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

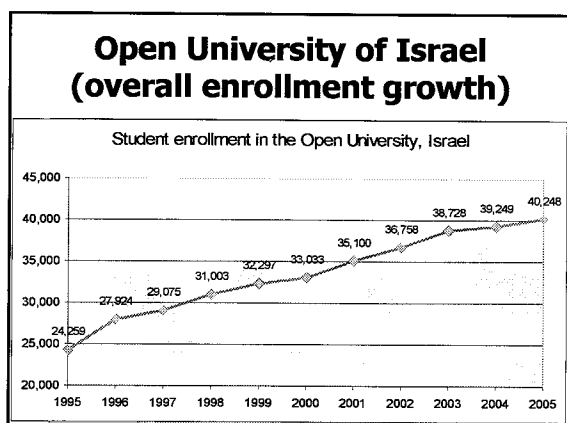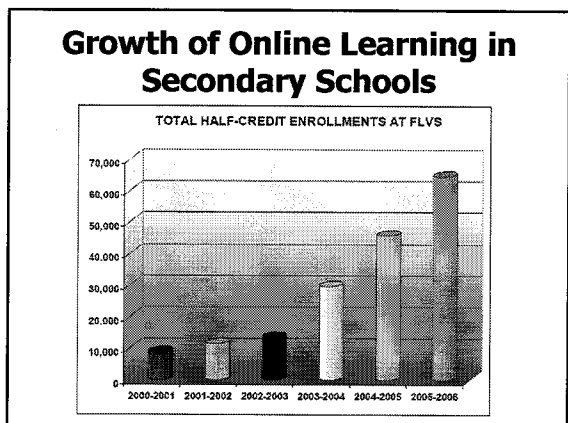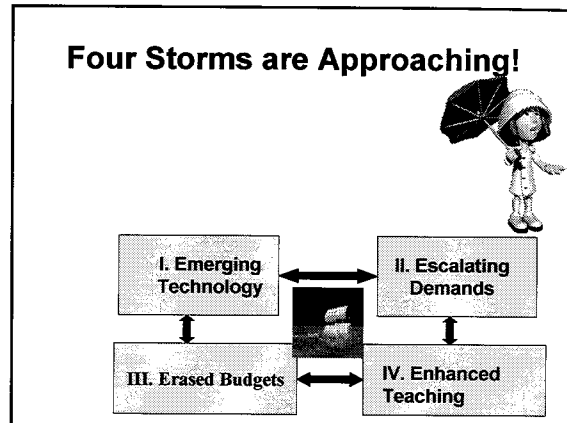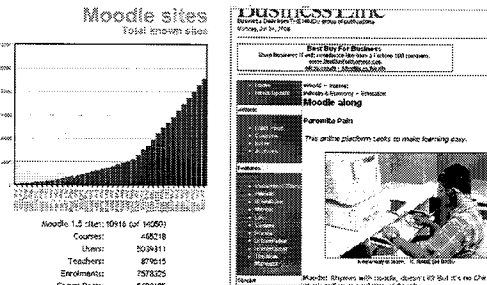**Curtis J. Bonk, Professor, Indiana University**
President, SurveyShare
cjbonk@indiana.edu
http://mypage.iu.edu/~cjbonk/

Four Storms are Approaching!

I. Emerging Technology

II. Escalating Demands

III. Erased Budgets

IV. Enhanced Teaching

Growth of Online Learning in Secondary Schools

TOTAL HALF-CREDIT ENROLLMENTS AT FLVS

Open University of Israel (overall enrollment growth)

Student enrollment in the Open University, Israel

The OUM

Enrollment Growth at the UOM

Year (2001 to 2005)

Open Source Courseware

Moodle sites
Total known sites

Moodle 1.5 stat: 10916 (of 14050)
Courses:	465218
Users:	5039311
Teachers:	879615
Enrolments:	7578325
Forum Posts:	5603185
Resources:	2936706
Quiz questions:	3452167

Accessible Technology

The project aims to build peer-to-peer communications

SCI-TECH

Features

A revolution in a laptop
By Greg Norman

Sunday 13 August 2006, 18:49 Makka Time, 15:49 GMT

A quarter of a century on the legacy of the PC is ubiquitous.

INFORMATION TECHNOLOGY

The CM1: Taking technology to the developing world
A revolution in a laptop
By Greg Norman
Sunday 13 August 2006, 18:49
Makka Time, 15:49 GMT

Negroponte says the new laptop is designed to be kid-friendly

OLPC aims to turn the tide of urban poverty

All learning in one's own hands?

USA TODAY

Wired for safety, late-night snacks

A Different Generation??? Multitasking...
"YOUNG AND WIRED," Katherine Seligman, San Fran Chronicle, Sunday, May 14, 2006

Always online -- and always talking

Gloria Kwan listens to her iPod while text messaging a friend who's in class.
Chronicle photo by Mike Kepka

"YOUNG AND WIRED, Computers, cell phones, video games, blogs, text messages -- how will the sheer amount of time spent plugged in affect our kids?"
Katherine Seligman, San Fran Chronicle, Sunday, May 14, 2006

Harker student Stephanie Lil (wearing a false nametag), during language class, recording her voice in Spanish for the teacher to evaluate later. Chronicle photo by Mike Kepka

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Top 5 "In" Things on Campus
June 7, 2006, USA Today

iPods knock over beer mugs

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.**

Brandon Hall, Chief Learning Officer Magazine, July 2006

"A blog is a Web journal containing dated entries on a given topic or scheme. They can include search, feedback from readers and links to other sites. They can be written by one person or a group. Blogs can be used to share a viewpoint, enable collaborative discussion, present new product ideas, or explain ongoing news or changes."

Blogging Questions

1. Who has a blog? Any for a specific class?
2. Who regularly reads other people's blogs?
3. Who assigns blogging tasks?
4. Who has created a video blog?
5. Who thinks it is an utter waste of time to blog?

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

Wikis
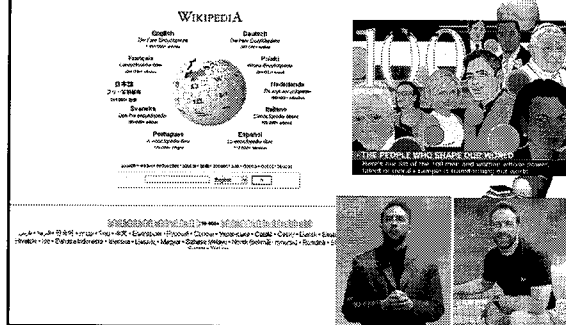
For Teachers New to Wikis

- Wikis are a writing space
- Writers build upon, edit, and revise
- Power and authority reside in the community not in an individual
- Permissions can be set to limit readers and writers who participate
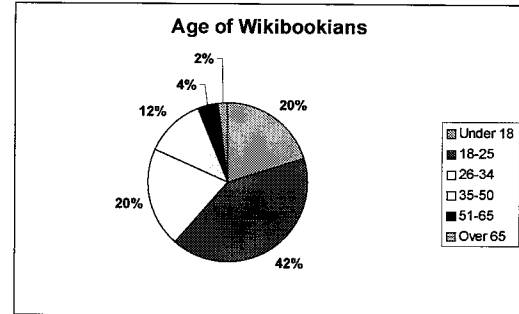
How use in teaching

1. Provide space for free writing
2. Debate course topics and readings
3. Share resources (websites, conferences, writing, etc.)
4. Maintain group progress journal
5. Require group or class essay
6. Have student revise Wikipedia pages
7. Write a wikibook

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?**

Wikibook Research

Age of Wikibookians

Pie chart values: 2%, 4%, 12%, 20%, 20%, 42%

Legend:
- Under 18
- 18-25
- 26-34
- 35-50
- 51-65
- Over 65

Podcasting, Webcasting, and Coursecasting
(Adam Curry; www.dailysourcecode.com)

Students download complete lecture

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?**

Webcasts: WorldBridges Goals

What is Worldbridges?
- Worldbridges is a network of individuals and organizations that use live, interactive webcasting and other new media technologies to help people connect, learn, & collaborate.
  (Webheads, Koreabridge, Worldbridges Tibet, EdTechTalk, etc.)

Goals & Values
- Our primary goal is to foster understanding and cooperation amongst the citizens of the world. We value civility and respect, open source collaboration, fair distribution of income, and a sense of world identity.

Podcasting and Coursecasting
(Adam Curry; www.dailysourcecode.com)

"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)

Language Learning
(ChinesePod—learn Mandarin)

Jenny Zhu

Educational Applications of Podcasting

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

So many emerging technologies to use and research!

Task

- **Ideas definitely Can Use (Circle or write down)**
- **Ideas you might use (check off or write down in a separate column)**
- **Ideas you cannot use (cross off or put at the bottom)**

	Low Risk	High Risk
1. Risk	←	→

	Easy to Embed	Extensive Planning
2. Time	←	→

	Free or Inexpensive	Enterprise Licenses
3. Cost	←	→

	Instructor-Focus	Student-Focus
4. Student-Centered	Low ←	High →

Part I: 10 Learning Centered Technology Ideas

Experience. The difference.

1. Learner-Centered Learning Principles
(American Psychological Association, 1993)

Cognitive and Metacognitive Factors
1. Nature of the learning process
2. Goals of the learning process
3. Construction of knowledge
4. Strategic thinking
5. Thinking about thinking
6. Context of learning

Motivational and Affective Factors
7. Motivational and emotional influences
8. Intrinsic motivation to learn
9. Effects of motivation on effort

Developmental and Social Factors
10. Developmental influences on learning
11. Social influences on learning

Individual Differences
12. Individual differences in learning
13. Learning and diversity
14. Standards and assessment

Learner-Centered on the Web
(Bonk & Cummings, 1998)

1. Safe Lrng Community:	6, 11
2. Foster Engagement:	1- 6, 11.
3. Give Choice:	8, 9, 12
4. Facilitate Learning:	2, 9, 11.
5. Offer Feedback:	3, 6, 8, 11, 13.
6. Apprentice Learning:	3, 6, 7-9, 11, 13.
7. Use Recursive Tasks:	1, 3, 8-9, 10, 13.
8. Use Writing & Reflection:	3, 8, 12-13.
9. Build On Web Links:	2-4, 8-9, 12-14.
10. Be Clear & Prompt Help:	2, 9, 11, 14.
11. Evaluate Dimensionally:	1-5, 14.
12. Personalize in Future:	6, 8, 10-13.

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2. Constructivistic Teaching Principles (Brooks, 1990)

1. Build on student prior knowledge.
2. Make learning relevant.
3. Give students choice in learning activity.
4. Student autonomy & active lrng encouraged
5. Use of raw data sources & interactive materials
6. Encourage student dialogue
7. Seek elaboration on responses and justification
8. Pose contradictions to original hypothesis
9. Ask open-ended questions & allow wait time
10. Encourage reflection on experiences

---

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. One minute papers or muddiest point papers (L = Cost, M = Risk, M = Time)

- **Have students write for 3-5 minutes what was the most difficult concept from a class, presentation, or chapter. What could the instructor clarify better.**
- **Send to the instructor via email or online forum.**
- **Optional: Share with a peer before sharing with instructor or a class.**

---

3. Cool Resource Provider
(Bonk, 2004) (L = Cost, M = Risk, M = Time)

- **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.**

4. 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.

5. Jigsaw
(L = Cost, M = Risk, H = Time)

- Form home or base groups of 4-6 students.
- Student move to expert groups— discussion ideas in a chat.
- Share knowledge in expert groups and help each other master the material in an online forum.
- Come back to base group to share or teach teammates.
- Students present in group what learned.

6. 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

7. Six Hats (Role Play):
(from De Bono, 1985; adopted for online learning by Karen Belfer, 2001, Ed Media) (L = Cost, M = Risk, M = Time)

- White Hat: Data, facts, figures, info (neutral)
- Red Hat: Feelings, emotions, intuition, rage...
- Yellow Hat: Positive, sunshine, optimistic
- Black Hat: Logical, negative, judgmental, gloomy
- Green Hat: New ideas, creativity, growth
- Blue Hat: Controls thinking process & organization

Note: technique was used in a business info systems class where discussion got too predictable!

8. Structured Controversy and Instructor (or student) Generated Virtual Debates
(L = Cost, M = Risk, M = Time)

1. Select controversial topic (with input from class)
2. Divide class into subtopic pairs: one critic and one defender.
3. Assign each pair a perspective or subtopic
4. Critics and defenders post initial position statements in an online thread
5. Rebut person in one's pair
6. Reply to 2+ positions with comments or q's
7. Formulate and post personal positions.

9. Best 3 Activity
(Thiagi, personal conversation, 2003)
(L = Cost, L = Risk, L/M = Time)

- After a lecture, have students decide on the best 3 ideas that they heard (perhaps comparing to a handout or dense sheet of paper).
- Work with another who has 3 as well and decide on best 3 (or 4).
- Those pairs work with another dyad and decide on best 3 (or 4).
- Report back to class.

10. Scavenger Hunt
(L = Cost, L = Risk, M = Time)

1. Create a 20-30 item scavenger hunt
2. Post scores

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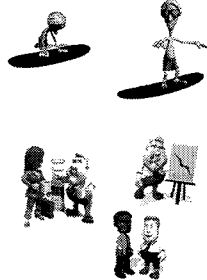
99 seconds: What have you learned so far?
• Solid and Fuzzy in groups of two to four
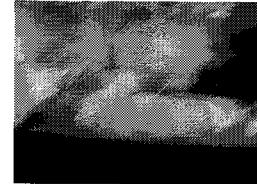
Part II: 10 Blended Learning Solutions

Ok, Million Dollar Question: How can you blend learning?
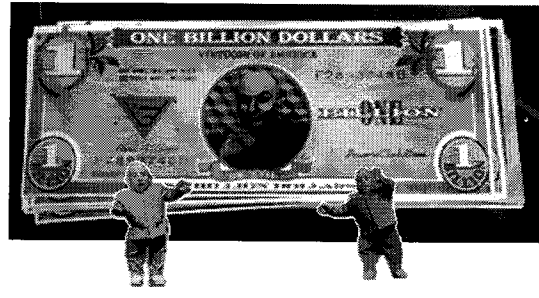
Blended Solution #1. Video Streamed Lectures and Expert Commenting

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Blended Solution #2: Warm-ups Online Just-In-Time-Teaching (JiTT)
http://webphysics.iupui.edu/jitt/jitt.html
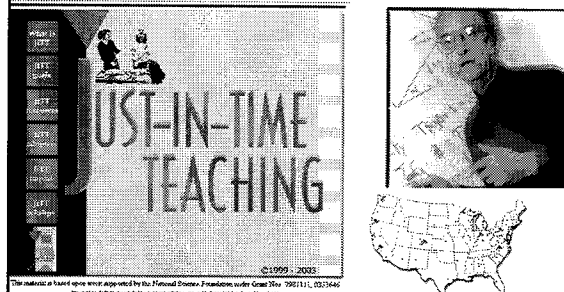
Blended Solution #3. Apprenticeship: Electronic Guests & Mentoring
(Simon Fraser University...)
http://www.sfu.ca/mediapr/sfnews/2001/Se...

Blended Solution #4. Online Simulation: Financial Accounting; (University of Calgary)

Blended Solution #5. Concept Mapping Tools

Blended Solution #6. Educational Simulations, Scenarios, and Manipulations

Blended Solution #7. Real World Problems (PBL online): Real-time Cases

Blended Solution #8. Video Scenario Learning
(Option 6, Arjuna Multimedia, Bloomington, IN)

9

Blended Solution #9. Instructor Presentation in Synchronous Sessions (Breeze, Elluminate, WebEx, etc.)

Blended Solution #10.
Video Observations (e.g., Virtual Psychiatric Interview, Trinity College, Dublin)

showcases

12

Department: Psychiatry
Academics: Prof. Michael Gill, Dr. Brian Fitzmaurice, Katie Armstrong

This is a Virtual Interview- project that has been development by CLT and the Department of Psychiatry. The first iteration was launched in March, 2004 for students. In this project student are given the opportunity to carry out a clinical interview with a patient. The student decides what questions are asked and with the aid of video clips can listen and watch the patient responses.

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99 Second Stretch Break and Chat!!!

Part III.
Mucho Motivation
10 Ideas

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

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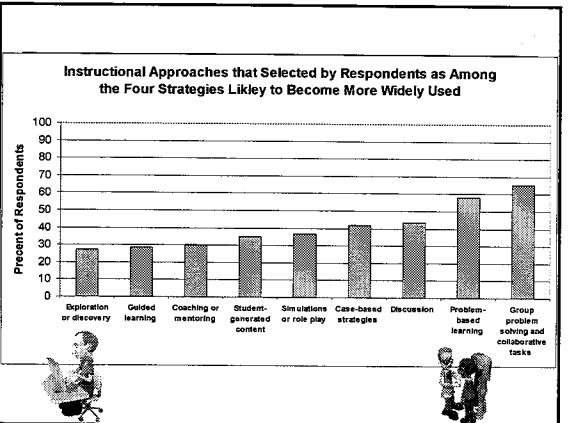
Intrinsic Motivational Terms

1. **Tone/Climate:** Psych Safety, Comfort, Belonging
2. **Feedback:** Responsive, Supports, Encouragement
3. **Engagement:** Effort, Involvement, Excitement
4. **Meaningfulness:** Interesting, Relevant, Authentic
5. **Choice:** Flexibility, Opportunities, Autonomy
6. **Variety:** Novelty, Intrigue, Unknowns
7. **Curiosity:** Fun, Fantasy, Control
8. **Tension:** Challenge, Dissonance, Controversy
9. **Interactive:** Collaborative, Team-Based, Community
10. **Goal Driven:** Product-Based, Success, Ownership

1. Tone/Climate: Ice Breakers

A. Eight Nouns Activity:
1. Introduce self using 8 nouns
2. Explain why choose each noun
3. Comment on 1-2 peer postings

B. Coffee House Expectations
1. Have everyone post 2-3 course expectations
2. Instructor summarizes and comments on how they might be met

---

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

---

3. Engagement: C. Clickers; Innovation is but one click away...

Interactive technology transforms the classroom

Iclicker

---

4. Meaningfulness:
A. Authentic Data Analysis

An informative virtual reality view inside the archaeology museum at the Maya ruins of Copan, Honduras.

---

5. Choice:
A. 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. Variety:
A. 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).

B. Alternative: Facilitator-Starter-Wrapper (Alexander, 2001)

Instead of starting discussion, student acts as moderator or questioner to push student thinking and give feedback

7. Curiosity: A. Games
Online Jeopardy Game
www.km-solutions.biz/caa/quiz.zip;
Games2Train: The Challenge; Thiagi.com

8. Tension: A. Online Role Play of Scholars, Personalities, or Famous People

– **Enroll famous people in your course**
– **Students assume voice of that person for one**

24.3. I am so wise..so listen.   Aristotle 11/25/03 05:49 PM

> – Training Magazine might have a a little bit of a bias too. Also, I h
> boring instructional animations and videos. Classroom or e-learnin
> a good audiotape – they can all be good for learning. Cost-effectiv
> to go away as an issue, so we might as well face it instead of sayin
> learning is better than another – because it costs more! How did y
> of the Huns? Didn't you compare prices on spears and horses bef
> global conquests?

24.3.1. Again my opinion – e-learning is NOT cost-   Attila the Hun
effective and is NOT value for money, and does
NOT equate good quality

9. Team Collaboration:
A. Court Room Forum (Bus Law)

10. Product-Based: A. Video Papers. Grounded Research and Production. Video Paper Builder (http://vpb.concord.org/

How many have ever felt that they hit the wall as far as teaching online?

BONK!

Your skeletal muscles' maximum burn rate is double that of your brain. Think about it.

When your body stalls mid-run, it's called bonking.

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

VARK learning styles (Fleming & Mills (1992a, 1992b): Four types of learners and learning styles:

(1) visual;

(2) auditory;

(3) reading/writing;

(4) kinesthetic, tactile, or exploratory,

Poll 1: Which learning style do you prefer?

a. Read (Auditory and Verbal Learners)

b. Reflect (Reflective Learners)

c. Display (Visual Learners)

d. Do (Tactile, Kinesthetic, Exploratory Learners)

VARK learning styles (Fleming & Mills (1992a, 1992b). Four types of learners and learning styles

1. Visual learners prefer diagrams, flowcharts, graphics (they do not mention video, film, Webcasts, or PowerPoint presentations).
2. Auditory learners prefer to hearing directions, lectures, or verbal information.
3. Reading and writing learners prefer text passages, words, and written explanations.
4. Tactile or kinesthetic learners learn best by connecting to reality through examples, practices, or simulations.

Kolb (1984)

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

One View of Learning Styles
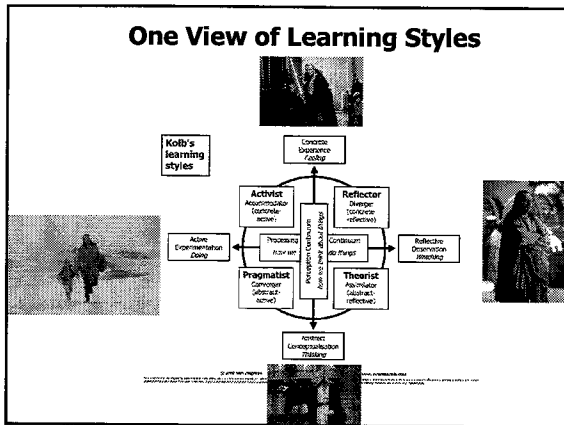
Abstract Conceptualization vs. Concrete Experiences

- **(AC)** - I am rational and logical.
- **(CE)** - I am practical and down to earth.

- **(AC)** - I plan events to the last detail.
- **(CE)** - I like realistic, but flexible plans.

- **(AC)** - I am difficult to get to know.
- **(CE)** - I am easy to get to know.

Active Experimentation vs. Reflective Observation

- **(AE)** - I often produce off-the-cuff ideas.
- **(RO)** - I am thorough and methodical.

- **(AE)** - I am flexible and open minded.
- **(RO)** - I am careful and cautious.

- **(AE)** - I am loud and outgoing.
- **(RO)** - I am quite and somewhat shy.

Index of Learning Styles Questionnaire
Barbara A. Soloman, North Carolina State Univ
http://www.engr.ncsu.edu/learningstyles/ilsweb.html

6. If I were a teacher, I would rather teach a course
   ○ (a) that deals with facts and real life situations.
   ○ (b) that deals with ideas and theories.

7. I prefer to get new information in
   ○ (a) pictures, diagrams, graphs, or maps.
   ○ (b) written directions or verbal information.
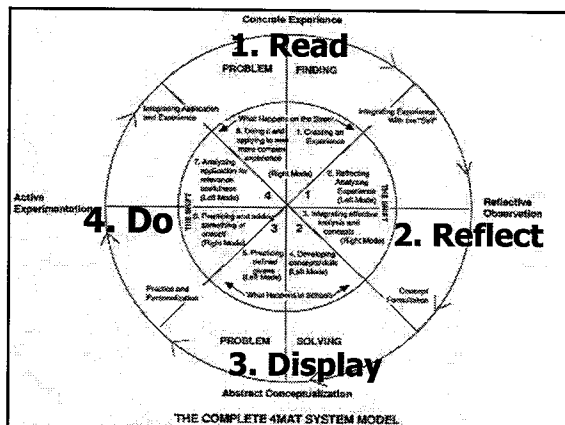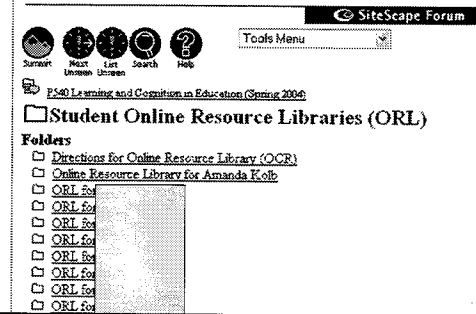

The R2D2 Method

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

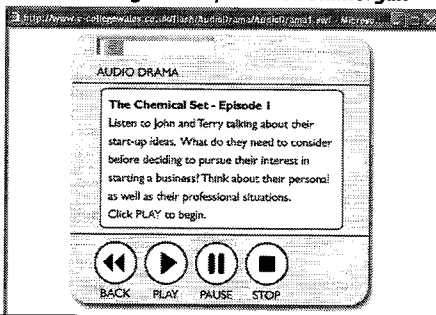- **Auditory and verbal learners prefer words, spoken or written explanations.**
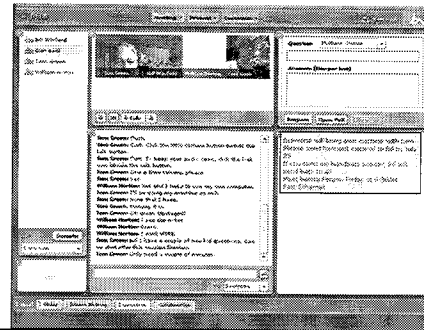

1a. Online Resource Libraries

1b. Online Audio Cases
Audio Dramas
eCollege Wales, Univ. of Glamorgan

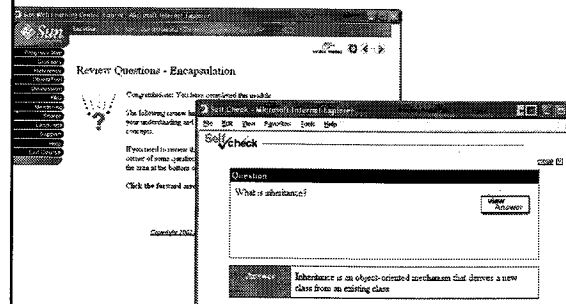## 1c. Synchronous Conferencing

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. Learner-Self Interactions and Reflections

2b. Post Model Answers

Employment Law and Ethics Project

Question 1

Would it be illegal for Laura 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 Laura 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

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2c. Reuse Chat Transcripts

2d. Video Streaming: Math Emporium of Online Tutorials and Testing (Virginia Tech, Robert Olin)

- In the Math Emporium, students can take advantage of diagnostic quizzes, an electronic hyperlinked textbook and interactive, self-paced tutorials. There are armies of tutors, GTAs and faculty in the emporium to give students personal help when they do not understand the tutorials or quizzes...Some traditional lectures by professors are also available along with help from a conventional tutor lab.

2e. Reflection and Observation: E-Portfolios
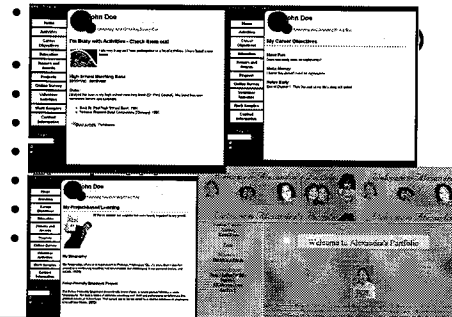
2f. Reflection Sheets and Scaffolds online (E-Reading First Ohio) (reflect, share, and compare)

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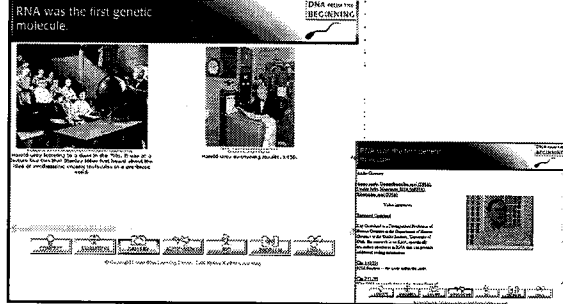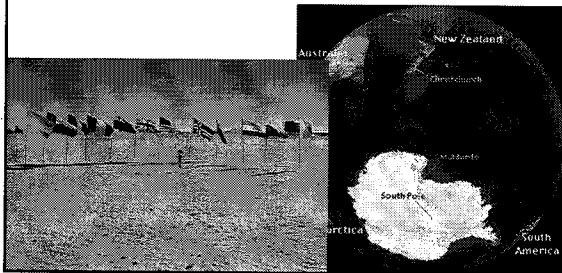
3. Visual Learners

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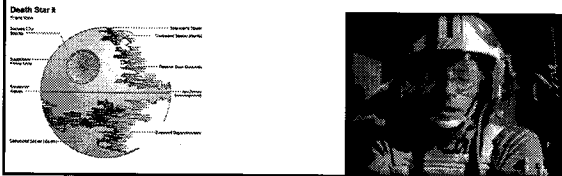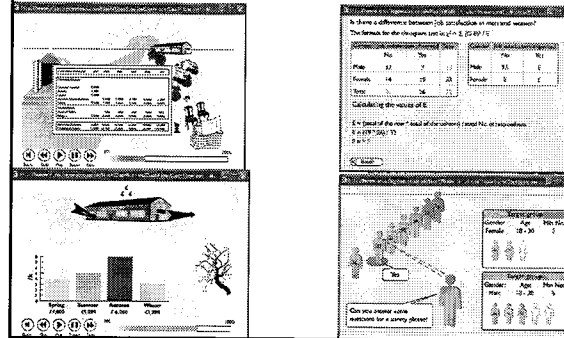

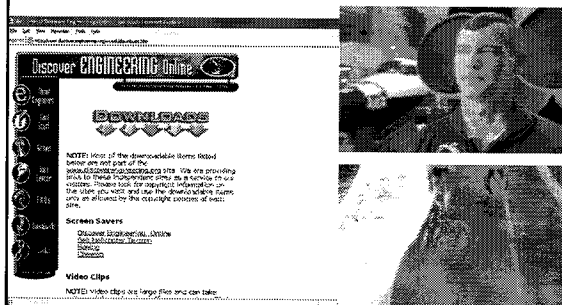# 3a. Animations, Video Clips, Audio, Pictures, Web Resources, etc.

3b. Virtual Tour (Center for Astophysical Research in Antarctica)

3c. Current Events: Interactive Online New Stories & Cases

3d. Video Library of Concepts, Cases, or Experts

3e. Digital Libraries (LibraryShare)

3f. Online Modeling: Watch Expert Performances
(Music, Cyber Fashion Shows, etc.)

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

3h. Capture and Videostream Lectures
(e.g., Apreso CourseCaster)

3i. Virtual Surgery: multisource, real-time, interactive lesson in anatomy and surgery
(Corn project)

3j. Internet2 Video Conferencing Applications

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. Educational Simulations, Scenarios, and Manipulations

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4b. 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**

4c. 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.
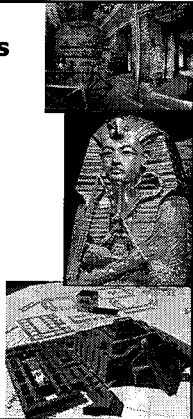
4d. Digital Storytelling

4e: Internally Built Web Links
(Human Intelligence Homepage, Jonathan Plucker, IU)

4f. Romantic Poetry Project

THE LIFE AND WORK OF JOHN KEATS
1795-1821

A COLLECTION OF RESOURCES
DEDICATED TO THE SECOND
GENERATION ROMANTIC POET

ENTER
THE
WEBSITE

4g. Continuous Writing Tools and Resources (e.g., Writer's Window)

4h: Virtual Worlds/Virtual Reality/MMOG

Virtual gaming

Online games are one of the many ways the Web has changed the way young people socialize and entertain themselves.

Percentage of visitors and users to game Web sites by age, September 2004

Age	%
12-17	10.5%
18-24	13.2%
25-34	17.2%
35-44	20.3%
45-54	19%
55-64	8.4%
65+	3.9%

SOURCE: ComScore Media Metrix   AP

4i. 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**

Try the R2D2 Method!!!

Stand and Share

- **Will Work:** _____
- **Might Work:** _____
- **No Way:** _____