E-Learning: It's about Nature (technology) AND Nurture (pedagogy)
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Nature and Nurture:
An Interactional Model

Technologies of 1885

Technologies of the 1880s?

Technologies of 1955
Technologies of 1985

Technologies of the 1980s

Radio Shack TRS-80 Model III
- Introduced: July 1980
- Price: US $899 basic model
- US $1299 w/ disk drive, dual cassette
- CPU: Z80A
- RAM: 64, 48K max
- Ports: Cassette, dual, expansion, serial
- Display: 13-sector SW monitor 84 x 14 char
- Staging: 0, 7, or 13 internal 700K floppy trays, external cassette @ 500 / 1000 baud
- OS: BASED on RT-11, TRS-DOS on disk

Technologies of the 1980s:
Course Management Systems

Apple
Apple III
Basic 10B

ten years

Effects of interactive multimedia in
distance learning

"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."
Entice Students with Technology Giveaways

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 explore 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

Trend #1: Blogging (75,000 new blogs each day, USA Today, March 27, 2006)

Scholars who Blog, Chronicle of Higher Ed,
(Glenn Reynolds, instapundit.com;

Vlogging (Video Blogging)
**Adventure Blogging**
(Ben Saunders, Mark Fennell)

**Trend #2. Wikis**

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**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?

**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

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**What is a wiki?**

- Ward Cunningham, in 1995
- The name, wiki, is based on the Hawaiian term *wiki-wiki*, meaning "quick"
- Also for "What I Know Is"

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**Wikibook Research**

My recent Wikibook project was successful

- Strong Agree: 21%
- Strong Disagree: 4%
- Disagree: 25%
- Agree: 50%
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?

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)
Educational Applications

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

Trend 4: Virtual Worlds/Virtual Reality/MMOG
First Course in a Virtual World (Second Life)
Wednesday, August 30, 2006

Trend #5: Wireless Technology

Trend #6: Mobile Technology

Trend #7. Collaborative Tools
1. Learner-Centered Learning Principles
(American Psychological Association, 1993)

- Cognitive and Metacognitive Factors
- Developmental and Social Factors
- Individual Differences
- Motivational and Affective 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
7. Motivational and emotional influences
8. Intrinsic motivation to learn
9. Effects of motivation on effort

2. Anchored Instruction (find anchoring event (CTGV, 1990?)
(L = 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.

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

- Have students spend a day in the library or online finding and summarizing a set number of articles.
- Have them bring to class or post abstracts to an online forum.
- Share in small groups interested in similar topics.
- Perhaps give each student 1-2 minutes to describe what found in a chat.

4. 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
5: Online Warm-ups Activities
Just-In-Time-Teaching (JITT)
http://webphysics.iupui.edu/jitt/jitt.html

Part II.
Mucho Motivation

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: a. Scavenger Hunt (Find Fellow Students Social Networking Software)

2. Feedback. A. Student Self-Testing (e.g., Calm Chemistry)

2. Feedback: b. Clickers; Innovation is but one click away...
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.

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 or more sessions


99 seconds: What have you learned so far?
- Solid and Fuzzy in groups of two to four

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
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)

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

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.
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.
2b. Reuse Chat Transcripts

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

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

3a. Online Anatomy and Physiology

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

4. Tactile/Kinesthetic Learners
- Tactile/kinesthetic senses can be engaged in the learning process through role play, dramatization, cooperative games, simulations, creative movement and dance, multi-sensory activities, manipulatives and hands-on projects.
4a. 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

4b. Romantic Poetry Project

Next up: The MATRIX!

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

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

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Technology is Part of the Equation (Podcasts and Wikis and Blogs! Oh, My!)