Stretching the Edges of Emerging Learning Technology with Three Frameworks

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1. Risk
Low Risk
High Risk

2. Time
Easy to Embed
Extensive Planning

Free or Inexpensive
Enterprise Licenses

3. Cost
Instructor-Focus
Student-Focus

Low
High

4. Student-Centered

Framework #1:
From Tinkering to Tottering to Totally Extreme Learning…

Tinkering

Tinker #1. Webcast Lectures
(Tegrity, Echo360, Mediasite, etc.)

Tinker #2. Timeline Tools
(e.g., USA Today, August 26, 2011)

Martin Luther King Jr. Memorial in Washington: A closer look
**Tinker #3. Video Animations and Simulations**

**Tinker #4. Case Learning and Role Play (Kelley Direct, IU)**

**Tinker #5. Online Experiments (e.g., psychology)**

**Tottering**

**Totter #1. Wikibooks, Wiki-Glossaries, Wiki-Syllabi (Ron Owston, York University, Toronto)**

**Totter #2. Global Class Videoconferencing and Remote Lands**
Totter #3. Video Blogging

Totter #4. Online Instructor Q&A
April 1, 2012, Piazza: https://piazza.com/

Totter #5. Student Collaborative Knowledge Building and Sharing
(e.g., Popplet: http://popplet.com/)

Totally Extreme Learning
Learn Anytime, Always On/ Mobile.

Robert Johnson, who championed the open-format Learn Anytime program at a two-year college in Louisville, Ky., checks students’ e-mail while waiting for a flight. “Everything I need to do today, I can do on my phone,” says Robert Johnson... He often grades papers and communicates with students from a cafe near his home.

Totally Extreme #1. Immediate Science
Ida (a transitional species) 47-Million-Year-Old Fossil
the Missing Link? (May 20, 2009)

Totally Extreme #2.
iPod Learning from MIT OCW
(e.g., Wendy Ermold, University of Washington)
Totally Extreme #3. International and Global Education and Competitions (e.g., Global Game Jams, online role play, Global Videoconferencing)

Totally Extreme #5. Telepresence and Teleportec Systems (e.g., Cisco and HP)

Totally Extreme #5. Online Language Learning and Conversations (e.g., PalTalk, iTalki, Palabea, Babbel)

Totally Extreme #6. Robots Teaching English Sejong City, South Korea

The robot assists English teacher & teaches students English, too. The first “Smart School” was a big issue in Korea lately.


Poll #1: Any light bulbs going off in your head so far…?
A. Yes definitely
B. Maybe
C. No
How can technology address diverse learner needs?

Yes, there are battles!

Framework #2: 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. Wikibook or Wikipedia Editing or Critiques
   - Ask students to critique a wikibook or page from Wikipedia

Read 1b. Reading from Open Access Journals (e.g., PLOS)
Read 1c. Course Announcements
(e.g., Teaching with Twitter; Course announcements and following people (e.g., microblogging))

Read 1d. Listen to Open Access Podcast Shows (and write papers)

Read 1e. Online Crossword Puzzles
(e.g., http://www.eclipsecrossword.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. Critical Friend Blog Postings (Kristen and Susan)

Reflect 2b. Expert and Domain Specific Blog Reflections (English, Health, Business, etc. blogs)
http://online.wsj.com/article/SB10001424052970204880404577228982976760026.html#articleTabs=interactive

Reflect 2d. Discuss Videos (e.g., Vialogues; https://vialogues.com)

Reflect 2e. Question and Answer on Videos (e.g., Grockit Answers; David Kolb)
https://grockit.com/answers/v/yt.BvIKBCZO_c.public

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

Display 3a. Videos for clinical education
(Sungkyunkwan University School of Medicine, www.mededu.or.kr)

Display 3b. Online News Stories
Frontier Airlines employees sharing concerns over impending layoffs, WTMJ News, Feb 14, 2012
Display 3c. Segment Video Anchors (e.g., TubeChop; Wikibooks Hooray for Us)
http://www.tubechop.com/watch/378752

Display 3d. Lessons on iPad (e.g., ShowMe: http://www.showme.com/)

Display 3e. Human Embryology Animations (Valerie O’Loughlin, Indiana University)

Display 3f. Interactive Maps (adults with college degrees by county, May 7, 2012)
http://todayscampus.com/article/Keith_Hampson_Interviews_Josh_Keller_on__Interactive_Graphics_for_Higher_Education

Display 3g. Interactive Maps (e.g., New USDA climate zone map reflects northward warming trends, By Janice Lloyd, USA TODAY, January 26, 2012)

Display 3h. Wordle
A Pedagogy of Abundance or a Pedagogy to Support Human Beings? Participant Support on Massive Open Online Courses, IRRODL, Kop, Fournier, & Sui Fai Mak, November 2011
Display 3i. Concept Mapping and Timeline Tools (VUE, Bubbl.us, Cmap, Freemind, Gliffy, Mindmeister, or Mindomo)

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. Podcast Productions and Shows

Do 4b. Student Films and Documentaries

Do 4c. Visual presentations (e.g., Prezi)

Do 4d. Survey Research and Market Analysis (e.g., Mister Poll, MicroPoll, Zoomerang, SurveyShare)
Do 4e. Uploading Mobile Books (e.g., BookRix, http://www.bookrix.com/)

Mobile Devices & Learning
How mobile devices are changing the world of education

Do 4f. Negotiate Meanings Online (e.g., MeetingWords: http://meetingwords.com/)
Your text is saved on the web, and more than one person can add the same document at the same time. Everybody’s changes are instantly reflected on all screens. Work together on meeting notes, brainstorming sessions, homework, team programming and more!

MeetingWords

Do 1g. Interactive Glossaries
Umida Khikmatillaeva, Dec. 2011, P540
http://learningplanet.shutterfly.com/

Poll #2: What phase of the R2D2 Method will you use most?
A. Read (Auditory and Verbal Learners)
B. Reflect (Reflective Learners)
C. Display (Visual Learners)
D. Do (Tactile, Kinesthetic, Exploratory Learners)

We are not motivating students with the technologies that they love!

April 15, 2012
Can Colleges Manufacture Motivation?, Dab Berrett, Chronicle of Higher Ed
Ok, Million Dollar Question:
How do you motivate online learners?
What Words come to mind?
(Please enter in chat window)

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.

Intrinsic Motivation
“…innate propensity to engage one’s interests and exercise one’s capabilities, and, in doing so, 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...

Framework #3: TEC-VARIETY 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

Examples of TEC-VARIETY
1. Tone/Climate: A. Video Course Intros
(examples from Northern Virginia Community College and
Indiana University KD (online MBA) program)
Yun Yun Chow, Open U Malaysia, Making Art Lessons Come Alive with Web 2.0
http://www.youtube.com/watch?v=BGt9ngD1GGo

2. Encouragement, Feedback, etc.:
A. Create Screencasts
(Jing, GoView, Screenr, slide from Zaid Ali Alsagoff
[zaid.alsagoff@gmail.com])

2. Encouragement, Feedback, etc.:
B. System Feedback and Self-Testing
http://www.polleverywhere.com/

2. Encouragement, Feedback, etc.:
C. Video Scenario Learning... Accounting
Interviews and Preparatory Course Review Modules
(Franklin University, cost and forensic accounting course)
http://video.franklin.edu/Franklin/acct/managerialAccounting/cost-behavior-player.html
http://video.franklin.edu/Franklin/acct/342/common/fraudScenario02.html

2. Encouragement, Feedback, etc.:
D. Blog and Website Polling
(e.g., Poll Everywhere, BlogPolls, BlogPoll, MicroPoll)
http://www.polleverywhere.com/

2. Encouragement, Feedback, etc.:
E. Student response systems
(e.g., Socrative; http://www.socrative.com/how-it-works.php)

6/4/2012
3. Curiosity, Fun:
   A. Online News
      (Politics, Giant jellyfish, Tiny T. rex, and Ardi)
   B. Online Database Activities
      (e.g., WolframAlpha; http://www.wolframalpha.com/)
   C. Track a Scientist, Scholar, Celebrity, Writer
      (e.g., Biography.com, biography online, FamousPeople.com)
   D. Cross-Cultural Videoconference
      (e.g., Global Nomads Group, Int’l Studies for Indiana Schools (i.e., ISI’s); Chinese, Niger, Sudan, Life in Eastern Europe, the History and Culture of Mexico)
   E. Create Cartoons, Movies, and Animations
      (slide from Zaid Ali Alsagoff [zaid.alsagoff@gmail.com])

3. Curiosity, Fun:

4. Variety, Novelty:
   A. Cool Resource Provider or Tech Demos
4. Variety, Novelty, Fun, Fantasy:
   B. Random Lists (Random.org—clocks, coins, playing cards, dice, integers, passwords, jazz scales, lists, sequences, etc.)

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

   B. Web Exploration Assignments
      1. Complete Works of Charles Darwin Online: http://darwin-online.org.uk/
      4. Einstein Archives Online: http://www.alberteinstein.info/
      7. iBerry (Open Courseware Directory): http://iberry.com/

   Poll #3:
   Which of the first 5 motivational principles will you use the most?
   A. Tone/Climate
   B. Encouragement/Feedback
   C. Curiosity/Fun
   D. Variety/Novelty
   E. Autonomy/Choice/Flexibility

6. Relevance, Meaningfulness:
   A. Online Cases (e.g., Mark Braun, IU)

7. Interactive, Collaborative:
   A. Working In Virtual Teams
      (e.g., Collanos, Ning, Wikispaces, Google Docs)
7. Interactive, Collaborative:
B. Collaborative Video Annotations and Discussions (Craig Howard, IU)

C. Smartboards and 3D worlds
(Meeyong Kim, Korea)

8. Engagement, Effort:
A. Interactive Event Timeline
Arab spring: an interactive timeline of Middle East protests,
The Guardian, Garry Illiglt & Sheila Pulham, July 12, 2011
http://www.guardian.co.uk/world/interactive/2011/jun/22/middle-east-protest-interactive-timeline

B. Interactive Simulations
http://phet.colorado.edu/en/simulation/energy-skate-park

9. Tension, Challenge:
A. Predict outcomes (May 2012)
(e.g., Interactive Political Maps: Huffington Post)
http://elections.huffingtonpost.com/2012/romney-vs-obama-electoral-map#cartogram

B. Game Show Final Project,
April 25, 2011, Kim Seeber
Website: http://mypage.iu.edu/~kseeber/web2.0technology.swf
10. Yields Products, Goals:
A. Student YouTube Products
   Miguel Lara (Web 2.0 FREEDOM): http://www.youtube.com/watch?v=8cmCFWi9lW8
   Shuya Xu and Yue Ma (Blog my online lrng): http://www.youtube.com/watch?v=im7GQM9fzhc
   Cesur Dagli (Animal perspectives on course): http://www.youtube.com/watch?v=cDeTEIdO5lc

Poll #4:
Which of the last 5 motivational principles will you use the most?
A. Relevance/ Meaningfulness
B. Engagement/ Effort
C. Interactive/ Collab/ Community
D. Tension/ Challenge/ Dissonance
E. Yielding Products/ Goals

Time for Commitments:
Which principle(s) of TEC-VARI ETY will you use?
- Tone/ Climate
- Encouragement, Feedback
- Curiosity
- Variety
- Autonomy
- Relevance
- Interactive
- Engagement
- Tension
- Yield Products

Poll #5: How many new ideas did you get today?
1. 0 if I am lucky.
2. 1 or 2.
3. 3-5.
4. 6-10.

Poll #6:
Which framework do you like better?
A. TEC-VARI ETY
B. R2D2

Any Questions?
Try the R2D2 Model!
Try TEC-VARI ETY too...

Slides at: TrainingShare.com
Papers: PublicationShare.com
Book: http://worldisopen.com/
Email: curt@worldisopen.com