Active Learning with Technology: Myths, Magic, and Mucho Motivation

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Technology of the 1980s

New technologies hit us everyday!

Part I. Some Online Motivational Ideas

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).


What if students minds were on fire for learning? i.e., Jumbo Motivation!

Ok, Million Dollar Question: How do you motivate online learners? What Words come to mind?

Motivation Research Highlights
(Jere Brophy, Michigan State University)

1. Supportive, appropriate challenge, meaningful, moderation/optimal.
2. Teach goal setting and self-reinforcement.
4. Novelty, variety, choice, adaptable to interests.
5. Game-like, fun, fantasy, curiosity, suspense, active.
6. Higher levels, divergence, dissonance, peer interaction.
7. Allow to create finished products.
8. Provide immediate feedback, advance organizers.
9. Show intensity, enthusiasm, interest, minimize anxiety.
10. Make content personal, concrete, familiar.

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
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)

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

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

2. Encouragement, Feedback, etc.: C. Video Scenario Learning Forensic Accounting Interviews and Preparatory Course Review Modules (Franklin University, MBA accounting course)
3. Curiosity, Fun:
A. Online News
(Giant jellyfish, Tiny T. rex, and Ardipithecus ramidus)

3. Curiosity, Fun: B. WolframAlpha
(access knowledge)
http://www.wolframalpha.com/

3. Curiosity, Fun: C. Videoconference
(e.g., Global Nomads Group, Int’l Studies for Indiana Schools (I.S.),
Mandarin Chinese, Niger, Sudan, Life in Eastern Europe
Today (Bulgaria), History and Culture of Mexico)

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

5. Autonomy, Choice:
C. Online Cases (e.g., Mark Braun, IU)

6. Relevance, Meaningfulness:
A. 60 Second Recap, Jenny Sawyer
http://www.60secondrecap.com/

Actress to students: Land me your earbuds!
English major, 24, rambunctiously recap the classics in 60-second Web videos; by Greg Toppo; USA TODAY, September 2009
6. Relevance, Meaningfulness:
   B. Tour an Oil Drilling Site (i.e., BP)

7. Interactive, Collaborative:
   A. Online Language Learning
      (Skype, MSN, ECpod, Minzer, Livemocha, Babbel, 
      KanTalk etc.)

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

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

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

8. Engagement, Effort:
   B. Flash, 3-D Visualization, & Laboratory 
      Software
8. Engagement, Effort:
   C. Tour a Museum (e.g., British Museum, Smithsonian, Louvre)

9. Tension, Challenge, etc.:
   A. Ethical Debates

9. Tension, Challenge, etc.:
   B. Electronic Guests & Mentoring...MM

10. Yields Products, Goals:
    A. Student YouTube Products...MM
    http://www.youtube.com/watch?v=Xi85yTz3Q
    http://www.youtube.com/watch?v=aE5Pm_E
    http://www.youtube.com/watch?v=U2zJnaps3UpG

10. Yields Products, Goals:
    B. Video Blogs...MM

10. Yields Products, Goals:
    C. Photo Festivals and Competitions (e.g., COFA at UNSW, Scrapblog, flickr, etc.)
**TEC-VARIETY Model for Online Motivation and Retention**

- Tone/Climate
- Encouragement, Feedback
- Curiosity
- Variety
- Autonomy
- Relevance
- Interactive
- Engagement
- Tension
- Yields Products

**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)

Poll: Podcast Questions
a. Who has listened to a podcast?
b. Who listens to a certain podcast on a regular basis?
c. Who has created a podcast?
d. Who has created a vodcast?
e. Who thinks podcasting is simply more talking heads?

Read 1c. Podcast Paper Reflections

Read 1d. 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.

Poll: Blogging Questions

a. Who has a blog?
b. Who regularly reads other people's blogs?
c. Who assigns blogging tasks?
d. Who has created a video blog?
e. Who thinks it is an utter waste of time to blog?

Reflect 2a. Critical Friend Blog Postings... MM

Reflect 2b. Cultural Blogs (e.g., Dr. Kim Foreman, San Fran State University, Come and See Africa Blog; http://comeandseeafrica.blogspot.com/)

Reflect 2c. Expert and Domain Specific Blog Reflections (English, Health, Business, etc. blogs)

Reflect 2d. Analyze Online Cases (problems, solutions, etc.) ... MM
Do 4e. Virtual World and Podcast Reenactments

Reflect 2f. Workplace and Field Reflections... MM

Reflect 2g. ORL or Library Day (e.g., The Thompson Library at Ohio State University) ... MM

Reflect 2h. Videos on Book Websites (e.g., Brain Rules, John Medina)

Reflect 2i. Big Think (short topical videos from famous people)

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

Display 3d. **Videos of the Periodic Table**

Display 3e. **Concept Mapping and Timeline Tools** (VUE, Bubbl.us, Cmap, Freemind, Giffy, Mindmeister, or Mindomo)

Display 3f. **Timeline Tools**
(e.g., SMILE from MIT, Learning Tools from UBC)
Display 3m. Human Embryology Animations (Valerie O’Loughlin, Indiana Univ.)

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

Display 3o. Indexing Sounds in Cities with Google Maps

Display 3p. Virtual Archaeology (e.g., ARCHAEO from Brown University)

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.

Do 4a. Wikibooks: International Collaboration (Web 2.0 and Emerging Learning Technologies (The WELT))...MM
Do 4b. Syllabus, Glossary, etc. in wiki: Students sign up for tasks (Ron Owston, York University) ...MM

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

Do 4d. Online Warm-ups Activities Just-In-Time-Teaching (JiTT)

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!

Do 4e. Podcasts for students of pronunciation class (e.g., Tzu-Su Chen, Taiwan)

Try the R2D2 Method!
Try TEC-VARIETY!
And hope for some magic!!!

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