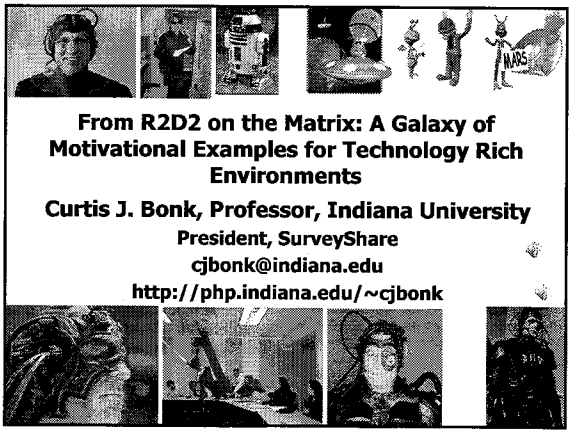
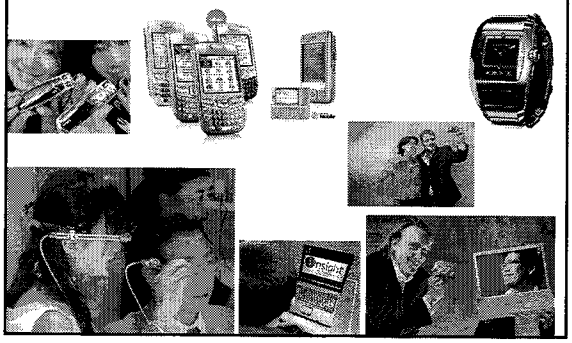


From R2D2 on the Matrix: A Galaxy of Motivational Examples for Technology Rich Environments

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

So many emerging technologies to use and research!



Learners' Perspectives on What is Missing from Online Learning

Emma J. Stodel, Terrie Lynn Thompson, & Colla J. MacDonald (Dec 2006)

The International Review of Research in Open and Distance

- **Emerging technologies are offering alternative ways to conceptualise and deliver education and in the process are revolutionising how learners work, think, and build knowledge. Technology is becoming integral to the teaching-learning process as ongoing advancements offer new avenues for learning. However, the adoption of this medium in the teaching-learning process has quickly outpaced our knowledge regarding how it might best be used.**

Learners' Perspectives on What is Missing from Online Learning

Emma J. Stodel, Terrie Lynn Thompson, & Colla J. MacDonald (Dec 2006)

The International Review of Research in Open and Distance

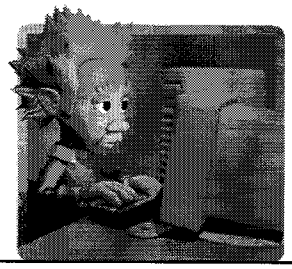
- **Over a decade ago, Berge and Collins (1995) pointed to the fact that educators often do not take advantage of the latest technologies available to enhance learning. They argued, "there is no shortage of technology, only a shortage of the educational vision necessary to use the technology to create new educational environments" (p. 5).**

A Synthesis of Research on K-12 Online Learning: Student Academic Performance (Robert Blomeyer, Learning Point Associates, 2006).

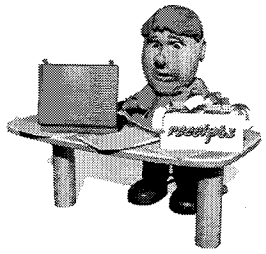
- **Lowes (2005) concludes that the recent advances in online courseware incorporate effective pedagogical approaches the "emphasize student-centered teaching, collaboration, problem-based learning, small-group work, and authentic performance-based assessments" (p. 3) all contribute to student academic performance.**

But this morning, we will discuss innovative pedagogy or teaching techniques and ideas with technology!

But first, a few theoretical perspectives and principles



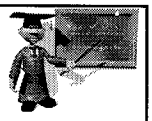
Thinking Back 20 Years Ago



Charles I. Gragg
(1940: Because Wisdom Can't be Told)

"A student of business with tact
Absorbed many answers he lacked.
But acquiring a job,
He said with a sob,
How does one fit answer to fact?"

Traditional Teachers



- Supposed sage, manager, conveyer
- Sets the agenda
- Learner is a sponge
- Passive learning & discrete knowledge
- Objectively assess, competitive
- Text- or teacher-centered
- Transmission model
- Lack interconnections & inert
- Squash student ideas

The Tao of Teaching

- A wise teacher lets other have the floor.
- Trying to appear brilliant does not work.
- The gift of a great teacher is creating an awareness of greatness in others.
- Facilitate what is happening, rather than what you think ought to be happening. Silence says more than words, pay attention to it.

The Tao of Teaching

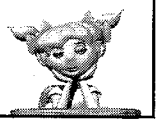
- Allow time for genuine insight.
- Instead of trying hard, be easy; teach by example, and more will happen.
- If you measure success in terms of praise and criticism, your anxiety will be endless.
- Any over-determined behavior produces its opposite.

Consultative Teachers

- Co-learner, mentor, tour guide, facilitator
- Student and problem-centered
- Learner is a growing tree and on a journey
- Knowledge is constructed and intertwined
- Many resources (including texts & teachers)
- Authentic, collaborative, real-world tasks
- Subjective, continual, less formal assess
- Display student ideas--proud and motivated
- Build CT, CR, CL skills

Students are too often...

- Emotionally moody and sleepy
- Preoccupied with previous class or hour
- Expecting entertainment
- Unable to concentrate for too long
- Isolated or alienated

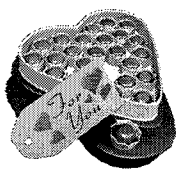


Ah, the Excitement of Instructional Design!

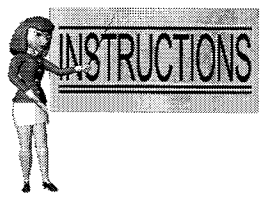
Ok, who is falling asleep at the mere mention of the phrase "instructional design?"

Did he say chocolate?

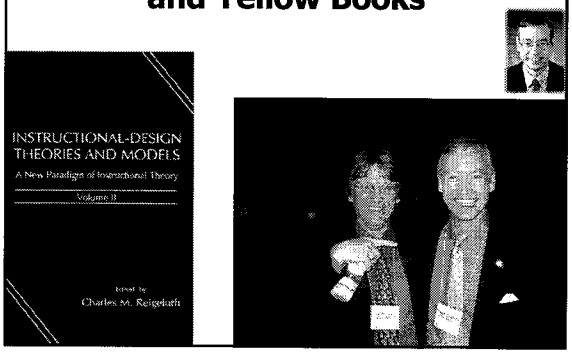
Who wants some chocolate???



Most ID Models in the 1980s Prescriptive



Instructional Design: Green and Yellow Books



1. Instructional Philosophy and Approaches

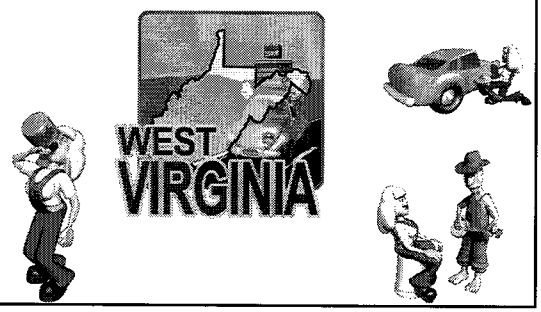
- Decisions about approach (behavioral, constructivistic, inquiry)
- Battle between constructivism and behaviorism
- Battle between student centered or instructor-centered

Robert Gagne's 9 instructional events

gaining attention	show variety of computer generated triangles
informing learners of the objective	"What is an equilateral triangle?"
stimulating recall of prior learning	review definitions of triangles
presenting the stimulus	give definition of equilateral triangle
providing learning guidance	show example of how to create equilateral
eliciting performance	ask students to create 5 different examples
providing feedback	~~check all examples as correct/incorrect~~
assessing performance	provide scores and remediation
enhancing retention and transfer	show pictures of objects and ask students to identify equilaterals

From http://tip.psychology.org/gagne.html

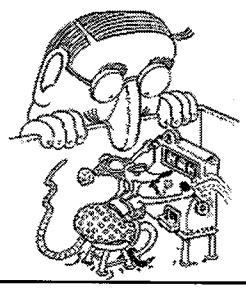
I headed out to West Virginny

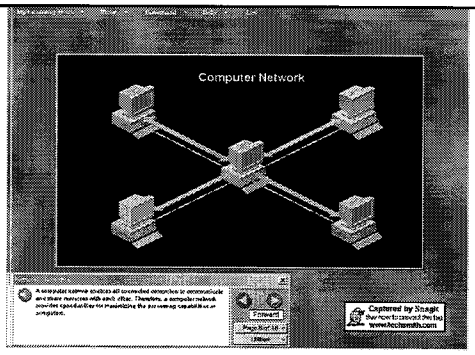


Skinner (1904-1990) Quote.

- I did not direct my life. I didn't design it. I never made decisions. Things always came up and made them for me. That's what life is.

Behaviorist Interactivity





Online PowerPoint?

2. 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

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

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

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.

3. Active Learning Principles

1. Authentic/Raw Data
2. Student Autonomy/Inquiry
3. Relevant/Meaningful/Interests
4. Link to Prior Knowledge
5. Choice and Challenge
6. Teacher as Facilitator and Co-Learner
7. Social Interaction and Dialogue
8. Problem-Based & Student Gen Learning
9. Multiple Viewpoints/Perspectives
10. Collab, Negotiation, & Reflection

Connections New Theories

- **Constructivism--concerned with learner's actual act of creating meaning (Brooks, 1990). The constructivist argues that the child's mind actively constructs relationships and ideas; hence, meaning is derived from negotiating, generating, and linking concepts within a community of peers (Harel & Papert, 1991).**

4. 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

Connections New Theories

- **Situated Learning--asserts that learning is most effective in authentic, or real world, contexts with problems that allow students to generate their own solution paths (Brown, Collins, & Duguid, 1989).**

PBL

(Blumenfeld et al., 1991; Savery & Duffy, 1996)

1. Anchor in larger task or problem
2. Develop learner ownership over the problem
3. Design authentic tasks
4. Tasks should reflect real world complexity
5. Learners must own the solution path/processes
6. Support and challenge learners
7. Encourage testing against alternative views
8. Encourage reflection on learning content and process
9. Novelty, Variety, Valued problems, Choice

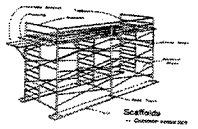
5. Sociocultural Ideas

(Bonk & Cunningham, 1998)

1. Shared Space and Build Intersubjectivity
2. Social Dialogue on Authentic Problems (mind is in social interactions and extends beyond skin)
3. Mentoring and Teleapprenticeships
4. Scaffolding and Electronic Assistance in ZPD
5. Group Processing and Reflection
6. Collaboration and Negotiation in ZPD
7. Choice and Challenge
8. Community of Learning with Experts & Peers
9. Portfolio Assessment and Feedback
10. Assisted Learning (e.g., task structuring)
11. Reciprocal Teaching & Peer Collaboration

6. Types of Scaffolding

(Bonk et al., 2001)



- Social Acknowledgement
- Questioning
- Direct Instruction
- Modeling/Examples
- Feedback/Praise
- Cognitive Task Structuring
- Cognitive Elaborations/Explanations
- Push to Explore
- Fostering Reflections/Self Awareness
- Encouraging Articulation/Dialogue Prompting
- General Advise/Scaffolding/Suggestions
- Management

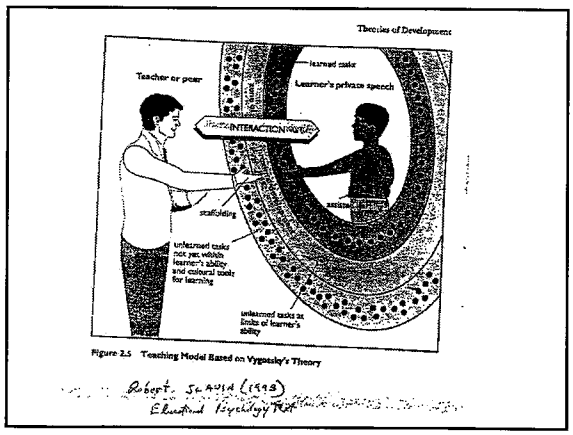


Figure 2.5 Teaching Model Based on Vygotsky's Theory

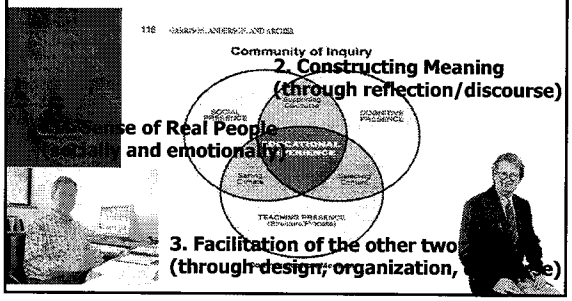
Robert Slavin (1994) Educational Psychology

7. Resources in a Learning Environment

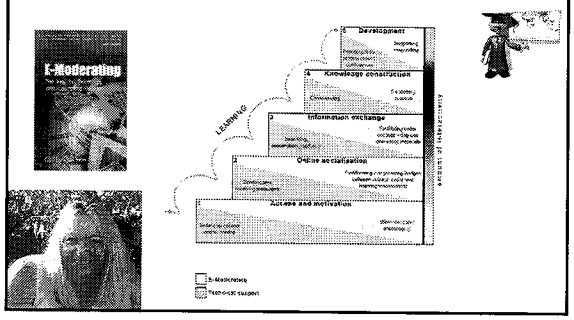
- Teachers
- Peers
- Curriculum/Textbooks
- Technology/Tools
- Experts/Community
- Assessment/Testing
- Self Reflection
- Parents

8. A Theory of Critical Inquiry in Online Distance Educ

Randy Garrison, Terry Anderson, & Walter Archer
2003, Handbook of Distance Education, Moore & Anderson (Eds.)
garrison@ucalgary.ca; terrya@athabascau.ca



9. Model of Teaching and Learning Through CMC (Gilly Salmon, 2000)



10. Instructor Roles Online

(Berge, 1995; Bonk, Kirkley, Hara, & Dennen, 2001; Ashton & Teles, 2001)

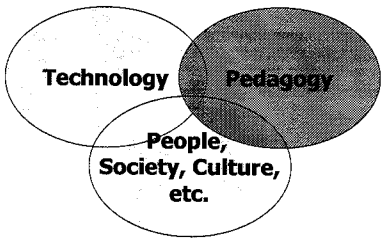
- **Technical:** Train, early tasks, be flexible, orientation task (passwords & equipment work?)
- **Managerial:** Initial meeting, FAQs, detailed syllabus, calendar, assign e-mail pals, gradebooks, email updates (understand structure?)
- **Pedagogical:** Peer feedback, debates, PBL, cases, field reflections, portfolios, teams, portfolios (interacting, summarizing)
- **Social:** Café, humor, interactivity, profiles, foreign guests, digital pics, conversations (tone)

11. Matrix of Web Interactions

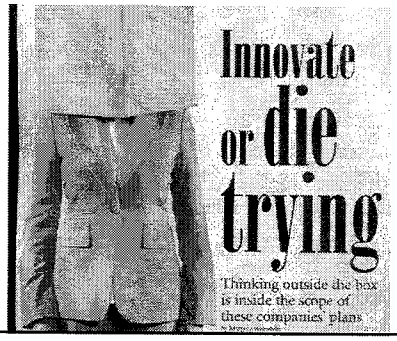
(Cummings, Bonk, & Jacobs, 2002, Internet in Higher Ed)

Instructor to Student: Syllabus, notes, feedback.
to Instructor: Course resources, syllabi, notes.
to Practitioner: Tutorials, articles, news.
Student to Student: Comments, sample work, links.
to Instructor: Votes, tests, papers, evals.
to Practitioner: Web links, resumes, reflections
Practitioner to Student: Internships, jobs, e-fieldtrips
to Instructor: Opinion surveys, fdbk, listservs
to Practitioner: Forums, listservs, prof devel.

12. Nature and Nurture: An Interactional Model



Let's Think Outside the Box!

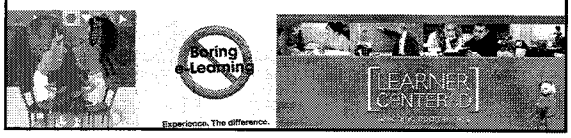


Task

- 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: 20 Learning Centered Technology Ideas



News Content Videos (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)

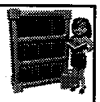
- Have students write for 3-5 minutes what was the most difficult concept from a class, presentation, or chapter. What could the instructor clarify better.
- Send to the instructor via email or online forum.
- Optional: Share with a peer before sharing with instructor or a class.

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. Think-Pair-Share-Online Partner

- Assign a topic for reflection or writing.
- Have share their responses with someone they are partnered with online.
- Share joint or individual answers with another team or with the class a online discussion forum.

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

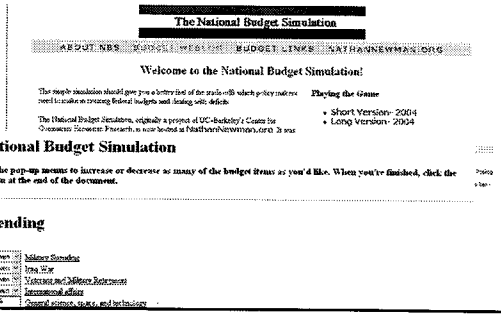
7. Six Hats (Role Play):

(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. Hands-on: Online Simulations (e.g., National Budget)



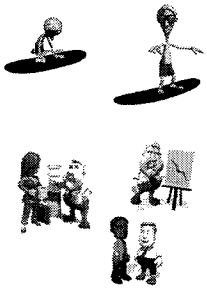
9. Best 3 Activity

(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



11. PMI (Plus, Minus, Interesting)
(L = Cost, L = Risk, M = Time)

- After completing a lecture, unit, video, expert presentation, etc. ask students what where the pluses, minuses, and interesting aspects of that activity.
- Write in an online forum.
- Respond to comments.

12. K-W-L or K-W-H-L
(L = Cost, L/M = Risk, M = Time)

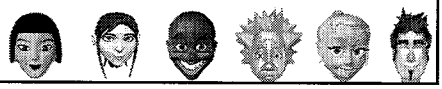
At the end of a unit, student presentation, videotape, expert presentation, etc., have student write down in an email or forum:

1. What did you know?
2. What do you want to know?
3. What did you learn?

- H = How will we learn it?

13. Numbered Heads Together
(L = Cost, M = Risk, M = Time)

a. Assign a task and divide into groups (perhaps 4-6/group).
b. Perhaps assign group names across class or perhaps some competition between them.
c. Count off from 1 to 4.
d. Discuss problem or issue assigned.
e. Instructor calls on groups & numbers.
   a. e.g., in a research methods class, one person reads intro, another the method, another the findings, discussion, implications, etc.



14. Human Graphs
(L = Cost, L = Risk, L = Time)

- In a videoconference or synchronous session, have students line up on a scale (e.g., 1 is low and 5 is high) on camera according to how they feel about something (e.g., topic, the book, class).
- Debrief

15. Stand and Share (video conferencing)

1. Present a question to a class with remote sites.
2. When know the answer, stand up to indicate to the instructor that you have an answer.
3. Wait until all are standing.
4. Call on one at a time; start with a remote site.
5. When you give an answer or hear you answer given, you can sit down (unless you have an additional answer).

16. Just-In-Time Syllabus

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

Syllabus is created as a "shell" which is thematically organized and contains print, video, and web references as well as assignments. (Goals = critical thinking, collab, develop interests)

e.g., To teach or expand the discussion of supply or elasticity, an instructor might add new links in the Just-in-Time Syllabus to breaking news about rising gasoline prices.

17. Reuse Online Discussion Transcripts

- Have students bring in their online discussions or to class.
- Look for key concepts embedded in the transcripts.
- Share or have competitions

18. Reuse Blog Transcripts

- Have students bring in their blogs on the readings for the week for a reflection or sharing.
- Summarize key points by group.
- Present in 2-3 minute summaries.

19. Movie assignments (Bonk 2004)

III. Final Project Movie Review (60 Points)

Movie Review Directions (Select 2 movies including at least 1 from Group A) Your final activity i from the standpoint of one or more learning theories or theorists. In your review, you should discu are they exhibited in different actors, scenes, or plots? I prefer personal descriptions of each cours may be needed at times. Also, what theory or theories of learning and cognition do these movies r discuss how teachers are portrayed and the overall learning environment. Is there any learning thec your personal theory of learning? You must include links to at least 4 chapters in your review. You review must come from Group A below.

Group A: Some standard learning and cognition classics include the following:

- Conrack (John Voight, Paul Winfield, Hume Cronyn)
- Dead Poets Society (Robin Williams, Ethan Hawke)
- Dangerous Minds (Michelle Pfeiffer, George Dzundza, Courtney B. Vance)
- Forrest Gump (Tom Hanks, Sally Field, Dick Clark, John Lennon, Bob Hope)
- The Lord of the Rings (pick any 1 of the 3 movie) (Sean Astin, Viggo Mortensen, Ian McK Bloom, Billy Boyd, Brad Dourif, Ian Holm, Christopher Lee, Ian McKellen, Dominic Mon
- Man Without a Face (Mel Gibson, George Martin, Michael DeLuise)
- Mirror Has Two Faces (Barbara Streisand, Jeff Bridges, Pierce Brosnan)
- Mr. Holland's Opus (Richard Dreyfuss, Glenne Headly)
- Renaissance Man (Danny Devito, Gregory Hines, Mark Wahlberg, Cliff Robertson)

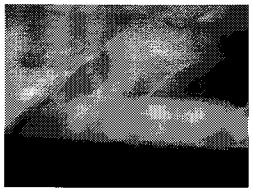
20. Class Voting and Polling
(perhaps electronic)

1. Ask students to vote on issue before class (anonymously or send directly to the instructor)
2. Instructor pulls our minority pt of view
3. Discuss with majority pt of view
4. Repoll students after class

(Note: Delphi or Timed Disclosure Technique:
anomymous input till a due date
and then post results and
reconsider until consensus
Rick Kulp, IBM, 1999)

99 seconds: What have you learned so far?

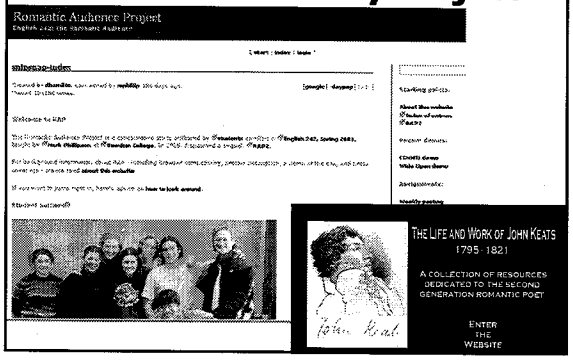
- Solid and Fuzzy in groups of two to four



Part II: Interactive and Collaborative Examples!!!

(Learner-Learner, Learner-Instructor, Learner-Self, and Learner-Content)

1. Romantic Poetry Project



2. Structured Controversy and Instructor (or student) Generated Virtual Debates

(L = Cost, M = Risk, M = Time)

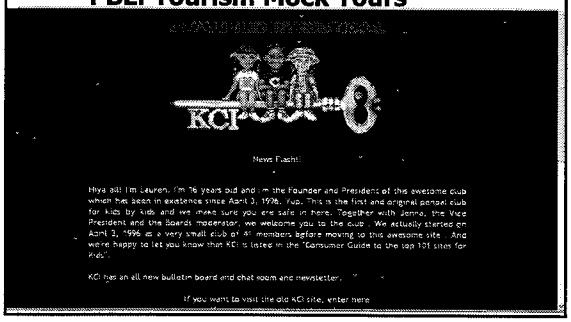
1. Select controversial topic (with input from class)
2. Divide class into subtopic pairs: one critic and one defender.
3. Assign each pair a perspective or subtopic
4. Critics and defenders post initial position statements in an online thread
5. Rebut person in one's pair
6. Reply to 2+ positions with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

3. Jigsaw

(L = Cost, M = Risk, H = Time)

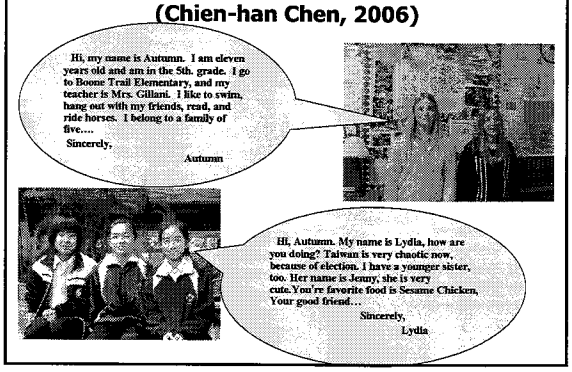
- Form home or base groups of 4-6 students.
- Student move to expert groups—discussion ideas in a chat.
- Share knowledge in expert groups and help each other master the material in an online forum.
- Come back to base group to share or teach teammates.
- Students present in group what learned.

4. Cross Cultural Exchanges and Goal Driven and Product Based: PBL: Tourism Mock Tours



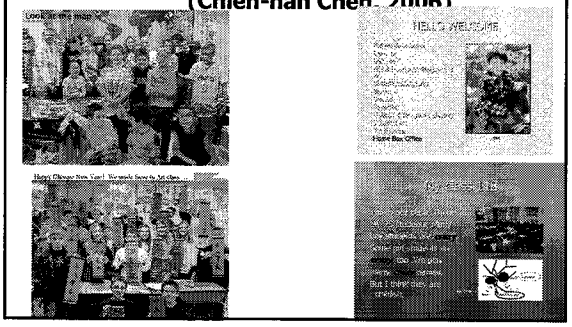
Exchange Self-introduction E-mail

(Chien-han Chen, 2006)



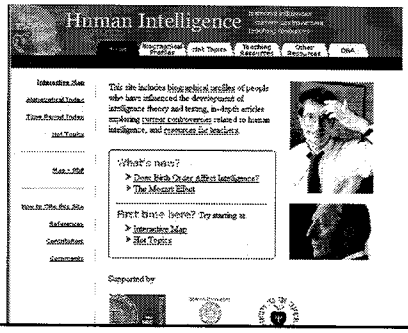
Exchange Self-introductions

PowerPoint Slides from Missouri and Taiwan (Chien-han Chen, 2006)



5: Internally Built Web Links

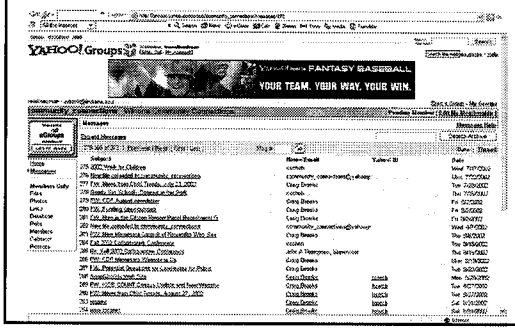
(Human Intelligence Homepage, Jonathan Plucker, IU)



6. Goal Driven & Product Based: B. PBL

1. **Asks a guiding question or poses a problem that each student can answer (e.g., What do nocturnal animals do while we're sleeping?)**
2. **Involves in concrete, hands-on experiences—filed trips, experiments, posters, presentations**
3. **Asks students to investigate issues & topics addressing real-world problems (in-depth)**
4. **Fosters abstract, intellectual tasks to explore complex issues (e.g., make judgments, interpret, synthesis, etc.)**

7. Yahoo Groups: Lurk in an Online Group



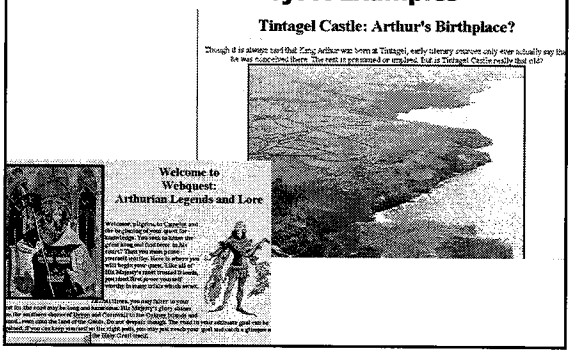
8. Expert Mentoring Online in Art and Design

(COFA Online, Omnium Project, Creative Waves—onine graphics and photomedia project)

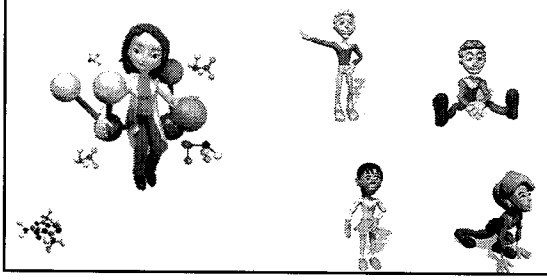
9. Gallery Tours, Team Products

- **Team or Course White Paper, Business Plan, Study Guide, Glossary, Journal: Have students work in teams to produce a product and share with other groups**
- **Post work to online gallery. Expert Review and rate projects (authentic audience)**
- **Students generate products for the class**

10. Gallery Tours: TICKET Project Examples



99 Second Stretch Break and Chat!!!



Part II. Mucho Motivation

Brainstorm: Why are computers motivating?

Ok, Million Dollar Question: How can you motivate learners with technology?

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

1. Social Ice Breakers

C. Scavenger Hunt

1. Create a 20-30 item online scavenger hunt (e.g., findin information on the Web)
2. Post scores

D. Two Truths, One Lie

1. Tell 2 truths and 1 lie about yourself
2. Class votes on which is the lie

E. Favorite Web Site

1. Social Ice Breakers

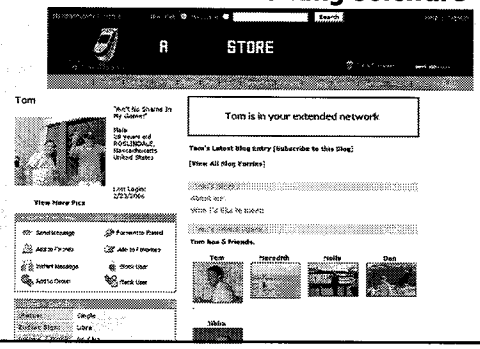
F. Peer (or Team) Interviews:

Have learners interview each other via e-mail and then post introductions for each other.

G. Public Commitments:

Have students share how they will fit the coursework into their busy schedules

1h. Scavenger Hunt: Find Fellow Students Social Networking Software



2. Feedback:

A. Web-Supported Group Reading Reactions

1. Give a set of articles.
2. Post reactions to 3-4 articles that intrigued them.
3. What is most impt in readings?
4. React to postings of 3-4 peers.
5. Summarize posts made to their reaction.

(Note: this could also be done in teams)

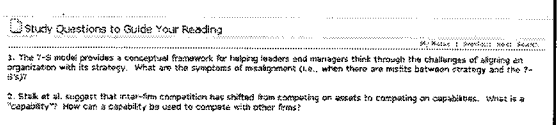
2. Feedback (Instructor)

B. Anonymous Suggestion Box

George Watson, Univ of Delaware, Electricity and Electronics for Engineers:

1. Students send anonymous course feedback (Web forms or email)
2. Submission box is password protected
3. Instructor decides how to respond
4. Then provide response and most or all of suggestion in online forum
5. It defuses difficult issues, airs instructor views, and justified actions publicly.
6. Caution: If you are disturbed by criticism, perhaps do not use.

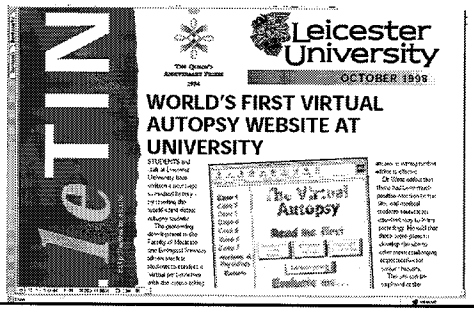
3. Engagement
A. Questions to Guide Reading


Study Questions to Guide Your Reading

1. The 7-S model provides a conceptual framework for helping leaders and managers think through the challenges of aligning an organization with its strategy. What are the symptoms of misalignment (i.e., when there are misfits between strategy and the 7-S's)?

2. Stalk et al. suggest that inter-firm competition has shifted from competing on assets to competing on capabilities. What is a "capability"? How can a capability be used to compete with other firms?

4. Meaningfulness: A. Virtual Surgery



4. Meaningfulness:
B. Authentic Data Analysis

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

- A set of research q's and problems that archaeologists have posed about the site
- A complete set of data from site & background info
- Students work collaboratively to integrate multidisciplinary data & interpr
- Interpret of ancient environme
- Analyze artifacts/fossils from s

4. Meaningfulness:
C. Use Google Maps Mashups in K-12 Education
By Jeffrey Branzburg, May 15, 2006
http://www.techlearning.com/story/showArticle.jhtml?articleID=187002846

- **Studying Earth Science? Earthquakes in the Last Week uses Google Maps with data provided by the U.S. Geological Survey to show earthquakes of magnitude 2.5 or greater in the past seven days. *Suggested activities:* Study patterns, then correlate them with plate tectonics and faults. Click the map markers for further information regarding the specific quake.**

4. Meaningfulness:
D. Use Google Maps Mashups in K-12 Education
By Jeffrey Branzburg, May 15, 2006
http://www.techlearning.com/story/showArticle.jhtml?articleID=187002846

- **The Google Planimeter measures areas. Click on three points on a map, and the Planimeter connects them in a triangle and computes the area. Click on additional points and the triangle expands into a many-sided polygon; the program recomputes the area. *Suggested activities:* Have students estimate the area of a geographical region; plot many points to obtain increasingly accurate estimates. For example, a lake in New York state is first bounded by using 3 points, then by 19 for increased accuracy.**

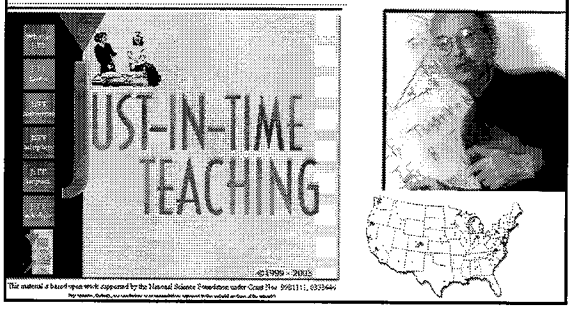
5. Choice:
A. Discussion: Starter-Wrapper (Hara, Bonk, & Angeli, 2000)

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).

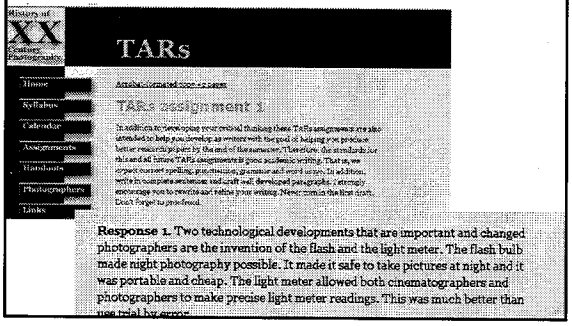
B. Alternative: Facilitator-Starter-Wrapper (Alexander, 2001)

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

6. Variety: A. Just-In-Time-Teaching (JiTT) http://webphysics.iupui.edu/jitt/jitt.html

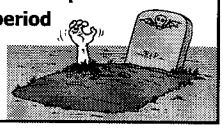


6B. Variety: Thinking About the Readings (TARS) JIiT; Claude Cookman, IU, Photography Class



7. Curiosity: A. Electronic Seance

- Students read books from famous dead people
- Convene when dark (sync or asynchronous).
- Present present day problem for them to solve
- Participate from within those characters (e.g., read direct quotes from books or articles)
- Invite expert guests from other campuses
- Keep chat open for set time period
- Debrief



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 b 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-effective and is NOT value for money, and does NOT equate good quality — Attila the Hun

Role 1: Starter/Mediator Reporter/Commentator

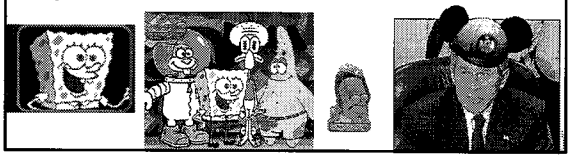
- Summarizes the key terms, ideas, and issues in the chapters, supplemental instructor notes, journal articles, and other assigned readings and asks thought provoking questions typically before one's peers read or discuss the concepts and ideas. In effect, he/she points out what to expect in the upcoming readings or activities. Once the "start" is posted, this student acts as a mediator or facilitator of discussion for the week.

Role 2: Wrapper/Summarizer Synthesizer/Connector/Reviewer

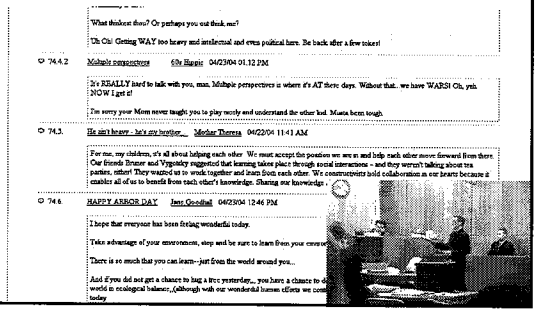
- Connects ideas, synthesizes discussion, interrelates comments, and links both explicit and implicit ideas posed in online discussion or other activities. The learner looks for themes in online coursework while weaving information together. The wrapping or summarizing is done at least at the end of the week or unit, but preferably two or more times depending on the length of activity.

Role 3: Slacker/Slough/Slug/Surfer Dude

- **In this role, the student does little or nothing to help him/herself or his/her peers learn. Here, one can only sit back quietly and listen, make others do all the work for you, and generally have a laid back attitude (i.e., go to the beach) when addressing this problem.**



8. Tension: B. Online Role Plays, Debates, Mock Trials



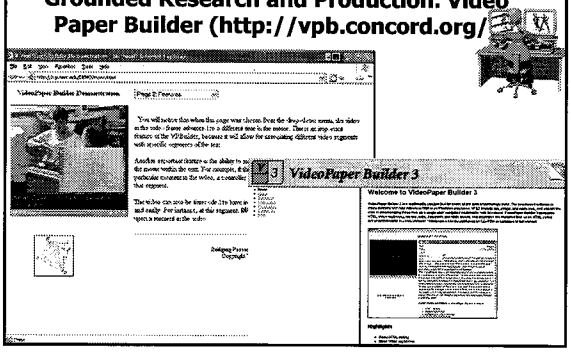
9. Interactive

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)

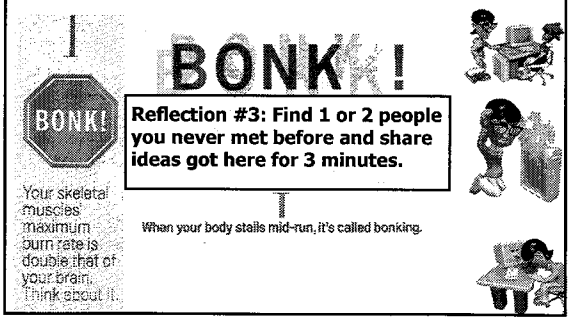
B. Press Conference: Have a series of press conferences at the end of small group projects; one for each group)

C. Symposia of Experts

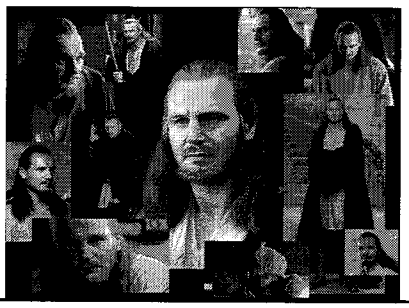
10. Product-Based: A. Video Papers. Grounded Research and Production. Video Paper Builder (http://vpb.concord.org/



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



Part IV. 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: 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.

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.

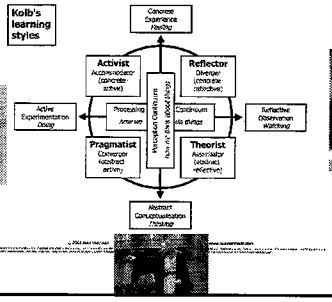
Abstract Conceptualization vs. Concrete Experiences

- (**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.

The Blending of Learning Styles

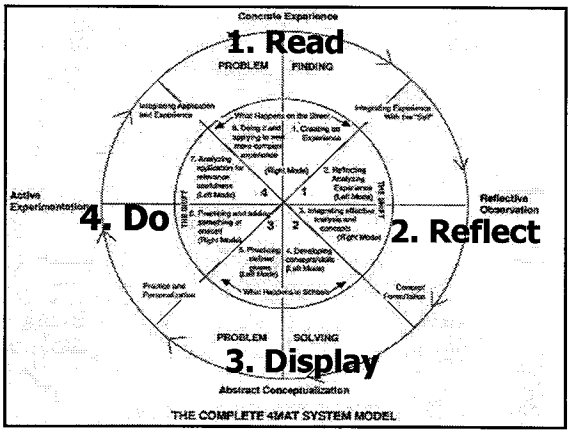


Index of Learning Styles Questionnaire

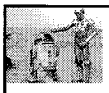
Barbara A. Soloman, North Carolina State Univ
http://www.engr.ncsu.edu/learningstyles/ilsweb.html

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.

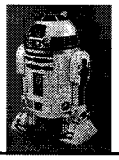
7. I prefer to get new information in
   - ○ (a) pictures, diagrams, graphs, or maps.
   - ○ (b) written directions or verbal information.

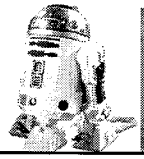


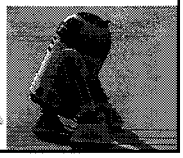
The R2D2 Method



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



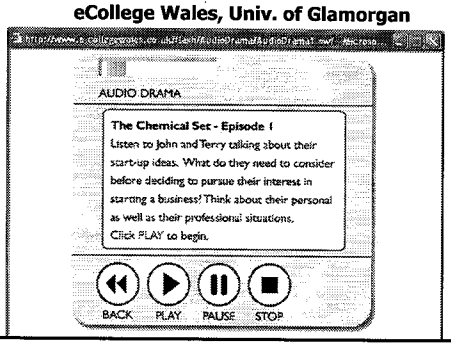




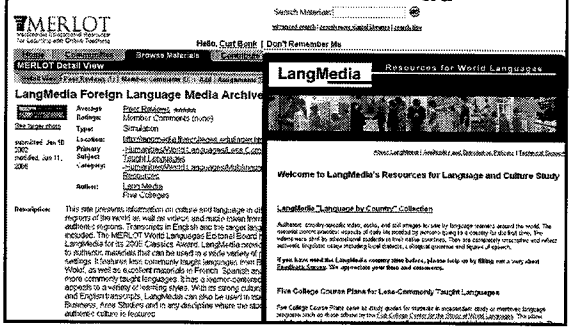
1. Auditory or Verbal Learners

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

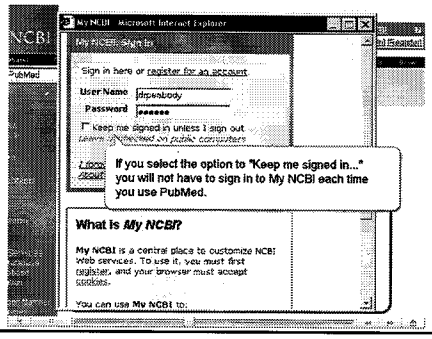
1a. Online Audio Cases
Audio Dramas
eCollege Wales, Univ. of Glamorgan



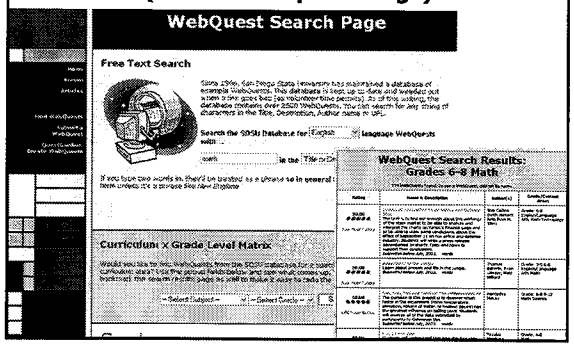
1b. LangMedia's Resources for Language and Culture Study
2005 MERLOT Classics Award



1c. Online Tutorials and Help



1d. Webquests
(see the Webquests Page)



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 Laura to recommend Billings instead of Lewis? Explain, being specific about the legal doctrines that would apply?

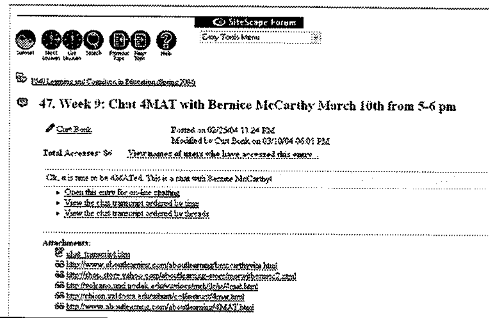
Answer 1

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.

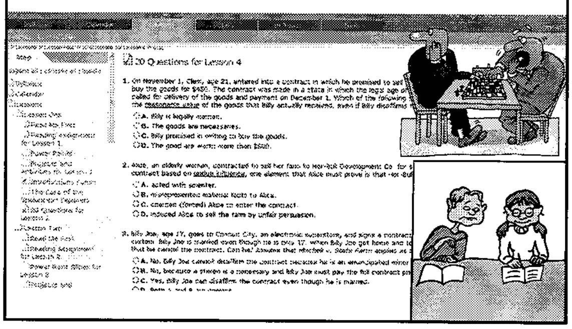
Title VII "prohibits discrimination based on race, color, religion, sex, and national origin in hiring, firing, job assignments, pay, access to training and apprenticeship programs, and most other employment decisions." ARPCO is a covered entity under Title VII because they are "employing 15 or more 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

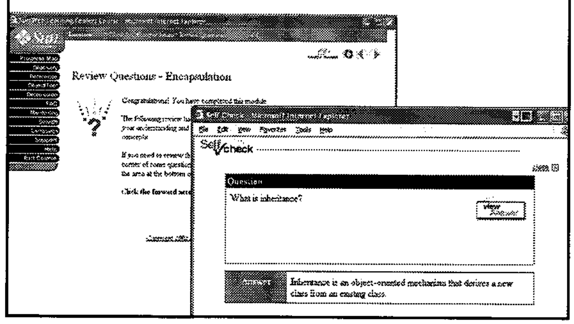
2b. Reuse Chat Transcripts



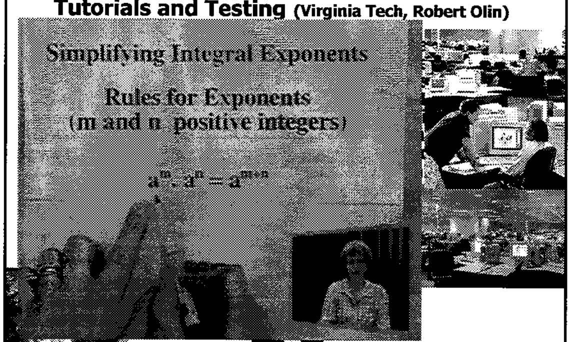
2c. Preclass Exam and Short Quizzes Practice



2d. Learner-Self Interactions and Reflections



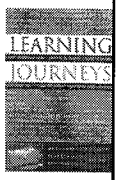
2e. Video Streaming: Math Emporium of Online Tutorials and Testing (Virginia Tech, Robert Olin)



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

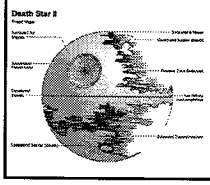
2g. Reflection Papers and Trend Papers (3-4 page)

- **Have students write papers about emerging trends in the field and post to an online forum or drop box. Have them select topics from a list or suggest topics. What did they learn? Perhaps have them present their trend papers to the class.**

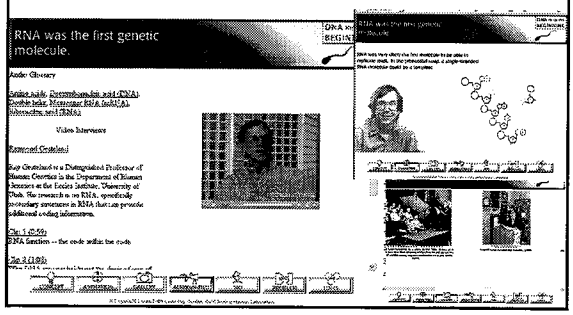


3. Visual Learners

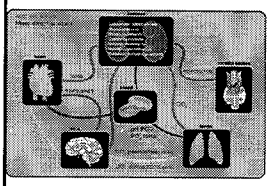
- **Visual learners prefer diagrams, flowcharts, timelines, pictures, films, and demonstrations.**

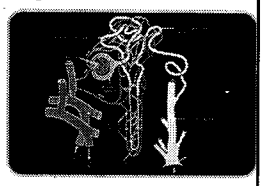


3a. Animations, Video Clips, Audio, Pictures, Web Resources, etc.



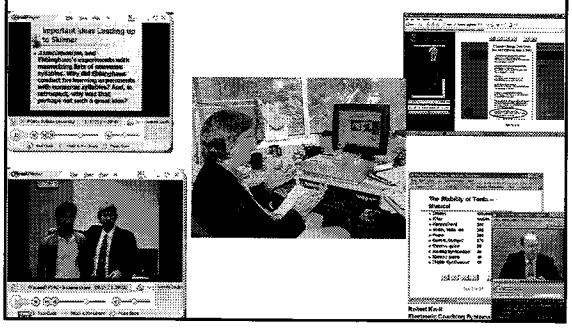
3b. Concept Maps, Flowcharts, Diagrams, Maps, etc.



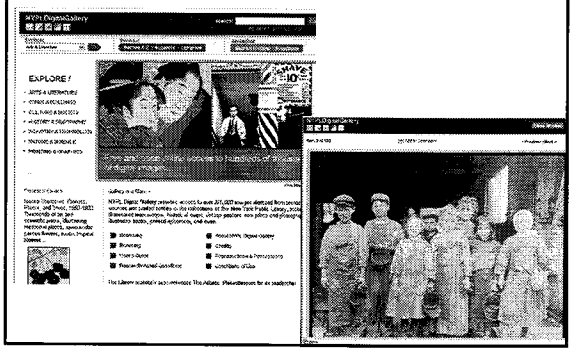


Elements in the system for control of oxygenation in the human body (e.g., the Kidney): From: Next-Generation Educational Software Why We Need It and a Research Agenda for Getting It. Van Dam, Becker, & Simpson, *Educause Review,* March/April 2005

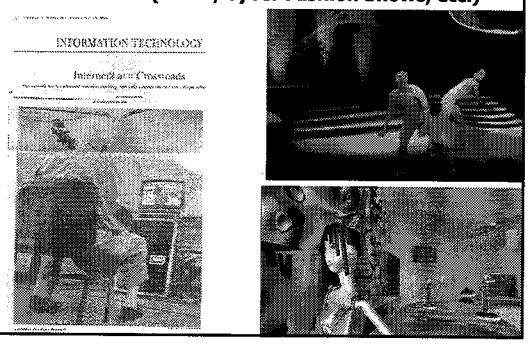
3c. Video Streamed Lectures and Expert Commenting



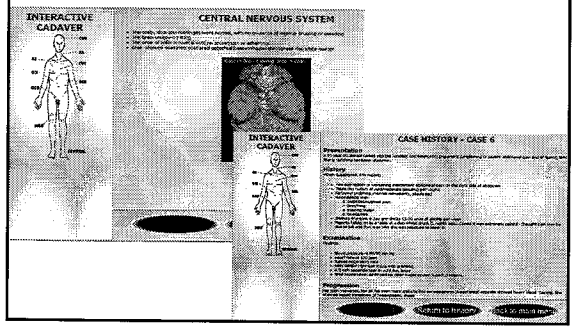
3d. Digital Libraries (LibraryShare)



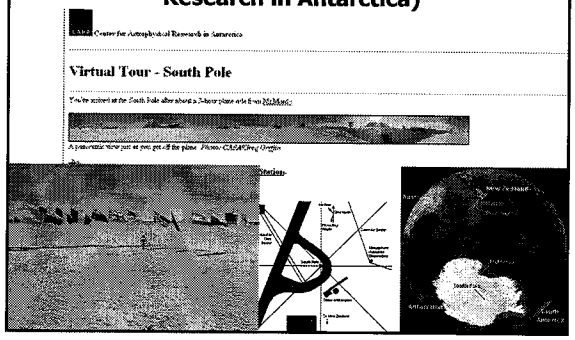
3e. Online Modeling: Watch Expert Performances (Music, Cyber Fashion Shows, etc.)



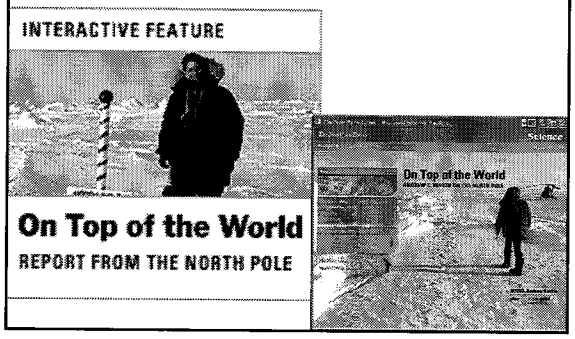
3f. Online Visual Cases.



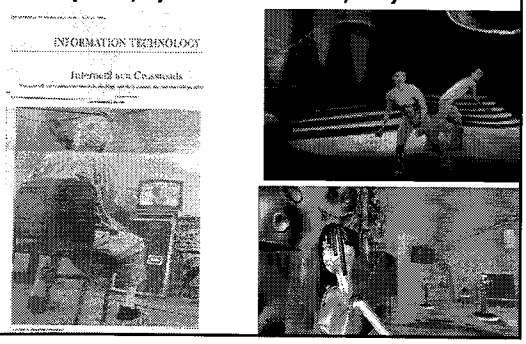
3g. Virtual Tour (Center for Astrophysical Research in Antarctica)



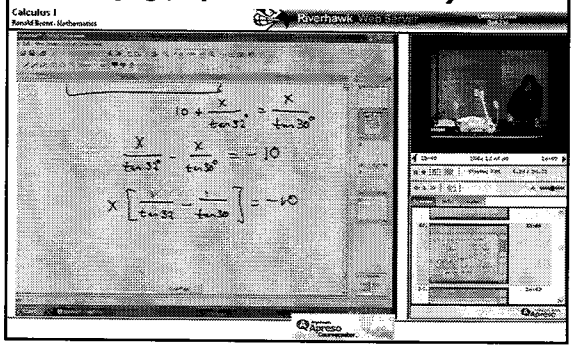
3h. Current Events: Interactive Online New Stories & Cases



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



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



3k. Internet2 Video Conferencing Applications

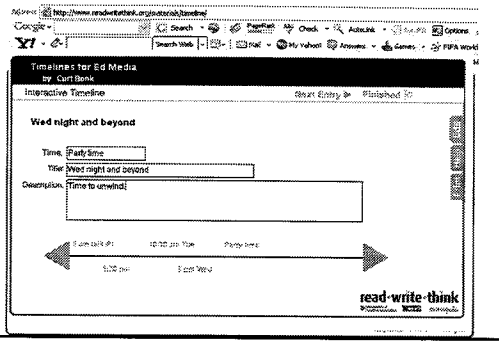
Arts & Humanities

Digital Film Festival

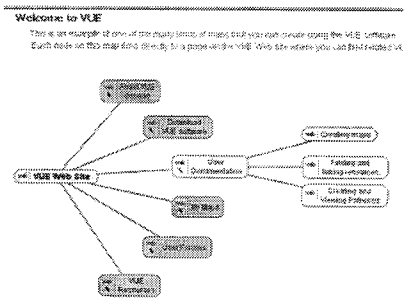
ng in the Arts

Distributed Rap Sessions

3k. Virtual Timelines

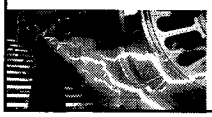


3m. MindMapping Software



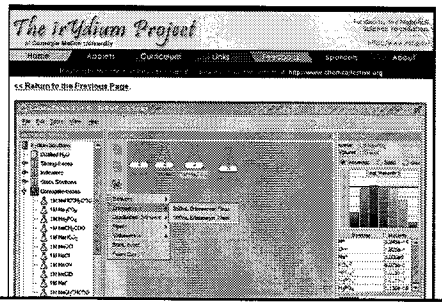
4. Tactile/Kinesthetic Learners

- **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. Online Labs

(e.g., Foreign Language Practice Exercises Online)

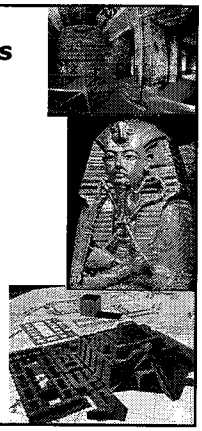


4b. Videoconferencing with Hearing Impaired Students Online

- **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

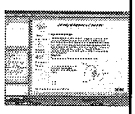
- In its final form, the multi-player game will let you march through three-dimensional recreations of the first city-states, around 3000 B.C., the first empires, around 2300 B.C., and finally the famous Iron Age empire of Assyria...offers three-dimensional walk-throughs of sites in the Valley of the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



4d. Digital Storytelling

4e. Synchronous Critique

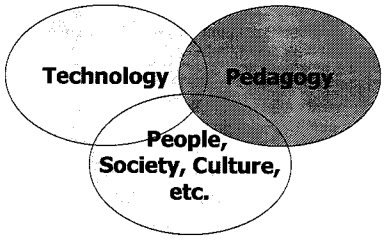
- Prepare students:
  - Provide ground rules and guidelines
  - Hold practice sessions
  - Provide materials to be critiqued
- Promote interactions and feedback:
  - Structure the synchronous critique activity
  - Scaffold the discussion
  - Moderate students' critique behaviors
  - Use a small-group and be flexible about synchronous activity management



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

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

Nature and Nurture: An Interactional Model



Poll: Do you think technology will change that way you teach?

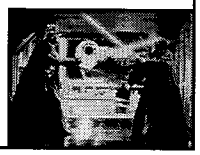
a. Yes, definitely
b. Probably yes
c. Maybe
d. No
e. Do not yet know

Final Poll: How many ideas did you get from this morning?

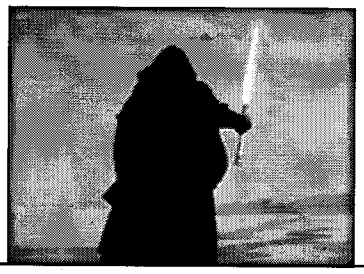
a. None—you are an idiot.
b. 1 (and it is a lonely #).
c. 2 (it can be as bad as one).
d. 3-5
e. 6-10
f. Higher than I can count!

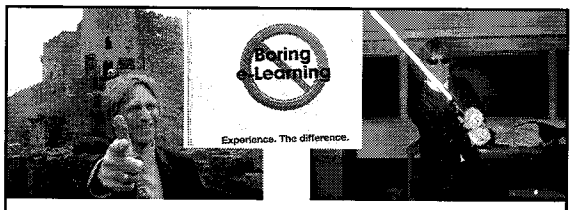
Stand and Share
(what have YOU mastered?)

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



Try the R2D2 Method!!!





Questions???

Sample HOBLe chapters at:
http://www.publicationshare.com/

Archived talks at:
http://www.trainingshare.com/