E-Learning: It's about Nature (technology) AND Nurture (pedagogy)
Curtis J. Bonk, Professor, Indiana University
President, SurveyShare
cjbonk@indiana.edu
http://mypace.liu.edu/~cjbonk/

Nature and Nurture: An Interactional Model
Technology
Pedagogy
People,
Society, Culture, etc.

Poll #1:
Raise your hands if you are a digital native (grew up with a computer at home).

Next Generation of Students

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

Gloria Kwan listens to her iPod while texting messaging a friend who's in class.
Chronicle photo by Mike Kepka
A. Enabling Blend National University
Department of Teacher Education
(Reynolds & Greiner, 2006)

- 12,000 Enrolled Students
- Since 2004 More than 50% of Candidates Enrolling as Online rather than On-site
  - They will take a majority of classes online
- Each Candidate Takes 7 Credential Classes
- Each Class Contains 2 Field-based Exp.
- 500 Classes/Yr. & 20 Students/Class =
- 20,000 Field-based Experiences/Year

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?
**Adventure Blogging**  
(Ben Saunders, Mark Fennell)

**Use of Weblogs**  
(epecially 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

**Vlogging (Video Blogging)**

**Trend #2. Wikis**

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

For Teachers New to Wikis

• Wikis are free, online writing spaces.
• Wikis use simple formatting rules, so no HTML understanding required.
• Highly collaborative composing and creativity
• Authors do not claim ownership
• Published online
• Wikis provide a history and anyone can revisit prior versions of text

Trend #3. Podcasting, Webcasting, and Coursecasting (Adam Curry; www.dailysourcecode.com)

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 podcast?
5. Who thinks podcasting is simply more talking heads?

Student Podcast

"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)
Educational Applications
(Essex, 2006; Leftwich, 2007)

1. Recordings of lectures, speeches
2. Supplemental textbook or entire book
3. Student projects
4. Virtual interviews
5. Language lessons
6. School announcements
7. Oral reports
8. K-12 classroom interactions
9. Downloadable library of resources
10. Recordings of performances

Trend #4. $100 Laptop
Negroponte says the new laptop is designed to be kid-friendly

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

Trend #5: Virtual Worlds/Virtual Reality/MMOG
First Course in a Virtual World (Second Life)
Wednesday, August 30, 2006
Harvard Law School (Charles & Rebecca Nesson)
Chronicle of Higher Ed (open to the public)

Trend #6. Skype and Google Talk: Online Phone Calls

Trend #7. Digital Books
By Kim Rahn, March 7, 2007, Digital Textbook to Debut Next Year, The Korea Times

• Students will be able to interact with teachers regardless of time and space and study according to their ability through computers as the nation plans to adopt the digital textbook.
• Provides the multi-functionality of textbook, workbook, exercise book and dictionary...such features as video clips, animation and virtual reality.

Trend #8. OpenSource Tools
Trend #9. Simulations (SimTeacher)

Ariella Naden

Trend #10. Open CourseWare

Technology in the Developing World
(Kirkpatrick, Dec 22, 2006, CNN Money)

- The Global Education and Learning Community (GELC) aims to bring the principles of open source to education. Scott McNealy, former CEO of Sun Microsystems, is working to create a free universal curriculum from Kindergarten to 12th grade in every major subject. Any educator/researcher can contribute and it will be in any language.

Trend #11. Portals and Free and Open Resources

Trend #12. Social Networking Software
(Facebook, MySpace, CyWorlds, etc.)

Trend #13. Participatory Video Repositories
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. Cool Resource Provider
(Bonk, 2004)

3. ORL or Library Day
(Bonk, 1999)

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

II. Four Motivational Ideas

TEC-VARIETY Model
Online Motivational

1. Tone/Climate: Psych Safety, Comfort, Belonging
2. Encouragement, Feedback: Responsive, Supports
3. Curiosity: Fun, Fantasy, Control

4. Variety: Novelty, Intrigue, Unknowns
5. Autonomy: Choice: Flexibility, Opportunities
6. Relevance: Meaningful, Authentic, Interesting
7. Interactive: Collaborative, Team-Based, Community
8. Engagement: Effort, Involvement, Excitement
9. Tension: Challenge, Dissonance, Controversy
10. Yields Products: Goal Driven, Products, Success, Ownership

1. Tone/Climate: a Scavenger Hunt (Find Fellow Students Social Networking Software)
2. Encouragement, Feedback, etc.: A. Critical/Constructive Friends, Email Pals...

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

10. Yields Products: Concept Maps, Video Papers, Virtual Timelines

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

Part III. 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?

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

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. Art and History Exhibits

1b. Basic Acoustics of Musical Instruments 2005 MERLOT Classics Award

Acoustic Challenge
If you are a musician and you have a question about how instrument design and sound affects the music, consider the acoustical properties below to answer the question.

- Resonance
- Reflection
- Absorption
- Diffraction
- Transmission

Some musical instruments are designed to produce sound in a specific environment, while others are designed to be played in a variety of environments. The acoustical properties of each instrument can affect the sound produced and the way it travels through the air.

1c. Online Literature and Free Books

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. Reuse Chat Transcripts

2b. Online Professional Development (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. Expert Mentoring Online in Art and Design
(COFA Online, Omnium Project, Creative Waves—online graphics and photomedia project)

3c. REAL-TIME PALEONTOLOGY
(videoconferencing) Ozarks Technical Community College (MO) and MOREnet, the Missouri Research and Educ Network
- They've installed 1,600 feet of armored, direct-burial fiber-optic cable in the Riverbluff Cave in southwest Missouri, and have networked a field house where work is being done on discovered artifacts. Those finds include some of the oldest Ice Age fossils in North America.
- RESEARCHERS broadcast live classroom content from Riverbluff Cave.

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. 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

4c. Sample Junior Book (Dinosaurs)
http://en.wikibooks.org/wiki/Main_Page
Next up: The MATRIX!!!!!!!!!!

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

Nature and Nurture:
An Interactional Model

Technology
Pedagogy

People,
Society, Culture,
etc.

It is both Nature AND Nurture as well as PEOPLE!!! Technology is just part of the Equation

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