Best Practices for Online Learning: R2D2 the TEC-VARIETY

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21 Things That Became Obsolete This Decade
December 11, 2009, Silicon Alley Insider

15 Gadgets that Changed Everything This Decade
December 9, 2009, Jay Yarow, Silicon Alley Insider

Yonsei University, Seoul, Korea

Technology for Learning Expands
College tech 'catching up' with students
Kathleen Gray & Robin Erb, USA TODAY, Oct. 6, 2009

Mobile Learning and Blended Learning Exploding
College tech 'catching up' with students
Kathleen Gray & Robin Erb, USA TODAY, Oct 6, 2009

- 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.

Senior Emily Smuk, 30, 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.
Verdict is in on Apple iPad: It's a winner, Edward Baig, April 1, 2010

First iPad buyers excited, curious
By Brandon Griggs and John D. Sutter,
CNN, April 3, 2010

Seton Hill University, 2,100 students. All fulltime students get an iPad and Incoming freshmen will also receive a 13-inch MacBook laptop, April 2010.

An iPad for Everyone

Part I. Some Online Motivational Ideas

What changes with ubiquitous access?
We are not motivating students with the technologies that they love.

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)


I even reflected on this for a moment...and then something magical happened...

Magic #1: 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

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
1. **Tone/Climate: Social Ice Breakers**

A. **Public Commitments:** Have students share how they see the coursework fitting 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.

2. **Encouragement, Feedback, etc.:**
   A. **Online Self-Testing** (e.g., self study in vocabulary, anatomy, chemistry, dissection, etc.)

3. **Curiosity, Fun:**
   A. **Online News** (Giant jellyfish, Tiny T. rex, and Ard!)
3. Curiosity, Fun: B. Online Games (e.g., public health; the POD game Points-of-Dispensing (PODs))

4. Variety, Novelty:
   A. Cool Resource Provider or Tech Demos
   - 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.

4. Variety, Novelty: B. Expert Chats
   1. Agree to a weekly chat time.
   2. Bring in expert for discussion or post discussion topics or issues.
   3. Summarize or debrief on chat discussion.

4. Variety, Novelty: C. Synchronous Session with Guest Expert

4. Variety, Novelty: D. Online Referenceware

5. Autonomy, Choice: A. Online Literature Search (Class Google Jockeys) (links to text, soundtracks, video clips, etc.)
5. Autonomy, Choice:
B. Famous Person Web Explorations, Searches, Twitter Tracking, and Interviews (e.g., Thomas Friedman, NY Times reporter)

6. Relevance, Meaningfulness:
A. 60 Second Recap, Jenny Sawyer
   http://www.60secondrecap.com/
   Actress to students: Lend me your earbuds!
   English major, 34, ramblingly recap 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, KenTalk)

B. Collaborative Groups (Ning, Google Groups, MSN Groups, Yahoo Groups, Diigo)
7. Interactive, Collaborative:
C. Collaborative Documents (Google Docs) and Bookmarking (Deligo, Delicious)

7. Interactive, Collaborative:
D. Real World Problems (PBL online):
Real-time Cases

8. Engagement, Effort:
A. Synchronous Learning

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

8. Engagement, Effort:
C. Podcasts, Audio Portals, etc. (e.g., Basic Acoustics of Musical Instruments; University of New South Wales)

8. Engagement, Effort:
D. Flash, 3-D Visualization, & Laboratory Software
9. Tension, Challenge, etc.:
A. Ethical Medical Debates

Students to protest human body exhibit

9. Tension, Challenge, etc.:
B. Electronic Guests & Mentoring
(Simon Fraser University News:

10. Yields Products, Goals:
A. Student YouTube Products

http://www.youtube.com/watch?v=6Z6yPrjS
http://www.youtube.com/watch?v=8gjYqP
http://www.youtube.com/watch?v=7R134P

Poll #1: 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.

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

II. Addressing Diverse 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.

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

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

Read 1c. Podcast Paper Reflections

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. Critical Friend Blog Postings

Reflect 2b. Expert and Domain Specific Blogs (English Teacher Blogs)

Reflect 2c. Analyze Online Cases (problems, solutions, etc.)

Reflect 2d. Workplace and Field Reflections
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 Discussions (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. Adventure Learning
Australian adventurer Don McIntyre and teenage circumnavigator Mike Perham to re-enact Capt William Bligh's epic mutiny on the Bounty open boat voyage, September 9, 2009
Display 3d. Concept Mapping and Timeline Tools (VUE, Bubbl.us, Cmap, Freemind, Gilly, Mindmeister, or Mindomo)

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

Display 3f. United Nations Opens World Digital Library, April 21, 2009

Display 3g. Shared Online Video (e.g., Howcast, WonderHowTo, Clip Chef, Link TV, Fora TV, etc.)

Display 3h. Online Historical Document (e.g., Turning The Pages, British Library)

Display 3i. Medical Animations and Videos (find anchoring event (YouTube, CNN, BBC, TeacherTube, CurrentTV)
Display 3j. Online Timelines
(US Presidents)

Display 3k. Videos of the
Periodic Table

Display 3l. Online History Portals and Resources
(Civil Rights Digital Library and Amistad)

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

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

Display 3o. Indexing Sounds in Cities with Google Maps
Display 3p. Space Portals (e.g., A New Motion Picture of the Universe, With Free Admission for Colleges Large and Small, By Ben Terris, Chronicle of HE, Feb 7, 2010)

From its mountaintop site of Cerro Pachón, in Chile (rendered above), the new telescope will look for dangerous asteroids and help researchers learn more about dark matter and dark energy. The Large Synoptic Survey Telescope has a combination of mirrors and three camera lenses that can capture the movements of billions of stars and galaxies.

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.

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

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

Do 4c. Online Warm-ups Activities Just-In-Time-Teaching (JITT)

http://webphysics.iupui.edu/jitt/jitt.html

Do 4d. Syllabus, Glossary, etc. in wiki: Students sign up for tasks (Ron Owston, York University)
Do 4e. Podcasts for students of pronunciation class
(e.g., Tzu-Su Chen, Taiwan)

Do 4f. Create Video Blogs
- Have students create a blog with videos or a video blog.
- Have them do a final reflection on it.

Do 4g. Virtual World and Podcast Reenactments

Do 4h. Medical Simulations in YouTube and Second Life

Poll #2: 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!
And hope for some magic!!!

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