Creatively Engaging Online Students: Models and Activities

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College technology 'catching up' with students
By Kathleen Gray and Robin Erb, USA TODAY,
October 6, 2009

Senior Emily Smak, 20, tries out the treadmill workstation in one of the study lounges in the new Education and Human Services Building at Central Michigan University. There is a new iMac computer attached to it so students can get a little exercise while doing homework or other things on the computer.

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- At Case Western Reserve University in Cleveland, a select group of freshmen received Kindles, an online book reader, instead of the textbooks.
  - Mike Kenney, a chemistry professor at Case Western, says he has about 350 pounds' worth of books in his Kindle
- And at Central Michigan University in Mt. Pleasant, a new $50 million education building has 75 miles of Internet networking cable and 11 miles of phone cable, allowing out-of-town students to link with the classroom.

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- At Abilene Christian (University)...about 2,800 students and 70% of the 250 professors use the Apple technology for instructional purposes.
  - Art students use app to draft sketch and send it to the teacher and other students for advice before starting the real art pieces.
  - A drama teacher takes video of the lead dancer in a production and sends that along to other students for rehearsal.

Teaching Under Fire and Online From 'Mortaritaville' in Iraq.
October 5, 2009, Chronicle of Higher Ed

Cheryl Wachenheim, an associate professor at North Dakota State U., was deployed to Iraq but decided to keep teaching her economics classes online.

"It was especially easy to teach about shortages and surpluses," she says. "When we heard that the base had Diet Mountain Dew, I can't even explain how exciting that was, and I could explain firsthand just what a shortage can do."

Poll #1: Bonk's Web Addiction Questionnaire (check all that apply)

1. Own 2 or more cell phones with Internet access.
2. Own 2 or more laptop computers with wireless connections.
3. Check email in the morning, noon, and at night.
4. Suffer from nervous tension when you cannot get on email.
5. Are checking email, updating your Facebook account, or text messaging right now.

We are not motivating students with the technologies that they love

The New Gender Divide!

What if our minds were on fire for learning?

A Circle of Knowledge Building and Sharing

Create
Support for creating interconnections of pedagogical knowledge

Open Knowledge Exchange Zone
Provide venues for sharing experiences/evidence to improve practice

Use
Encourage teachers to reuse, critique, and share freely posted pedagogical knowledge

Re-mix
Enable teachers to integrate others' knowledge into their knowledge

Promote these organically & sustainably

From the Web 2.0 to Learning 2.0

MINDS ON FIRE: OPEN EDUCATION, THE LONG TAIL, AND LEARNING 2.0. JOHN SEELY BROWN AND RICHARD ADLER, EDUCAUSE REVIEW, JANUARY-FEBRUARY, 2008.
http://connect.educause.edu/Library/EDUCAUSE+Review/MindsonFire
OpenEducationt/45823

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

Ok, Million Dollar Question: How do you motivate online learners? What words come to mind? (put ideas in chat window)

Poll #2: Which of these is the most important for motivating students? (Pick just one)

1. Supportive, appropriate challenge, meaningful.
2. Teach goal setting and self-reinforcement.
3. Offer rewards for good/improved performance.
4. Novelty, variety, choice.
5. Game-like, fun, fantasy, curiosity, suspense.
6. Divergence, dissonance, peer interaction.
7. Allow to create finished products.
8. Provide immediate feedback.
9. Show intensity, enthusiasm, interest.
10. Make content personal, concrete, familiar.

Intrinsic Motivation

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

(i.e., it emerges from needs, inner strivings, and personal curiosity for growth)

See: Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior.* NY: Plenum Press.
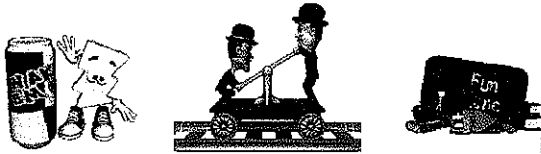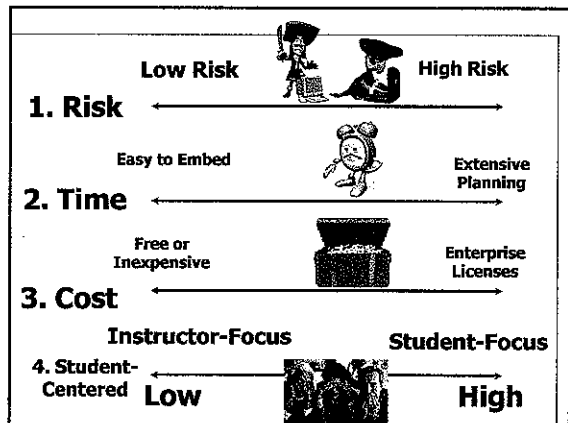
I even reflected on this for a moment...

TEC-VARIETY Model for Online Motivation and Retention

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

Part I: Some Online Motivational Ideas

	Low Risk	High Risk
1. Risk	←	→
2. Time	Easy to Embed ←	Extensive Planning →
3. Cost	Free or Inexpensive ←	Enterprise Licenses →
4. Student-Centered	Instructor-Focus Low ←	Student-Focus High →
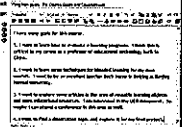
1. Tone/Climate: Social Ice Breakers

A. Public Commitments: Have students share how they will fit the coursework into their busy schedules

B. Favorite Websites
1. Everyone posts 1-2 of their favorite Websites and explain why.
2. Peers comment on or rate them.

1. Tone/Climate: C. Video Course Intros
(examples from Northern Virginia Community College and Indiana University KD (online MBA) program)
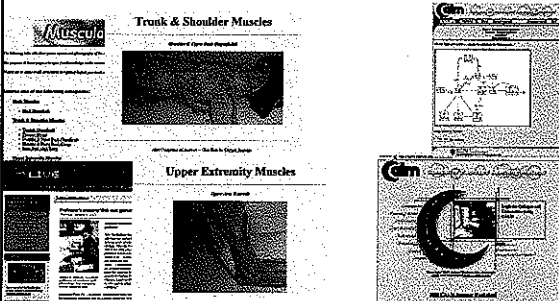
Poll #3: If students were face-to-face briefly, which of these would you use (check all that apply)
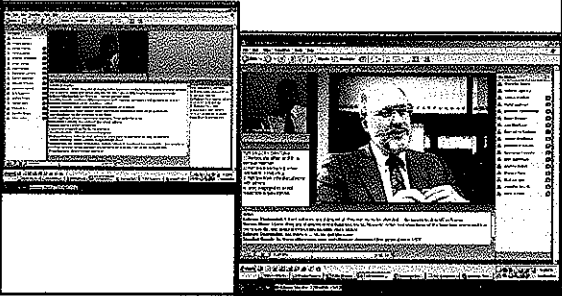
1. Assign Web buddies or critical friends.
2. Do ice breakers (e.g., paired introductions).
3. Solve cases in team competitions.
4. Test course technology in a computer lab.
5. Assign teams and exchange information using text messaging.
6. Conduct a library scavenger hunt.
7. Do a podcast documenting the meeting.
8. Have everyone start a blog.
9. Have everyone open an e-portfolio.
10. Brainstorm how might use technology in program.
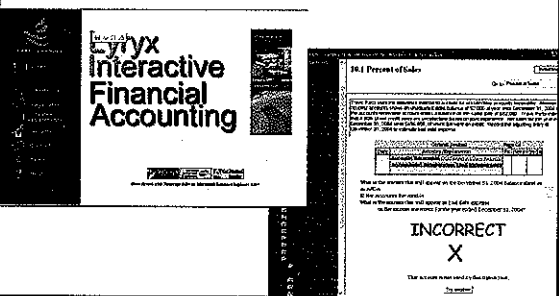
2. Encouragement, Feedback, etc.:
A. Online Self-Testing (e.g., self study in anatomy or chemistry, virtual autopsy, dissection, etc.)
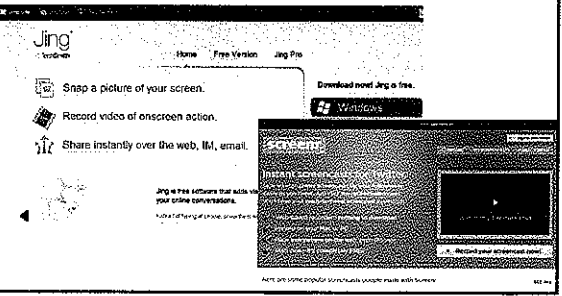
2. Encouragement, Feedback, etc.:
B. Instructor Presentation in Synchronous Sessions (Breeze, Elluminate, WebEx, etc.)
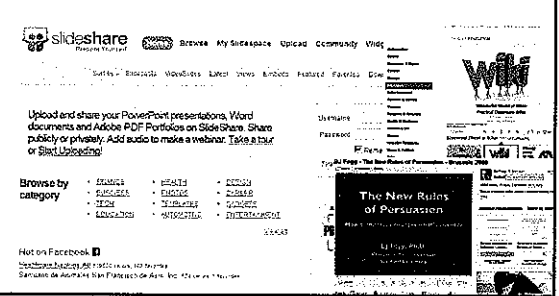
2. Encouragement, Feedback, etc.:
C. Online Simulation: Financial Accounting; (University of Calgary)

2. Encouragement, Feedback, etc.:
D. Tutorials with Screen Capture (e.g., Jing, Screenr)

2. Encouragement, Feedback, etc.:
E. Sharing Your Slides, Syllabus, Notes, Documents, etc. (e.g., SlideShare)

3. Curiosity, Fun:
A. Exploration and Demonstration:
Virtual Tours and Timelines (HyperHistory)
http://simile.mit.edu/timeline/

3. Curiosity, Fun:
B. Supplemental information (e.g., BookTV;
http://www.booktv.org/)

3. Curiosity, Fun:
C. Satellite Call Conversations
http://vg.sitesalive.com/a-call-to-antarctica

3. Curiosity, Fun:
D. Online News
(Giant jellyfish, Tiny T. rex, and Ardi)

4. Variety, Novelty:
A. Supplementing Course with Health Resources
(portals, referatories, & repositories)

4. Variety, Novelty:
B. Creating your own instructor videos
(Animoto, VideoSpin, Windows Movie Maker)

4. Variety, Novelty:
C. Adding voice to email, docs (Yack Pack, VoiceThread)

5. Autonomy, Choice: A. Online Literature Search (Class Google Jockeys)
(links to text, soundtracks, video clips, etc.)

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

5. Autonomy, Choice:
C. Online Portal Explorations
(e.g., the Encyclopedia of Life)

5. Autonomy, Choice:
D. Famous Person Homepage Explorations
(e.g., Thomas Friedman, NY Times reporter)

6. Relevance, Meaningfulness:
A. Mobile News (New York Times): A new way to take your news with you on the iPhone and iPod touch

6. Relevance, Meaningfulness:
B. 60 Second Recap
http://www.60secondrecap.com/
Actress to students: Lend me your earbuds!
English major, 24, rambunctiously recaps the classics in 60-
second Web videos; By Greg Toppo; USA TODAY, September 2009

7. Interactive, Collaborative:
A. Online Language Learning
(ECpod, Mixxer, Livemocha, Babbel, KanTalk)

7. Interactive, Collaborative:
B. Collaborative Groups (Ning, Google Groups, MSN Groups, Yahoo Groups, Diigo)

7. Interactive, Collaborative:
C. Collaborative Documents (Google Docs)

7. Interactive, Collaborative:
D. Collaborative Bookmarking (Diigo, Delicious)

8. Engagement, Effort:
A. Synchronous and Asynchronous Events (e.g., Breeze + Video + Online Forum + Online Papers)

9. Tension, Challenge, etc.:
A. Online Role Play of Famous People, Mock Trial, Debates, etc.

- Enroll famous people in your course
- Students assume voice of that person for one or more sessions

9. Tension, Challenge, etc.:
B. Electronic Guests & Mentoring
(my eCoach, Triple Creek mentoring)

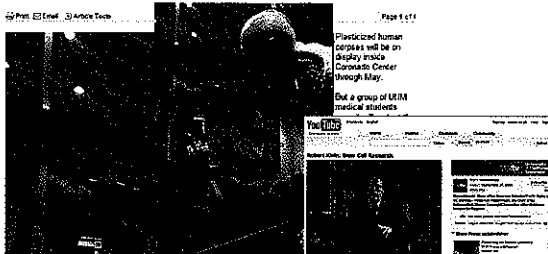## 9. Tension, Challenge, etc.:
C. Ethical Medical Debates
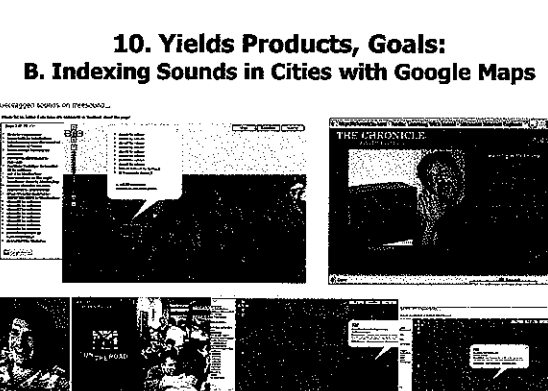
Students to protest human body exhibit

10. Yields Products, Goals:
A. Movie Festivals, Concept Maps, Video Papers, Virtual Timelines, Digital Movies

10. Yields Products, Goals:
B. Indexing Sounds in Cities with Google Maps
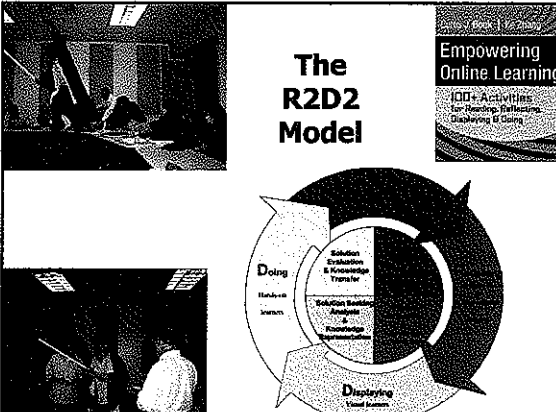

Poll #4: How many ideas did you get so far?

1. 0 if I am lucky.
2. Just 1.
3. 2, yes, 2...just 2!
4. Do I hear 3? 3!!!!
5. 4-5.
6. 5-10.
7. More than 10.
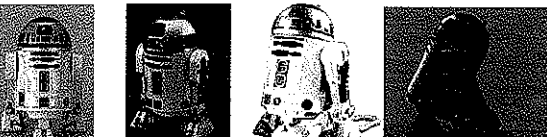
Part II: Addressing Learning Styles

The R2D2 Model

The R2D2 Method

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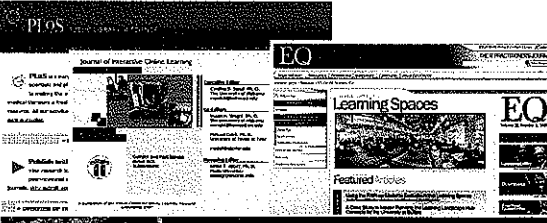

1. Auditory or Verbal Learners

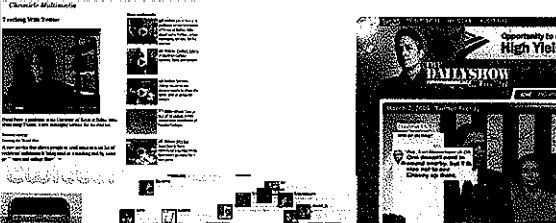- Auditory and verbal learners prefer words, spoken or written explanations.

Read 1a. Publishing in Open Access Journals (e.g., PLOS)

Read 1b. Course Announcements (e.g., Teaching with Twitter)

Read 1c. University Podcast Shows
(School of Dentistry, Univ of Michigan) Educause
Quarterly, 29(3), 2006

Poll #5: Podcast Questions

1. Have you listened to a podcast?
2. Do you listen to a certain podcast on a regular basis?
3. Have you created a podcast?
4. Have you created a vodcast?
5. Do you think podcasting is simply more talking heads?

Read 1d. Read Online Text
(e.g., Turning The Pages, British Library)

Read 1e. Wiki Steps on How to do Something: Wikihow
http://www.wikihow.com/

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

Reflect 2a. Blogs Uses

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: sumarize themes or comments across blogs
7. Blog on blog: reflections on feelings, confusions, and experiences with blogs

Reflect 2b. Critical Friend Blog Postings

Reflect 2c. Expert and Domain Specific Blogs (Health and Business Blogs)

Reflect 2d. Watch or Listen to Online Conferences

Reflect 2e. Business and Medical Cases Online (problems, solutions, etc.)

Reflect 2f. Basic Acoustics of Musical Instruments

3. Visual Learners

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

Display 3a. Pubcasts! (videos of scientific papers and science)

NSF, the Public Library of Science, and the San Diego Supercomputing Center created a YouTube for scientists to help demystify important research papers. See SciVee

Display 3b. Anchored Instruction
(find anchoring event (YouTube, CNN, BBC, TeacherTube, CurrentTV)

- 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.

Display 3c. Medical Animations and Videos
(find anchoring event (YouTube, CNN, BBC, TeacherTube, CurrentTV)

Display 3d. NASA TV
http://www.nasa.gov/multimedia/nasatv/index.html

Display 3e. Adventure Blogging
(Ben Saunders, Mark Fennell, Andrew Revkin)

Display 3f. Video Blogging
(Mike Perham's Video Blog)

Display 3g. Follow Online Adventure
Australian adventurer Don McIntyre and teenage circumnavigator Mike Perham to re-enact Capt William Bligh's epic mutiny on the Bounty open boat voyage, http://www.theyachtmarket.com/
September 9, 2009

Display 3h. Online Timelines
(US Presidents)

Display 3i. Concept Mapping and Timeline Tools (VUE, Bubbl.us, Cmap, Freemind, Gliffy, Mindmeister, or Mindomo)

Display 3j. World Trends and Indices (e.g. Worldmapper)

Display 3k. Flash, 3-D Visualization, & Laboratory Software

**Display 3L.
Videos of the Periodic Table**
(University of Nottingham)

Display 3m. Explore Virtual Worlds and Online Representations (UCLAs CVRLab, Univ of Virginia, June 11, 2007)

Display 3n. Online History Portals and Resources
(Civil Rights Digital Library and Amistad; 90 libraries, 30 hours of news films, and 450 videoclips)

Display 3o. United Nations Opens World Digital Library, April 21, 2009
Chronicle of Higher Ed, http://www.wdl.org/en/

Display 3p. Map Mash-ups
(e.g., Shakespeare's Global Globe; PopSci, June 13, 2008, Michael Behar
GOOGLE EARTH ENVIRONMENT GUIDE THE FREE SOFTWARE FROM GOOGLE
GIVES SCIENTISTS A NEW WORLD VIEW

Display 3q. Human Embryology Animations
(Valerie O'Loughlin, Indiana University)

**Display 3r.
Broadcast Surgeries**

Evaluating an In-Vivo Surgical Training Demonstration over Broadband Internet

Duncan Stevenson
CSIRO ICT Centre &
Department of Computer Science, Australian National University
GPO Box 664, Canberra, Australia, 2601
duncan.stevenson@csiro.au

Display 3s. Shared Online Video
(e.g., Howcast, WonderHowTo, Clip Chef)

Display 3t. Download and Use Online 3D Sketches (Google SketchUp; download http://sketchup.google.com/3dwarehouse)

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.

Poll #6: Wiki Questions (check all that apply)

1. I regularly read Wikipedia articles just for fun.
2. I have read one or more Wikibooks.
3. I seek out Wikipedia for content.
4. I have edited or written new articles on Wikipedia or Wikibooks.
5. I think it is ok for college students to cite from Wikipedia.

Do 4a. Wikibooks: International Collaboration (Web 2.0 and Emerging Learning Technologies (The WELT))

Web 2.0 and Emerging Learning Technologies
From Wikibooks, the open-content textbooks collection

Do 4b. Survey Research and Market Analysis
(e.g., Mister Poll, MicroPoll, Zoomerang, SurveyShare)

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

Do 4d. Online Performances
Virtual Worlds/Reality/MMOG
(e.g., Shakespeare plays reenacted)

Do 4e. Syllabus, Glossary, etc. in wiki:
Students sign up for tasks
(Ron Owston, York University)

Read 1f. Podcasts for students of
pronunciation class
(e.g., Tzu-Su Chen, Taiwan)

Hey Jude, don't make
it bad
Take a sad song and
make it better

Do 4g. Educational Simulations
(Medical Traumas from TD Magazine, Cells Alive)

U.N. Food Force, called the first
humanitarian game,
simulates problems of getting
supplies to wartime refugees.

Do 4h. Real World Problems
(PBL online): Real-time Cases

Supercharging the case method,
making it more realistic and
engaging

Do 4i. Video Scenario Learning
(Option Six, Wisdom Tools)

Do 4j. Wiki: Romantic Poetry Project
(Professor Mike Phillipson, English at Bowdoin College)

Poll #7: How many ideas did you get from the second part of this talk?

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!

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

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