

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

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

CANADA

**Nature AND Nurture:
Pedagogy**

Technology

Pedagogy

People,
Society, Culture,
etc.

Effects of interactive multimedia in distance learning
Giti Javidi and Ehsan Sheybani, 2004, In Proceedings of the IASTED International Conference WEB-BASED EDUCATION

"The advancement in technology is shaping every aspect of our life, including education. One decade ago, the Internet was not critical to education. However, now, it has become an integral part of learning process. Internet technology is having a dramatic effect on colleges and universities, producing what may be the most challenging period in the history of higher education."

Singapore and Taipei (Intel Press Release, 2006)

- Singapore, the island city-state in Southeast Asia, is about to complete a major new public/private project that will see large chunks of the 270 square mile city provided with Wi-Fi access by the end of 2008. The entire city, indoors and out, is due to be covered by 2015.
- In the coldest capital in Canada, the city residents of Iqaluit (pop. 6,000) enjoy free wireless from one free hotspot (with two more due soon to cover the suburbs), while Taipei, Taiwan (pop. 2.6 million) has a few more—over 4,000 hotspots that provide coverage for 90 percent of the city.

U.S. senator: It's time to ban Wikipedia in schools, libraries

By Preston Gralla on Wed, 02/14/2007 - 7:08pm

Here's the rawest from Sen. Ted Stevens, the man who described the Internet as a series of tubes: It's time for the federal government to ban access to Wikipedia, MySpace, and social networking sites from schools and libraries.

ABOUT THIS BLOGGER
Preston Gralla: Preston Gralla is a contributor to Computerworld, and the author of more than 100 articles on technology.

Google
of Feb. 17 | Technology
Virus creators target Wikipedia
Feb 16, 2007 | Technology
Wikipedia creator hints to search
Feb 16, 2007 | Technology

been hit by controversy after the disclosure that a prominent editor had assumed a false identity complete with fake PhD.

The editor, known as Essayj, had described himself as a professor of religion at a private university.

But he was in fact Ryan Jordan, 24, Kentucky who used texts such as C4 has now rebranded the site.

Wikipedia is an encyclopedia open t volunteers worldwide.

'Trust and tolerance'
Under the name Essayj, Mr Jordan at the authority to arbitrate disputes b

iPod's More Popular than Beer?

iPods knock over beer mugs

By Mike Under, USA TODAY

Students are not the only ones who are hooked on iPods. The biggest obstacle to their use in schools is not the music but the device itself.

It's not that they're bad. It's that they're so good. iPods are the most popular device in schools, according to a survey by the National Education Technology Center. The survey found that 72% of schools use iPods, up from 58% in 2005.

And it's not just schools. iPods are also popular in homes. A survey by the Pew Research Center found that 40% of households have an iPod, up from 28% in 2005.

BY TOP 5 IN BEER DRINKING COUNTRIES

Country	Per Capita Consumption (Liters)
Belgium	230
Denmark	190
Germany	180
France	170
United Kingdom	160

Source: World Health Organization, 2005

Social Networking Software

- Classmates: <http://www.classmates.com/>
- Facebook: <http://www.facebook.com/>
- Friendster: <http://www.friendster.com/>
- Friendzy: <http://www.friendzy.com/>
- MySpace: <http://www.myspace.com/>
- Orkut: <https://www.orkut.com/>
- Tribes: <http://www.tribe.net/>
- YouTube: <http://www.youtube.com/>

Monday April 30, 2007, USA Today Top 25 Things that Shaped the Internet

- 747 Million adults logged on in Jan, 2007
- 97 billion e-mails are sent each day
- Google had 500 million visitors in Dec, 2006
- USA: 1% broadband in 1998; 78% in 2007
- YouTube bought by Google for \$1.7 billion
- Adobe's Flash player on 98% of machines
- There are 75 million blogs!!!
- 19 million people play MMOG!
- 173 million personalized pages in MySpace

Next Generation of Students

"STUDENT 2.0"

Tech Creates Bubble for Kids
Alejandro Gonzalez, USA TODAY, Updated 6/20/2006 10:34 AM ET

INFORMATION TECHNOLOGY

E-Mail Is for Old People

A man sits at a desk with a laptop in his office.

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. As the Internet evolves -- with its webcams, iPods, Instant Messaging, broadband, wi-fi and weblogs -- its image as a relationship-wrecker is changing. Now a sociable habit is emerging among the Netorati: couple-surfing. (Nick Currie/Handout/Reuters)
- "For my birthday, he upgraded my RAM and I thought it was incredibly romantic," writes Jess.

Entice Students with Technology Giveaways

Gateway M275 tablet PC, Winona State University, Mayville State University
The schools will provide the tablet computers to full-time students who do not have laptops from previous programs.

BlackBerry 7510 PDA, University of Maryland
The school has begun handing out the wireless personal-digital assistants to faculty and more than 300 full-time graduate students in the Smith School of Business.

Edward represents with tech toys in educational handout.

Learning with iPods (Campus Technology, Dec, 2006)

Georgia College & State University, The Department of Music and Theatre, which had foreign language speakers come in to do recordings that are helping the school's chorus. Learners singing in Korean, Portuguese, and many other languages, "Now we can listen to the diction, and make sure that we're pronouncing everything correctly."



Podcast

Learning TRENDS by Elliott Masie - September 18, 2006.
#402 - Updates on Learning, Business & Technology.
52,889 Readers - <http://www.masie.com> - The MASIE Center.

Fingertip Knowledge Podcast & Transcript:
One of my focus points these days is Fingertip Knowledge. You and I and most of our colleagues are increasingly using search engines, from Google to Corporate Intranets, to "walk" our way to the information or knowledge that we need.

Podcast (and Transcript) about the implications of Fingertip Knowledge and the Learning Field:

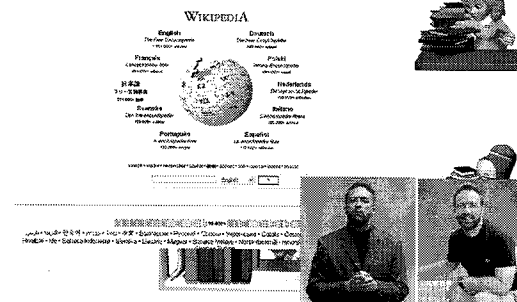
- <http://www.learning2006.com/university/>
(Duration: 20 Minutes)

Podcast Questions

1. Who has listened to a podcast?
2. Who listens to a certain podcast on a regular basis?
3. Who has created a podcast?
4. Who has created a vodcast?
5. Who thinks podcasting is simply more talking heads?



Wikis



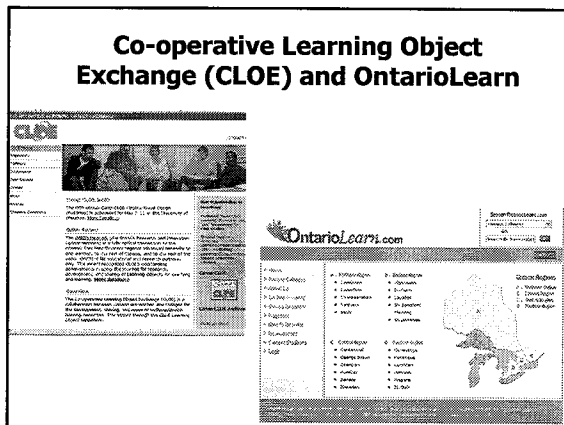
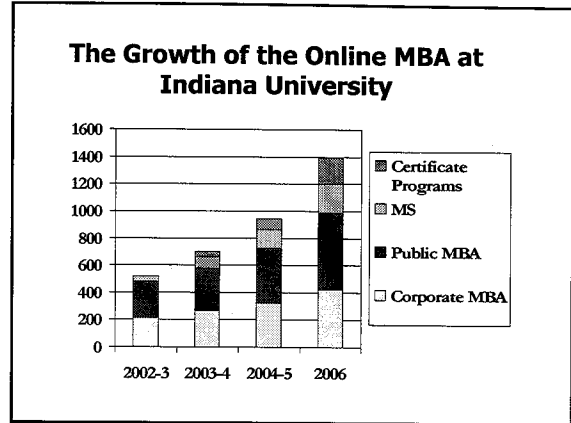
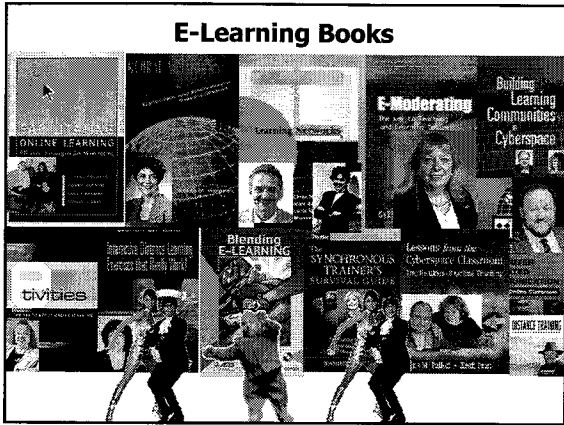
Wiki Questions

1. Who regularly reads Wikipedia articles just for fun?
2. Who regularly reads Wikibooks?
3. Who seeks Wikipedia for content?
4. Who has edited or written new articles on Wikipedia or Wikibooks?
5. Who thinks it is ok for college students to cite from Wikipedia?

Instructor Technology Myths

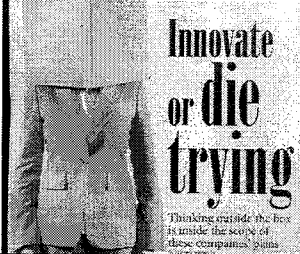
1. Tech savvy instructors are young & loyal.
2. Can teach the same way.
3. Instructors will not share
4. Tech savvy instructors will use latest technology.
5. Nothing new here.
6. Technology does not improve learning.
7. Can't afford tech.
8. Must be a techie.




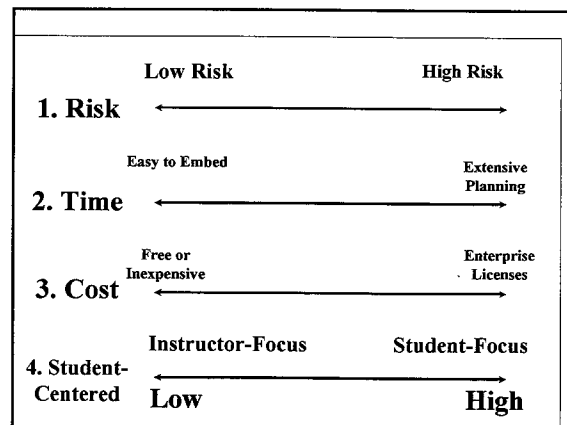
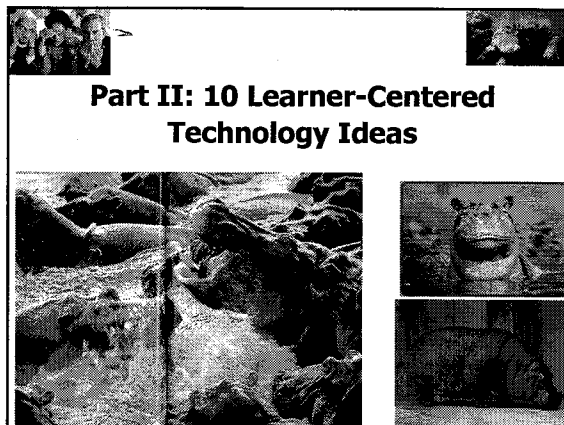


Let's Think Outside the Box!

(For 99 Seconds—what technologies that you might not think about using for learning, might students today prefer to use?)









Task

Experiences. The Difference.

- 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)

Learner-Centered and Active Learning Principles



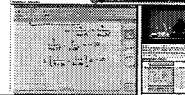
1. Authentic/Raw Data
2. Student Autonomy/Inquiry
3. Make Relevant/Meaningful/Interests
4. Link to and Build on Prior Knowledge
5. Provide Choice and Challenge
6. Act as a Facilitator and Co-Learner
7. Foster Social Interaction and Dialogue
8. Embed Problem-Based and Student Generated Learning and Inquiry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

1. Anchored Instruction (find anchoring event (CTGV, 1990?))

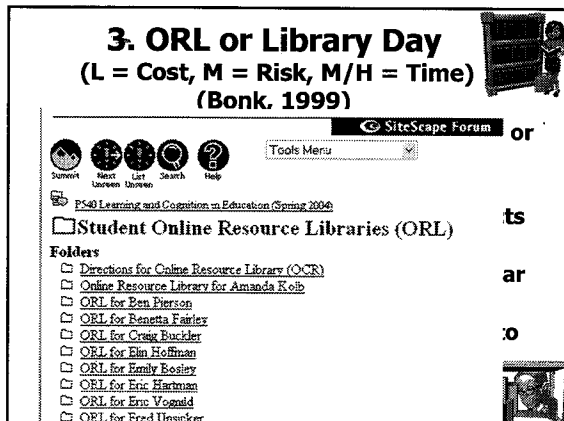


2. Cool Resource Provider (Bonk, 2004) Capture and Videostream Lectures (e.g., Apreso CourseCaster)

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



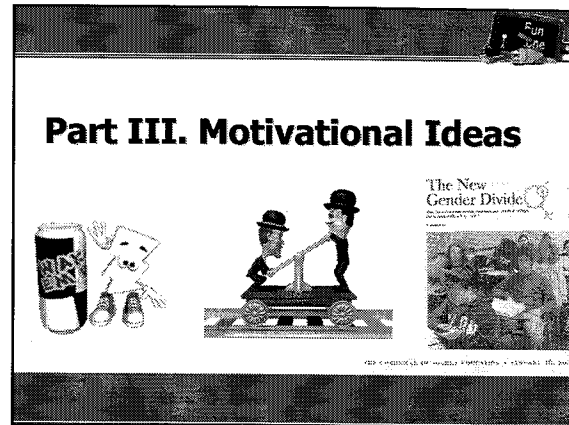
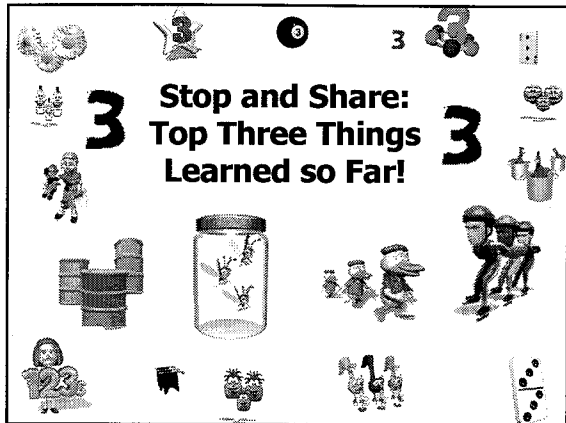
3. ORL or Library Day (L = Cost, M = Risk, M/H = Time) (Bonk, 1999)



4. 99 Second Quotes (L = Cost, M = Risk, M = Time)

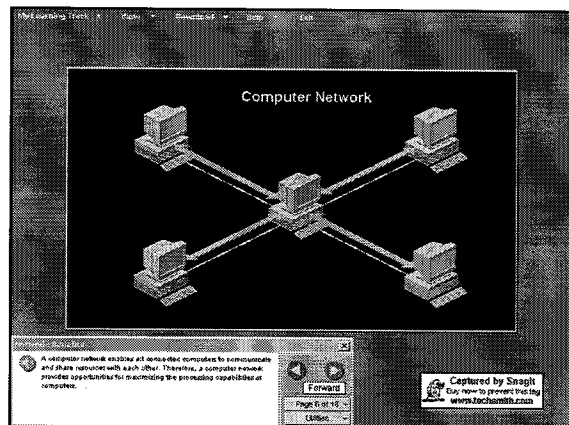


- Everyone brings in a quote that they like from the readings
- You get 99 seconds to share it and explain why you choose it in a sync chat or videoconference
- Options
 - Discussion wrapped around each quote
 - Small group linkages—force small groups to link quotes and present them
 - Debate value of each quote in an online forum




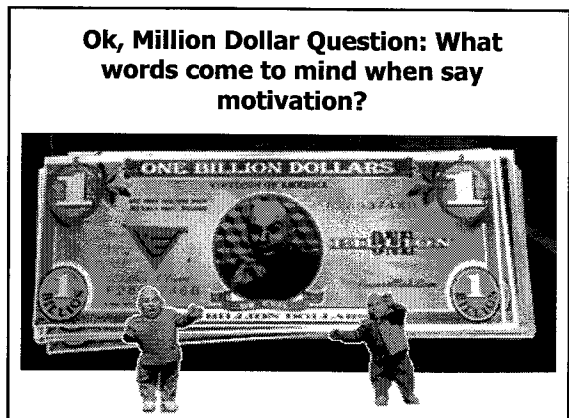
Top Reasons for Dropping Out (Deosnews, May 2004; Frankola, 2001)

- Lack of time
- Lack of management oversight
- Lack of motivation
- Lack of student support
- Individual learning preference
- Poorly designed course
- Substandard/Inexperienced instructor



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

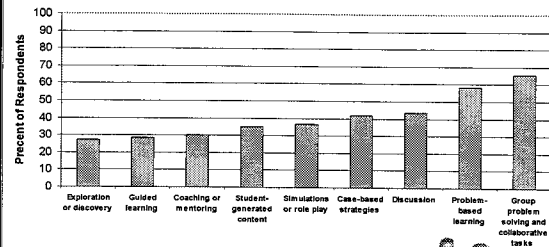
"...innate propensity to engage one's interests and exercise one's capabilities, and, in doing so, to seek out and master optimal challenges

(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.



Instructional Approaches that Selected by Respondents as Among the Four Strategies Likely to Become More Widely Used



So, I reflected on this for a moment...



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

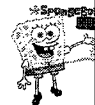
1. Tone/Climate:

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...

Public Applying Technology for Teaching and Learning
Home • Overview • 4. Reading Res. • 5. Free Trial Res. • Overview/Details

John Becker and Dana Irwin

- 1. 3. Mar. 2001 (05:55) Thu, Dec. 26, 2000, 17:28
- 2. 37. John Becker (teacher) Fri, Feb. 16, 2001, 15:25
- 3. 41. Dana Irwin (07:35) Sat, Feb. 17, 2001, 03:00
- 4. 228. Dana Irwin (teacher) Fri, Mar. 30, 2001, 05:56
- 5. 229. Dana Irwin (teacher) Sat, Mar. 31, 2001, 11:54
- 6. 230. John Becker (teacher) Tue, Apr. 3, 2001, 12:09
- 7. 253. Dana Irwin (teacher) Thu, Apr. 5, 2001, 07:47
- 8. 230. Dana Irwin (teacher) Sat, Mar. 31, 2001, 02:02

Nancy Hudson and Candy Nicolson Feedback

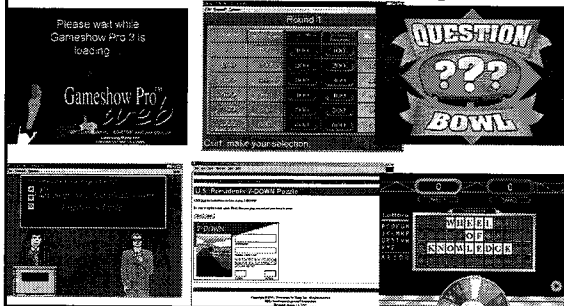
- 1. 4. Lee Irwin (05:43) Tue, Dec. 26, 2000, 17:38
- 2. 104. Nancy Hudson (teacher) Thu, Mar. 8, 2001, 10:56
- 3. 123. Dana Irwin (05:35) Sat, Mar. 16, 2001, 20:09
- 4. 138. Candy Nicolson (teacher) Wed, Mar. 21, 2001, 12:39
- 5. 140. Nancy Hudson (teacher) Thu, Mar. 22, 2001, 07:17
- 6. 144. Candy Nicolson (teacher) Thu, Mar. 22, 2001, 06:06
- 7. 155. Nancy Hudson (teacher) Fri, Mar. 23, 2001, 14:18
- 8. 196. John Becker (teacher) Wed, Mar. 22, 2001, 15:25

Janina Schmidt and Kim Rasmussen Feedback

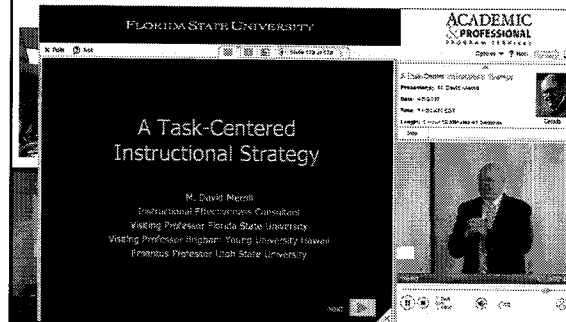
- 1. 3. Lee Irwin (05:55) Thu, Dec. 26, 2000, 17:29
- 2. 76. Janina Schmidt (teacher) Fri, Feb. 23, 2001, 15:58
- 3. 83. Kim Rasmussen (teacher) Mon, Feb. 26, 2001, 10:35



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



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



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



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 & background info
- Students work collaboratively to integrate multidisciplinary data & 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)



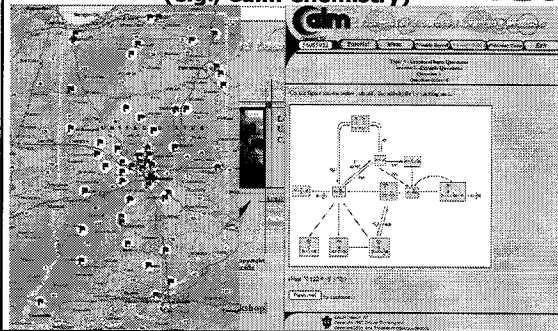
Text-message course helping newcomers learn English

Text-message course helping newcomers learn English

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)



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

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 b...

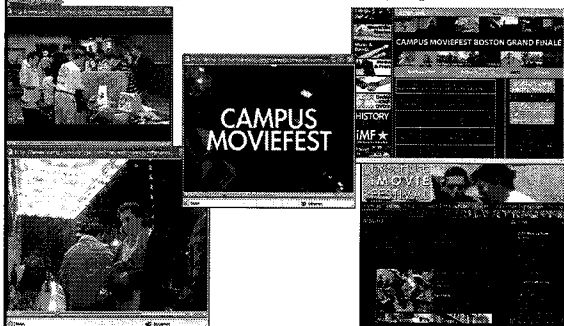
74.5. [He ain't heavy - he's my brother...](#) [Mother Theresa](#) 04/22/04 11:41 AM

For me, my children, it's all about helping each other. We must accept the position... Our friends Bruner and Vygotsky suggested that learning takes place through social parties, either! They wanted us to work together and learn from each other. We co... enables all of us to benefit from each other's knowledge. Sharing our...

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

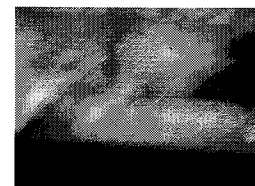
I hope that everyone has been feeling wonderful today.

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



Part IV. Addressing Learning Styles



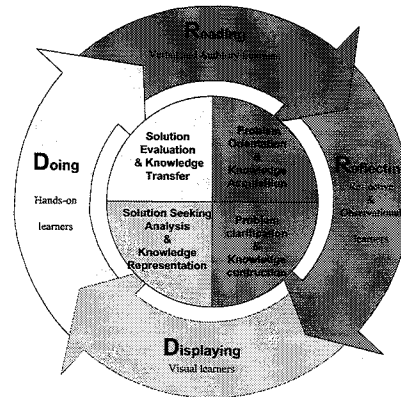
Poll 1: Which learning style do you prefer?

- Read (Auditory and Verbal Learners)
- Reflect (Reflective Learners)
- Display (Visual Learners)
- Do (Tactile, Kinesthetic, Exploratory Learners)



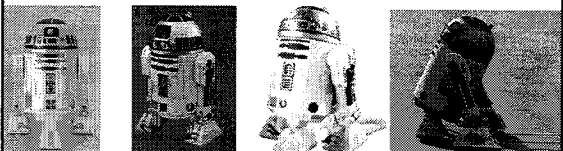
Kolb (1984)

- 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)



1. Auditory or Verbal Learners

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



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

1b. Instructor and Learner Podcasts

"Just the word 'podcast' scares a lot of teachers away," Ms. Schrock said. "There are a lot of misconceptions."

"All you need is a computer, access to the Internet and a microphone that you can buy at Toys 'R' Us," Mr. Warlick said. "I listen to podcasts on my computer." (NY Times, Jan 25, 2006)



1c. Language Learning (ChinesePod—learn Mandarin)

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

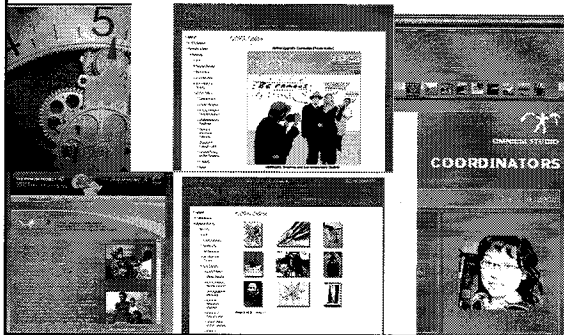
- Reflective and observational learners prefer to reflect, observe, view, and watch learning; they make careful judgments and view things from different perspectives



2a. 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

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



3d. Historical Documents
discoverbabylon.org

- In its final form, the multi-player game will let you march through three-dimensional recreations of the first city-states, around 3000 B.C., the first empires, around 2300 B.C., and finally the famous Iron Age empire of Assyria...offers three-dimensional walk-throughs of sites in the Valley of the Kings.

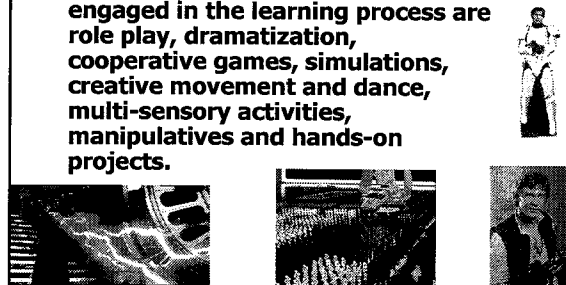


3e. Online News Multimedia
(New York Times reporter Andrew Revkin continues doing compelling multimedia work.)



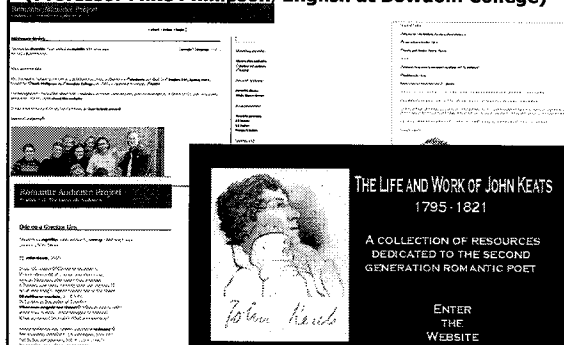
4. Tactile/Kinesthetic Learners

- 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.

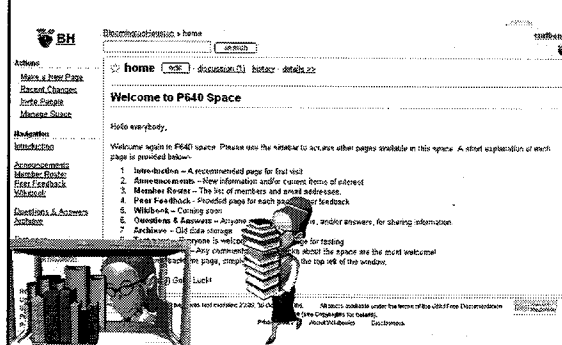


4a. Romantic Poetry Project

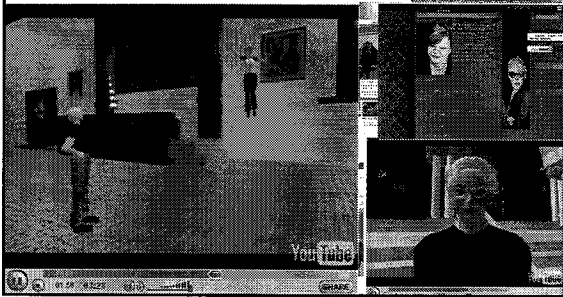
(Professor Mike Phillipson, English at Bowdoin College)



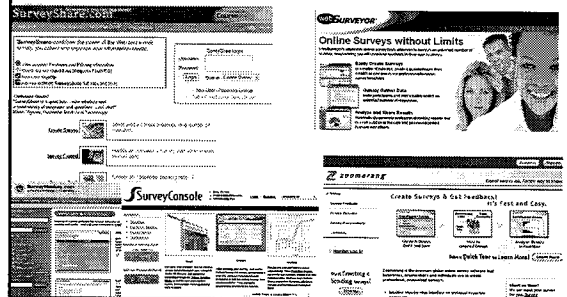
4b. Wikibook Creation and Collaboration



4c. 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>



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

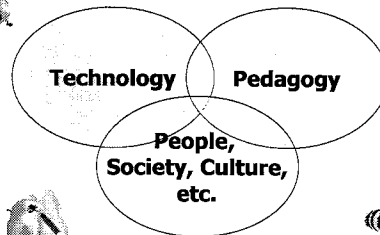


Next up: The MATRIX!!!!!!!!!!!!

- 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



The End...Remember

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

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