The Perfect E-Storm: Emerging Technology, Enhanced Pedagogy, Enormous Learner Demands, and Erased Budgets

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21st Century Technology: Podcasts and Wikis and Blogs, Oh My!!!!

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

Senior Emily Smaltz, 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.

Ok, Million Dollar Question: Which technology will impact us the most?

Storm 1. Emerging Learning Technologies

1. Assistive Technologies
2. Blogs and Online Diaries
3. OpenCourseWare and Open Educational Resources
4. Digital Books
5. Social Networking Technology
6. Intelligent Agents
7. Wikis and Wikibooks
8. Online Games and Simulations (Massive Multiplayer Gaming)
9. Shared Online Video
10. Peer-to-Peer Collaboration
11. Reusable Content Objects
12. Videostreaming, IP Videoconferencing
13. Virtual Worlds/Reality
14. Wearable Computing
15. Wireless Tech: Tablet PCs, Handheld Devices
16. Digital Portfolios
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.

1. New Search Technology (timeline oriented)

2. Google Sky
What if the World was Beyond our World?
NASA’s Hubble Space) USA Today, August 22, 2007

3. Mobile Health and Medical Education
(Courtesy of Paul Kim, Stanford University)

4. Mobile Technology Expert Advice
(e.g., Live Happy Practitioner Directory)
http://www.signalpatterns.com/practitioner

5. iPhone Applications
Pull yourself away from that iPhone and read this story, by Mary Brophy Marcus, USA Today, October 3, 2009
• 50 million iPhone users and 85,000 applications.
6. Social Networking Gaming (e.g., Farmville)
For social networks, it's game on, USA Today, Jon Swartz, Thursday October 15, 2009

7. iPhone e-books
(e.g., Shortcovers: http://shortcovers.com/)

8. e-Book Readers
(e.g., Barnes & Noble unveils its e-reader, USA Today, October 21, 2009)

9. Digital Textbook Projects (Korea)
dictionary, email and forums, games, simulations, hyperlinks, multimedia, authoring, data search, study aids, evaluation, etc.
(112 schools as of 2009; free for all schools by 2013)
http://www.dtbook.kr/eng/index.jsp

9. Continued...In a Digital Future,
Textbooks Are History, NY Times, August 9, 2009

10. Scanning and Printing
Google to Reincarnate Digital Books
Sept 17, 2009, By MICHAEL LEEDTKE AP Technology Writer
11. LibraryThing: The World's Largest Online Book Club (you can be a "thingamabrarian}; 850,000 users and 35 million books on member bookshelves)

12. BookTV
http://www.booktv.org/

13. Book Websites
(e.g., Brain Rules, John Medina)
http://www.brainrules.net/

14. YouTube as Class

15. TED
Tech Confab With a Conscience Goes Global
USA Today, July 21, 2009

16. Video Supported Language Learning
(e.g., ECPod)
17. Live Streaming
(e.g., Zoo Animals on Demand)
USA Today, September 8, 2009
Littlest patients find distraction, comfort in live feeds from zoos

17. Continued
Livestream University Feeds (Colgate)
http://www.livestream.com/colgateuniversity

19. OpenCourseWare and OER
(MIT Highlights for High School and BLOSSOMS Project)

20. Online News Coverage
Ray of hope in Afghanistan
Greg Mortenson is educating the children of Afghanistan one school at a time.
(CNN's Christiane Amanpour)

21. Mobile Video Blogging
(Stanford, Paul Kim)

22. Medical Simulations in YouTube
Can Training in Second Life Teach Doctors to Save Real Lives? Discover, by Melissa Lefsky published online July 16, 2009
23. Simulations
(e.g., Virtual Astronaut from WisdomTools)

24. Second Life
The Learning inworld blog posts examples from the Second Life education community.

25. Video Chat Collaboration
U. of La Verne Welcomes the World, One Fulbright Lecturer at a Time, Karin Fischer, Chronicle of HE, October 18, 2009

Jack W. Mesh, a professor at the U. of La Verne, video-chat with Marcos A. Pedlowkni, a Brazilian scholar with whom he did a study of community participation in municipal planning. They met through Mr. Pedlowkni's participation in a Fulbright visiting-lecturer program.

26. Global Collaboration
(e.g., Flat Classroom Projects!)
(combine blogs, videoconferencing, chat, async discussion, etc.)

26. Global Collaboration continued
EPals and iEARN (International Education and Resource Network)

27. Interactive Videoconferencing
Global Nomads Group
http://www.gng.org/home.html
'Distance learning' gets its close-up
By G. Jeffrey MacDonald, Special for USA TODAY, November 2007

- More than two-thirds of all U.S. colleges and universities offer online courses, and 35% of schools offer programs that are entirely online, according to the Sloan survey, and 20% of the USA's 17 million college students say they have taken at least one course online.
For-Profit Colleges, Growing Fast, Say They Are Key to Obama's Degree Goals, By Jennifer Gonzalez, Chronicle of Higher Ed, Nov 8, 2009

Students at the Kaplan Career Institute in Boston study medical billing in one of the for-profit college's computer labs.

We're in the Midst of Storm 3: Erased Budgets

Report: 10 states face looming budget disasters

Obama to Invest in High-Tech Education, CNN Money, September 21, 2009

Obama urges investment in high-tech education

The president today joined donations for jobs of the future to help create a more futures-competent workforce for the economy.
Call for 5 Million Additional Community College Graduates

Obama Course-Giveaway Backlash?, by Marc Parry, August 10, 2009

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

- At Abilene Christian (University)...about 2,860 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.

On to Storm 4: Enhanced Teaching
(a swirling storm)

Part I: Some Online Motivational Ideas

We are not motivating students with the technologies that they love
Ok, Million Dollar Question: How do you motivate online learners? What Words come to mind?

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)


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.
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.

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

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: A. 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, Screenr)

2. Encouragement, Feedback, etc.: C. Instructor Presentation in Synchronous Sessions (Breeze, Elluminate, WebEx, etc.)

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

3. Curiosity, Fun: B. Online News (Giant jellyfish, Tiny T. rex, and Ardi)
4. Variety, Novelty:
A. Adding voice to email, docs (Yack Pack, VoiceThread)

4. Variety, Novelty:
B. Free Text Chats
   (Bonk, 2007; Mei-Ya Liang, 2007)
   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.

5. Autonomy, Choice: A. Online Literature Search (Class Google Jockeys)

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

5. Autonomy, Choice:
C. 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: Lead 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. Ethical Medical Debates

Students to protest human body exhibit
Maggie Harris
Rhetoric & 1010 Debra Gotta

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

10. Yields Products, Goals:
B. Video Blogs
- Have students create a blog with videos or a video blog.
- Have them do a final reflection on it.

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

Addressing Learning Styles

The R2D2 Model

Empowering Online Learning
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

- Students listen to a podcast.
- Reflect on what they learned in an online forum.
- Students comment on each other’s post.

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.

Reflect 2a. Critical Friend Blog Postings

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

Reflect 2c. Watch or Listen to Online Conferences

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

Reflect 2e. Wikibook Critique

- Ask students to critique a wikibook or page from Wikipedia
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 Sciverse
Display 3f. Shared Online Video (e.g., Howcast, WonderHowTo, Clip Chef)

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

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

Display 3i. Online Timelines (US Presidents)

Display 3j. Videos of the Periodic Table

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

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/jtt.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)

Recap of the Perfect E-Storm....
1. Emerging Technology
2. Escalating (Learner) Demands
3. Erased Budgets
4. Enhanced Teaching

Try the R2D2 Method!!!
Try TEC-VARIETY!!!
Sample papers:
http://www.publicationsshare.com/
Archived talks:
http://www.trainingshare.com/

Any questions, comments, or concerns?