





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



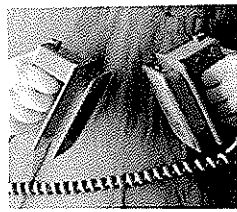
 **Dr. Curtis J. Bonk**
Professor, Indiana University
President, SurveyShare, Inc.
<http://mypage.iu.edu/~cjbonk/>
cjbonk@indiana.edu




Poll #1: Who here is constantly hit on the head about integrating technology???



Accelerate Learning




I. Myths: No Models or Best Practices



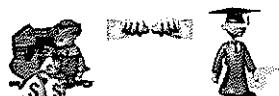
I. Student Technology Myths

1. They all are Web 2.0 savvy and equipped.
2. Some will dominate and intimidate others.
3. Will be too off task and social online.
4. Online cheating is the key reason not to teach with tech.
5. Online students are located far away.




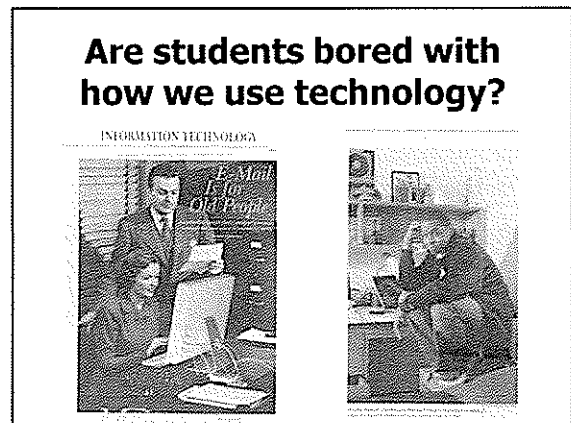
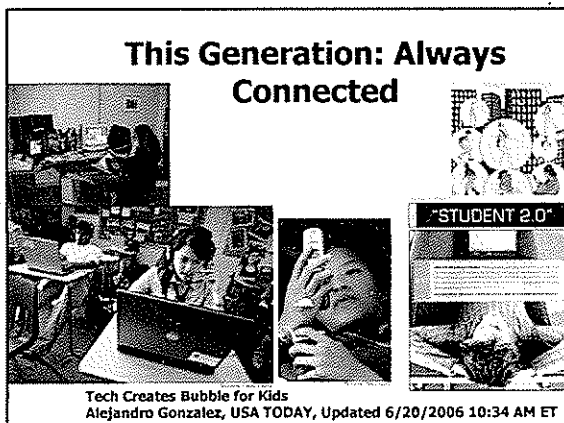
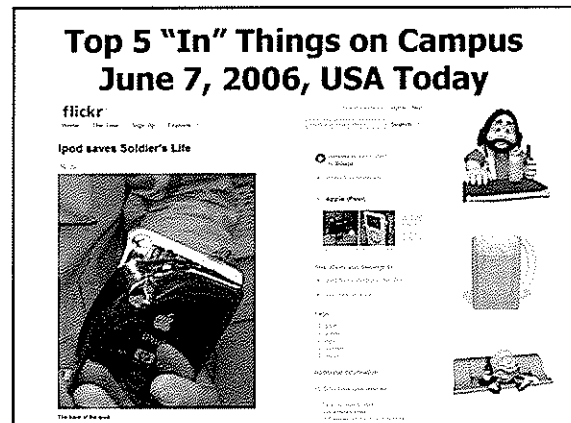
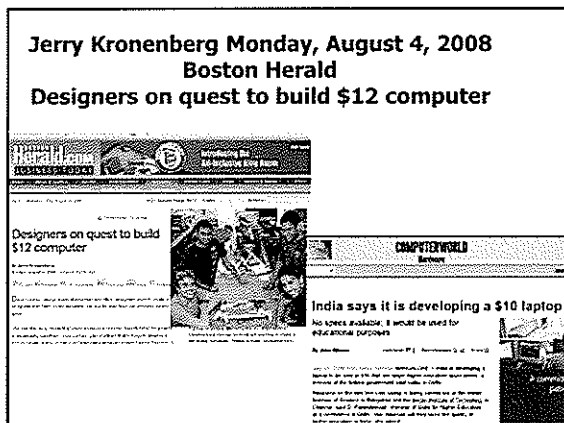
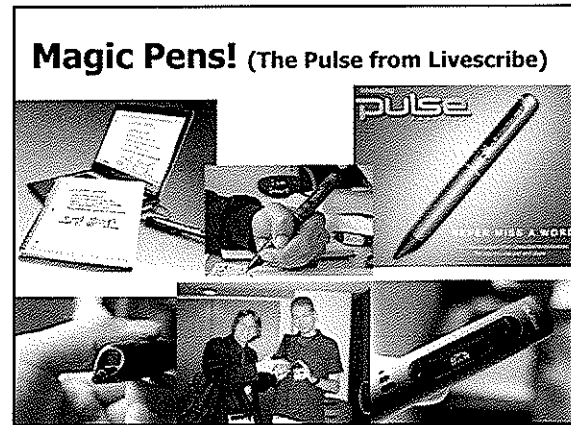
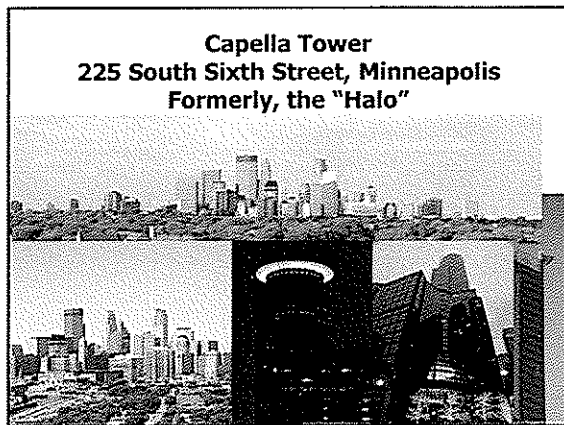
Instructor Technology Myths

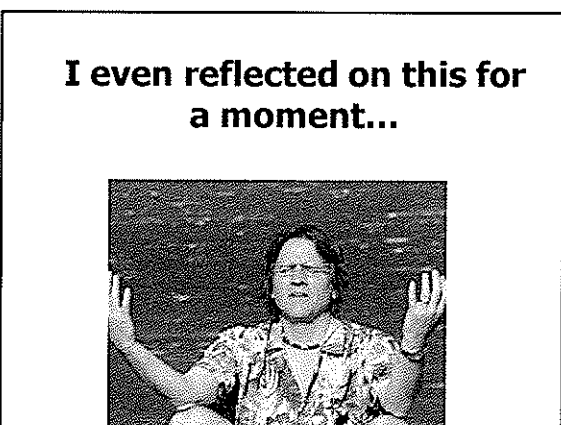
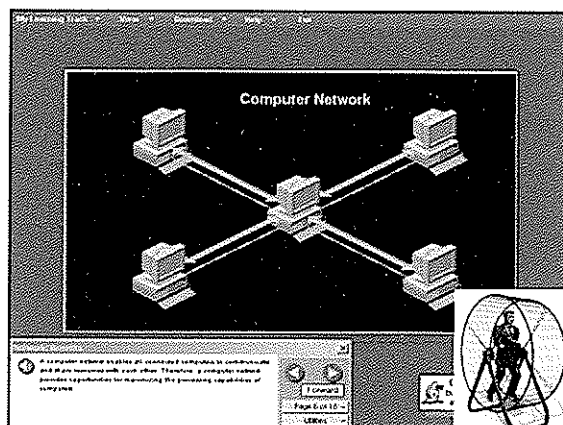
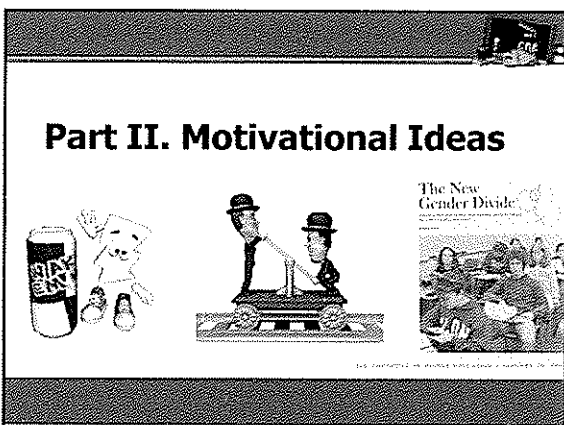
1. Tech savvy instructors are young & loyal.
2. Can teach the same way.
3. Instructors will not share
4. Tech savvy instructors will use latest technology.
5. Nothing new here.
6. Technology does not improve learning.
7. Can't afford tech.
8. Must be a techie.



II. Magic....







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

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.

1. Tone/Climate: Social Ice Breakers

A. Eight Nouns Activity

1. Have everyone post 8 nouns that represent them.
2. Comment on nouns of 1-3 peers might be met

B. Favorite Medical Websites

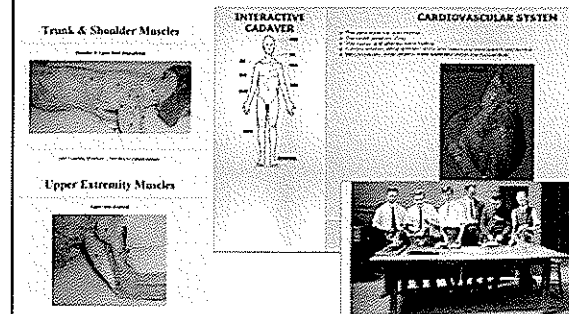
1. Everyone posts 1-2 of their favorite medical Websites and explain why.
2. Peers comment on or rate them.



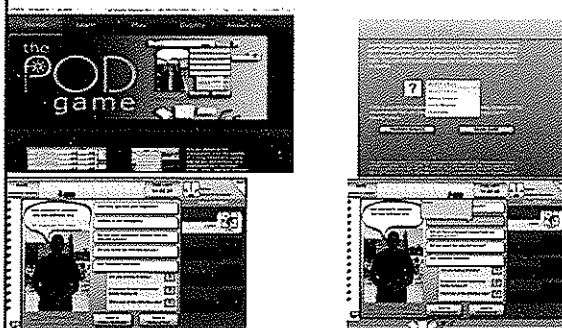
1. Tone/Climate: C. Video Course Intros
(examples from Northern Virginia Community College and Indiana University KD (online MBA) program)



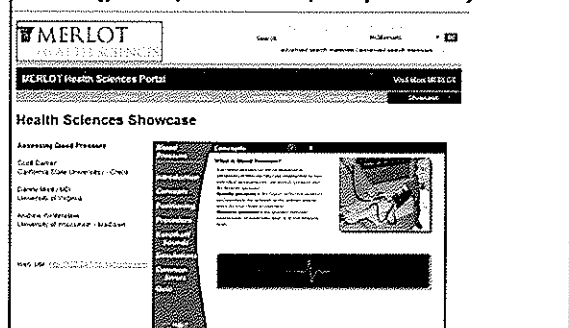
2. Encouragement, Feedback, etc.:
A. Online Self-Testing (e.g., self study in anatomy or chemistry, virtual autopsy, dissection, etc.)



3. Curiosity, Fun: A. Online Games
(e.g., public health; the POD game Points-of-Dispensing (PODs))



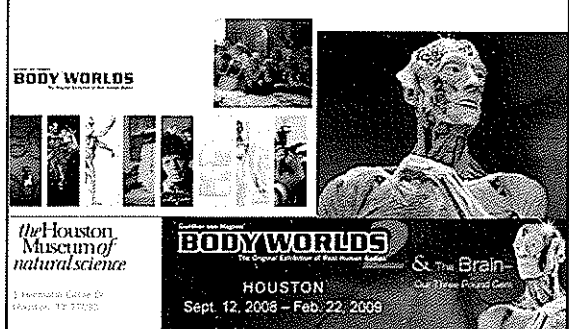
4. Variety, Novelty:
A. Supplementing Course with Health Resources
(portals, referatories, & repositories)



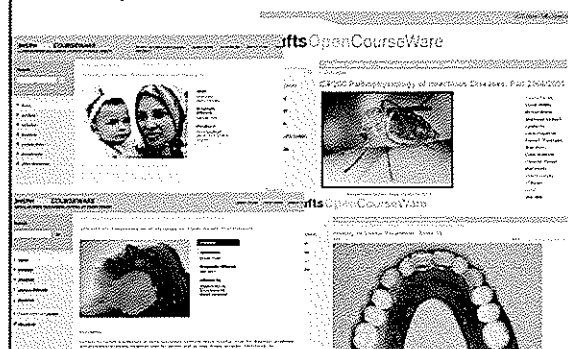
5. Autonomy, Choice: A. Online Literature Search (Class Google Jockeys)
The Electronic Literati, in Search of a Voice, June 1, 2007, Chronicle of Higher Education, Jeffrey Young (links to text, soundtracks, video clips, etc.)



5. Autonomy, Choice:
B. Explore Human Body and Museum Exhibits



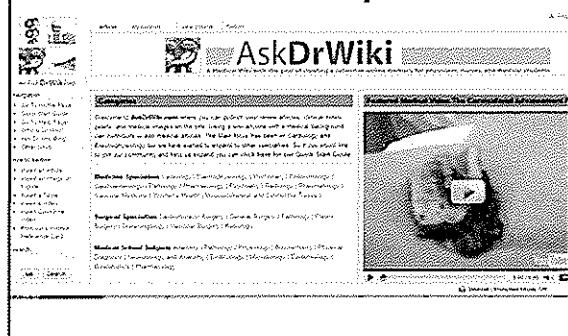
5. Autonomy, Choice: C. OpenCourseWare Project (e.g., Tufts)



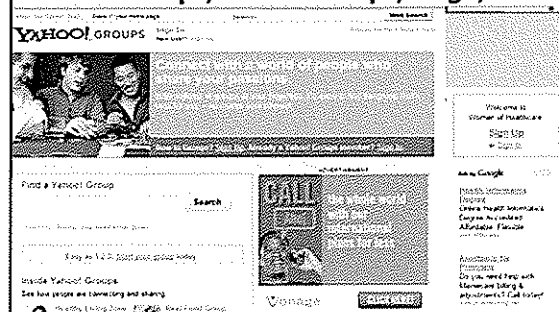
6. Relevance, Meaningfulness: A. Mobile Health and Medical Education (Courtesy of Paul Kim, Stanford University)



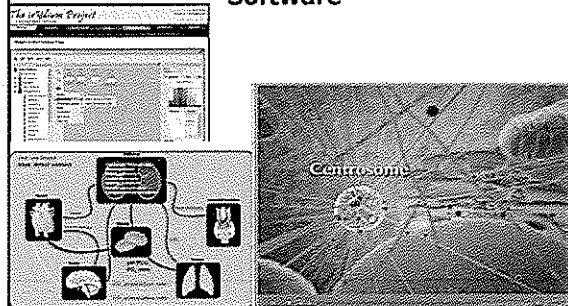
6. Relevance, Meaningfulness: B. Medical Community Wikis



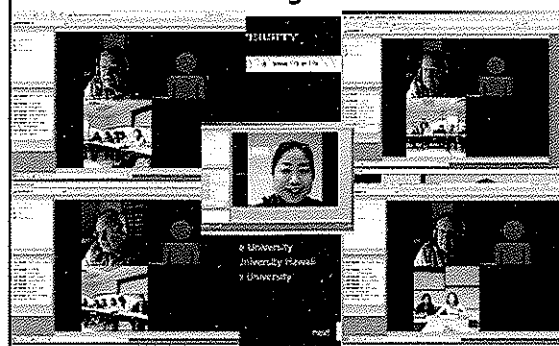
7. Interactive, Collaborative: A. Google Docs, Ning, Google Groups, MSN Groups, Yahoo Groups, Diigo, etc.



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



8. Engagement, Effort: A. Breeze in Higher Education



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. [Lam to visit in N.H.](#) [Amster](#) 11/25/03 05:49 PM

245. [Hansberry-Johnson](#) [Moses Thoma](#) 04/02/04 11:14

For me, my children, it's all about helping each other. We can't see. Our friends Bruce and Virginia suggested that learning takes place in a party, where they wanted us to work together and learn from each other. It's all about us to build on each other's knowledge. Sharing is the key.

HAPPY MONDAY [Jana Goudal](#) 04/20/04 12:46 PM

I hope that everyone has been feeling wonderful today

9. Tension, Challenge, etc.:

B. Ethical Medical Debates

Students to protest human body exhibit

Maigle Ybarra

Issue date: 2/2/02 Section: News

10 PM 11/25/03 05:49 PM



9. Tension, Challenge, etc.:

C. Electronic Guests & Mentoring

(Simon Fraser University News:

<http://www.sfu.ca/mediapris/news/2001/sep/05/hightech.html>)



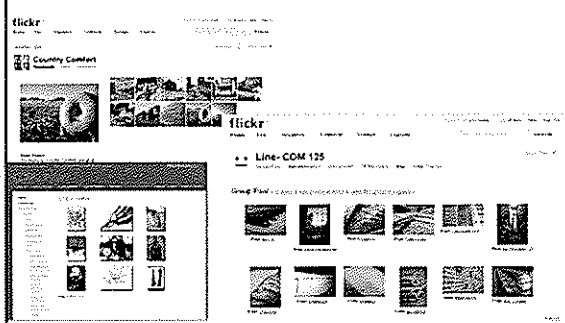
10. Yields Products, Goals:

A. Produce a YouTube Video



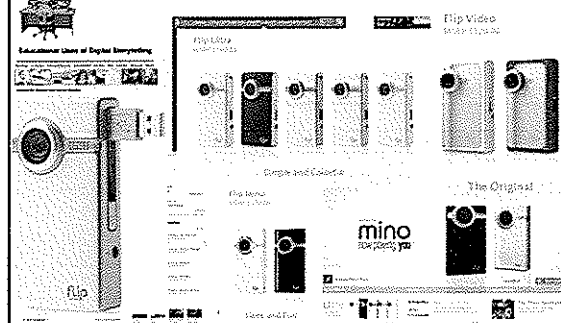
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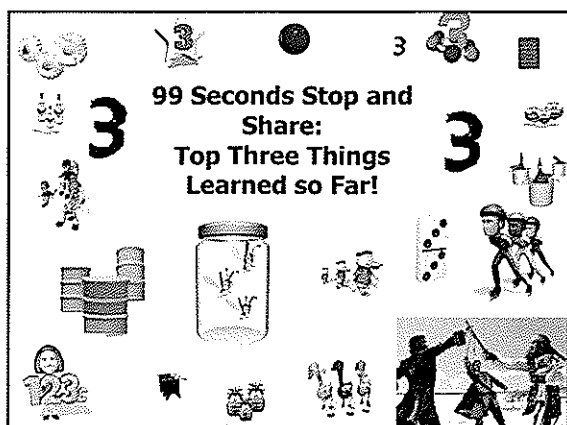
B. Online Portfolios or Galleries (Flickr, Omnium)



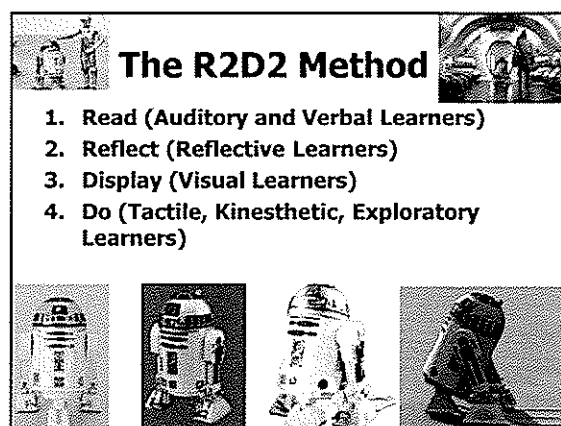
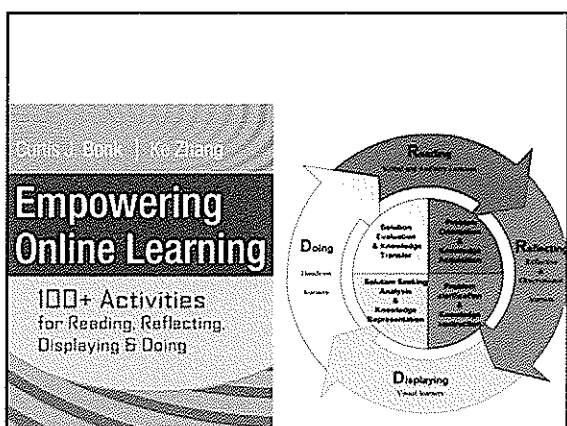
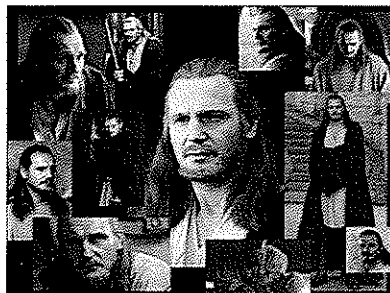
10. Yields Products, Goals:

C. Film Festivals and Competitions





Part III. Addressing Learning Styles



1. Auditory or Verbal Learners

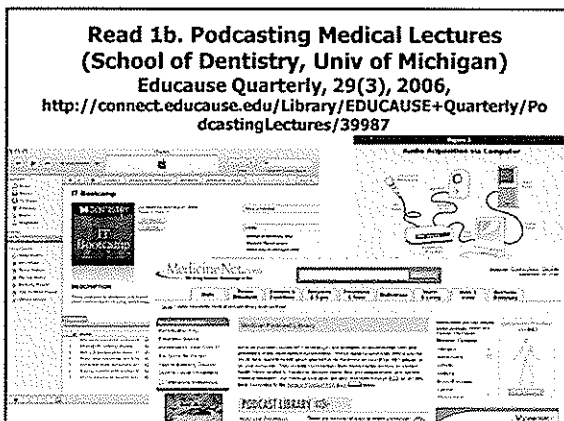
- Auditory and verbal learners prefer words, spoken or written explanations.



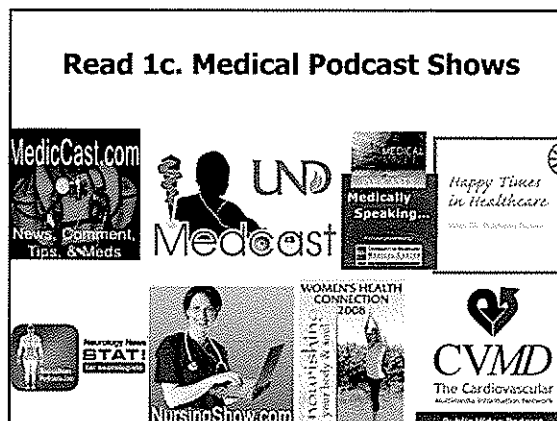
Read 1a. Course Announcements (e.g., Teaching with Twitter)



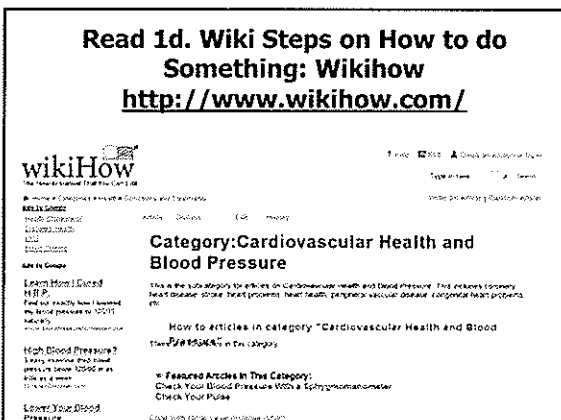
**Read 1b. Podcasting Medical Lectures
(School of Dentistry, Univ of Michigan)**
Educause Quarterly, 29(3), 2006,
<http://connect.educause.edu/Library/EDUCAUSE+Quarterly/PodcastingLectures/39987>



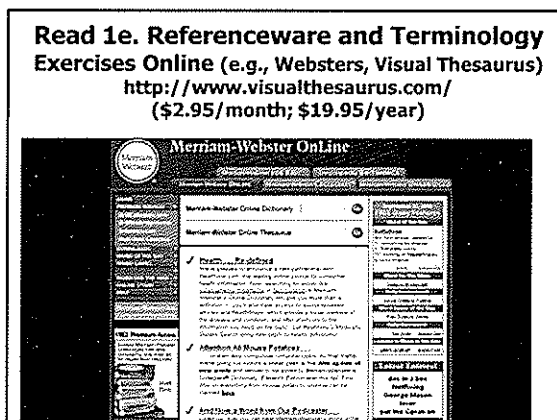
Read 1c. Medical Podcast Shows



**Read 1d. Wiki Steps on How to do
Something: Wikihow**
<http://www.wikihow.com/>

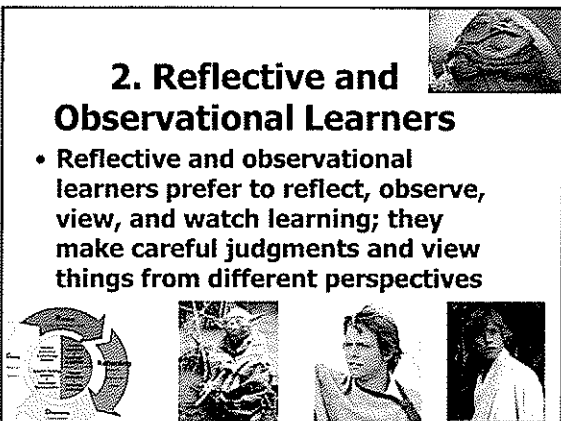


**Read 1e. Referenceware and Terminology
Exercises Online (e.g., Websters, Visual Thesaurus)**
<http://www.visualthesaurus.com/>
(\$2.95/month; \$19.95/year)

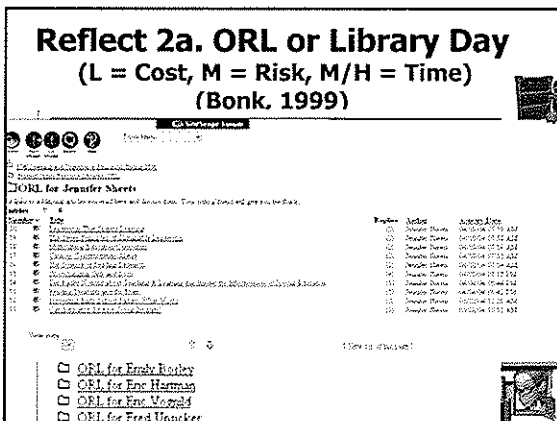


**2. Reflective and
Observational Learners**

- 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)**



Reflect 2b. Paired Weblog Critiques

Student Weblogs
EDER679.20 - Blended Learning

Author(s):
Paula Gorman, Blended Learning & Online Education

Topic(s): Blended Learning, Online Education

Order(s): Blended Learning

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Reflect 2c. 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

Reflect 2d. Health Blogs

Biomedical Sciences Blog

This is a site to provide education and career development in biotechnology and biomedical research.

Home | About | Contact | Search

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Reflect 2e. Reuse Blog, Chat Transcripts, Presentations

Online Students' Expectations

Zana Berge, Ph.D.
zberge@umc.edu

Reflect 2f. Workplace and Field Reflections

1. Instructor provides reflection or prompt for job related or field observations
2. Reflect on job setting or observe in field
3. Record notes on Web and reflect on concepts from chapter
4. Respond to peers
5. Instructor summarizes posts



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

Medical and Business Cases Online

Welcome to Medical Cases Online

Business Cases Online

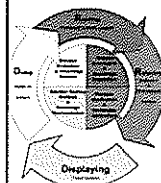
Reflect 2h. Real World Problems (PBL online): Real-time Cases

Reflect 2i. Explore and Write Reflection Papers on Online Healthcare News, Medical Libraries, Associations, Organizations, etc.

Reflect 2j. Watch or Listen to Online Conferences, Courses, etc. on Disaster Preparedness and other areas

3. Visual Learners

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

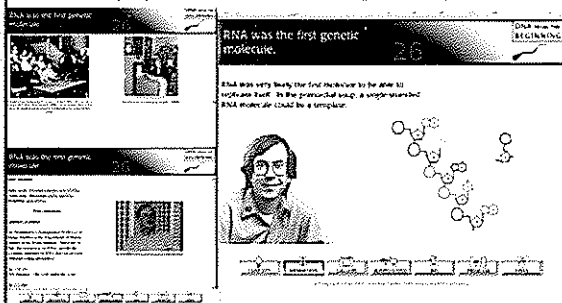


Display 3a. Pubcasts! (videos of scientific papers and science)

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. Anchored Instruction (find anchoring event (YouTube, CNN, BBC, TeacherTube, CurrentTV))

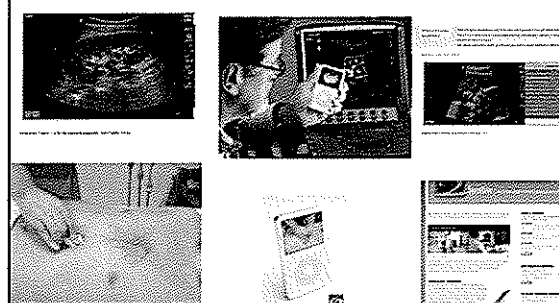
Display 3i. Animations, Video Clips, Audio, Pictures, Web Resources, etc. (e.g., DNA from the Beginning)



RNA was the first genetic molecule.

It had also very likely the first molecule to be able to replicate itself. In the primordial soup, a superheated RNA model of DNA is a template.

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 Fettes, Herald Writer, Everett, WA, Sept 25, 2006)



Display 3k. Tracking Live Internet Events (e.g., Thawing: A Colossal of an Idea) (caught Feb. 2007; thawed April 30, 2008)



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.

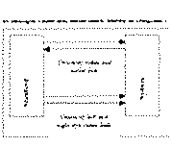
Display 3L. Video Streamed and Webcast Lectures



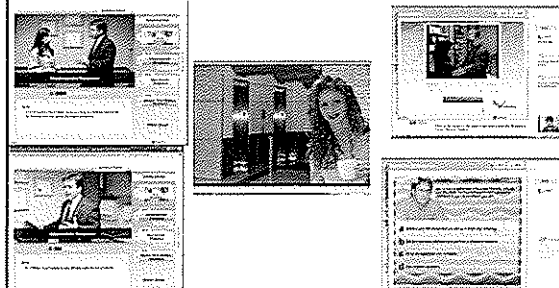
Display 3m. Broadcast Surgeries

Evaluating an In-Vivo Surgical Training Demonstration
over Broadband Internet

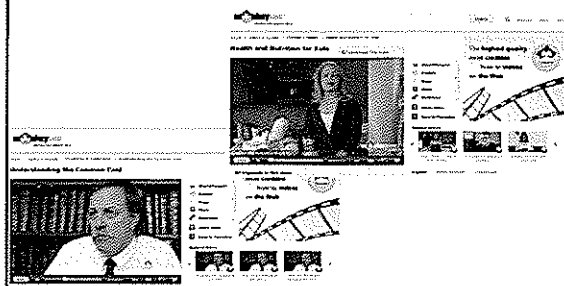
Dezhaev Mervin
CSDO ICT Centre A
Department of Computer Science, Australia National University
GPO Box 664, Canberra, Australia, 2601
dezhaev.mervin@anu.edu.au



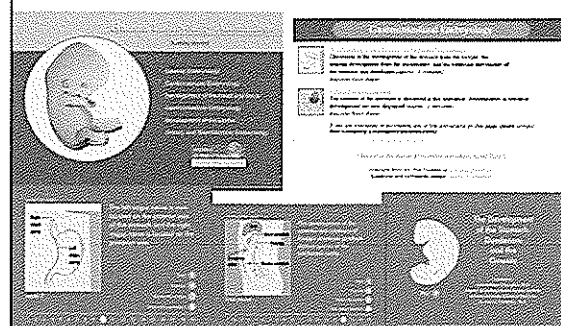
Display 3n. Video Scenario Learning (Option 6, Bloomington, IN)



Display 3o. Shared Online Video Demonstrations (e.g., Monkey See, doFlick)



Display 3p. Human Embryology Animations (Valerie O'Loughlin, Indiana University)

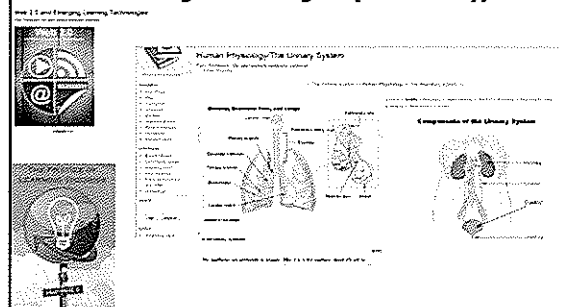


4. Tactile/Kinesthetic Learners

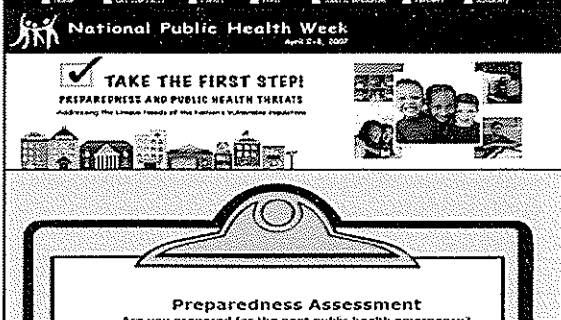
- Tactile/kinesthetic senses can be engaged in the learning process are role play, dramatization, cooperative games, simulations, creative movement and dance, multi-sensory activities, manipulatives and hands-on projects.



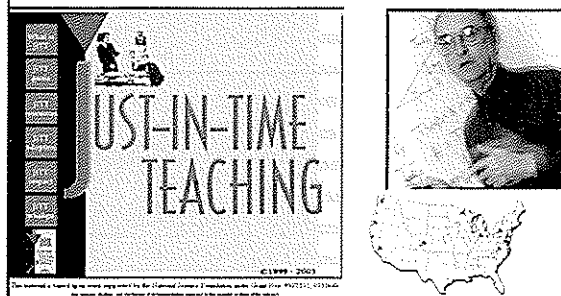
Do 4a. Wikibooks: International Collaboration (Web 2.0 and Emerging Learning Technologies (The WELT))



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



Do 4c. Online Warm-ups Activities Just-In-Time-Teaching (JiTT) <http://webphysics.lupui.edu/jitt/jitt.html>



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>



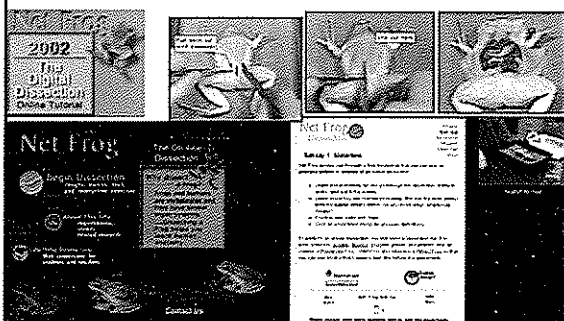
Do 4e. Cool Resource Provider
 (Bonk, 2004) Capture and Videostream Lectures
 (e.g., Apreso CourseCaster)

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.



Do 4f. Hands-On Frog Dissection
 (Net Frog, Univ. of Virginia)



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



Poll #2: How many ideas did you get from this talk?

- None—you are an idiot.
- 1 (and it is a lonely #).
- 2 (it can be as bad as one).
- 3-5
- 6-10
- Higher than I can count!

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

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