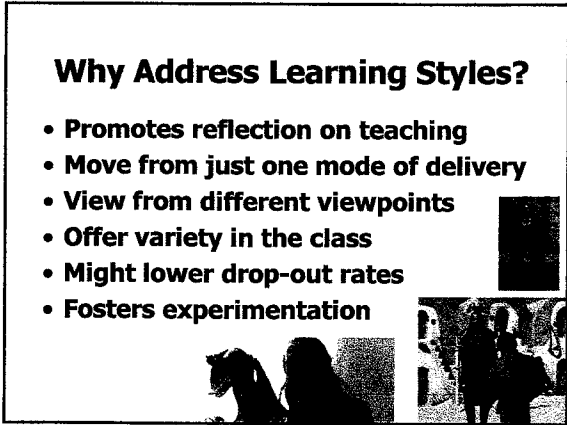


Activities Part III.
Addressing Learning Styles




Why Address Learning Styles?


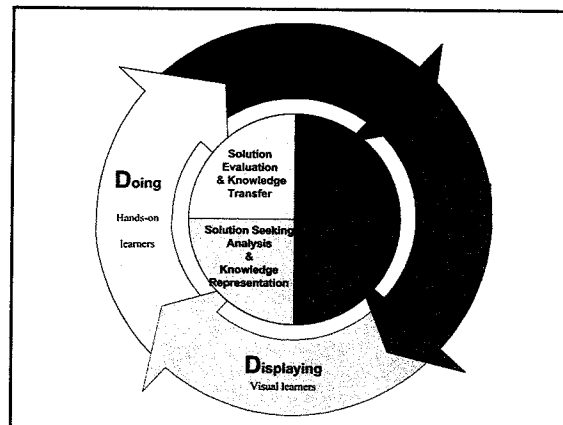
- Promotes reflection on teaching
- Move from just one mode of delivery
- View from different viewpoints
- Offer variety in the class
- Might lower drop-out rates
- Fosters experimentation





Kolb (1984)



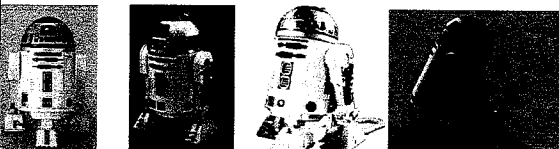
- According to Kolb, effective learning involves four phases:
 - from getting involved (Concrete Experience) to
 - listening/observing (Reflective Observation) to
 - creating an idea (Abstract Conceptualization) to
 - making decisions (Active Experimentation).
- A person may become better at some of these learning skills than others; as a result, a learning style develops.

The R2D2 Method

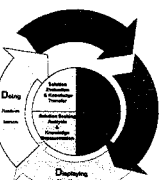

1. Read (Auditory and Verbal Learners)
2. Reflect (Reflective Learners)
3. Display (Visual Learners)
4. Do (Tactile, Kinesthetic, Exploratory Learners)



R2D2 Book (to be printed July 4, 2008)

1. Auditory or Verbal Learners

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

1a. Documents on Web

Scribd: <http://www.scribd.com/>

1b. Vocabulary Practice Feeds the World

A Grain of Rice: A Bloomington man's computer vocab game feeding the world, Herald Times, Wednesday February 6, 2008
Mike Leonard

1c. Online Tutorials, Help, Announcements, Q&A, and FAQs

A service of the National Library of Medicine and the National Institutes of Health
www.pubmed.gov

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

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

2a. Post Model Answers

Employment Law and Ethics Project

Question 1
Would it be illegal for Letara to recommend Billings instead of Lewis? Explain, being specific about the legal doctrines that would apply?

Answer 1
Under both Title VII of the 1964 Civil Rights Act and Section 1981 it is illegal to discriminate on the basis of race or color, and Lewis would likely win a lawsuit using the claim of disparate treatment if he were not recommended for the promotion. If Letara does not recommend Lewis, she is guilty of violating the law. None of the three primary defenses—seniority, merit, or bona fide occupational qualification—apply to this situation since Lewis has higher seniority, equal skills, and more direct experience with power tools, than does the other candidate Frank Billings. Title VII "prohibits discrimination based on race, color, religion, sex, and national origin in hiring, firing, job assignments, pay, access to training and apprenticeship programs, and most other employment decisions." ARPCO is a covered entity under Title VII because they are "employing 15 or more employees and engaging in an industry affecting interstate commerce" and as the case footnotes point out "as of November 21, 1991, the Civil Rights Act of 1991 extended protection from discrimination in employment to U.S. citizens working in foreign countries while employed by U.S. firms."
In this case, Title VII's disparate impact is not applicable since ARPCO's policy clearly states to "promote the most

2b. Use of Weblogs (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

2c. Reuse Blog, Chat Transcripts, Presentations

47. Week 9: Chat dMAT with Bernice McCarthy March 10th from 5-6 pm

Chat Log
 Started on 03/10/08 11:24 PM
 Modified by Chat Log on 03/10/08 06:07 PM

Total Answers: 10

Chat Log: This is a chat with Bernice McCarthy

- View the chat transcript
- View the chat transcript ordered by post
- View the chat transcript ordered by time

Attachments:
 01. Chat transcript.doc
 02. Chat transcript ordered by post.doc
 03. Chat transcript ordered by time.doc

Online Students' Expectations

David Berg, Ph.D.
 david.berg@duke.edu

2d. Reflecting on Adventure Blogging (Ben Saunders, Mark Fennell, Andrew Revkin)

Science

CLASHING TRENDS | THE FINAL DAY | GRAPHIC | FEEDBACK | RELATED ARTICLE

Testing the Tundra

PLAYING | PAUSE OFF

Images compiled from satellite data show the changes in the extent of the North Pole's summer ice cap from 1979 to 2005.

Andrew C. Revkin is a reporter for the science section of The Times and he recently traveled to the North Slope of Alaska with a digital recorder.

2e. 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.

Chat Log
 Started on 11/01/01 07:14 PM
 Modified by Chat-Log Wang on 11/02/01 27:27 PM

Chat transcript: Chapter 8, 9, or 10 questions from Bob, John, Erping, Kira, Julia, and others right? Thanks

- View the chat transcript
- View the chat transcript ordered by post
- View the chat transcript ordered by time

Attachments:
 01. chat transcript.doc

3. Visual Learners

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

Displaying

Displaying

3a. Online Anatomy and Physiology

INTERACTIVE CADAVER

CARDIOVASCULAR SYSTEM

Interactive anatomical diagrams and text descriptions of the cardiovascular system.

3b. Map Mash-ups (e.g., Shakespeare's Global Globe)

Map Mash-up application showing Shakespeare's characters overlaid on a world map.

3c. What if the World was Beyond our World?
NASA's Hubble Space: Google Sky) USA Today, August 22, 2007
<http://earth.google.com/sky/index.html>

3d. Animations, Video Clips, Audio, Pictures, Web Resources, etc.

3f. Electronic Cameras and Maps

3g. 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.)

3h. Online Timelines
(US Presidents)

3i. Tracking Live Internet Thawing:
A Colossal of an Idea

Deep-Sea Behemoth
 Captain John Bennett examines the world's first intact adult male colossal squid on board his New Zealand fishing boat in February, 2007, in the Ross Sea near Antarctica. The gigantic sea creature weighs a world record 1,089 pounds. After being frozen whole for over a year, scientists at New Zealand's national museum will thaw the squid for further study.

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)

3k. Expert Mentoring Online in Art and Design
 (COFA Online, Omnium Project, Creative Waves—online graphics and photomedia project)

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.

4a. Romantic Poetry Project
 (Professor Mike Phillipson, English at Bowdoin College)

4b. YouTube to Memorize Sonnets and Poems

4c. Videoconferencing with Hearing Impaired Students Online

- College students tutoring high schools on their homework
- Instructors observing how teacher education students are doing in field placements (practice presentation and communication skills)
- Interpret speaker via Web cam

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>

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

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

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

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

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

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

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