Addressing Diverse Online Learner Needs with the Read, Reflect, Display, and Do (R2D2) and TEC-Variety Models

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Four Storms are Approaching!

1. Emerging Technology
2. Escalating Demands
3. Erased Budgets
4. Enhanced Teaching

Storm 1. Emerging Learning Technologies

Poll #1: Which of these is the most important? (pick one)
1. Assistive Technologies
2. Blogs and Online Diaries
3. OpenCourseWares 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 (YouTube, Teachertube)
10. Peer-to-Peer Collaboration
11. Reusable Content Objects and Portals
12. Videoconferencing
13. Virtual Worlds/Reality
14. Wearable Computing
15. Wireless Tech: Tablet PCs, Handheld Devices
16. Digital Portfolios

Tech & Learning, Nov 2009

1. New Search Technology (timeline oriented)
2. Google Sky
What if the World was Beyond our World?
NASA’s Hubble Space) USA Today, August 23, 2007

3. Mobile Learning
• 50 million iPhone users and 85,000 applications.
• Pull yourself away from that iPhone and read this story, by Mary狎hy Marcus, USA Today, October 6, 2009

4. Social Networking Gaming (e.g., Farmville)
For social networks, it’s game on, USA Today, Jon Swartz, Thursday October 15, 2009

6. Digital Textbook Projects (Korea)
Includes: 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)

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

7. TED
Tech Confab With a Conscience Goes Global
USA Today, July 21, 2009
8. Live Streaming
(e.g., Zoo Animals on Demand)
USA Today, September 8, 2009
Littlest patients find distraction, comfort in live feeds from zoos

9. OpenCourseWare (OCW)
(MIT Highlights for High School and BLOSSOMS Project)

10. Online Educational Resources (OER)
(See free-reading.net)

11. Mobile Video Blogging
(Stanford, Paul Kim)

12. Simulations
(e.g., Virtual Astronaut from WisdomTools)

13. Global Collaboration
(e.g., Flat Classroom Projects)
(combine blogs, videoconferencing, chat, async discussion, etc.)
14. Global Collaboration continued
EPals and iEARN (International Education and Resource Network)

15. Interactive Videoconferencing
Global Nomads Group
http://www.gng.org/home.html

16. Wikis and Wiki Collaboration Sites
(e.g., Wikispaces)

17. Connexions Growth
January 2009
> 8,000 modules (3-5 pages)
> 425 collections (books and courses)
multiple languages:
engineering, computer science, nanotech, physics, statistics, math,
history, music, bio-diversity, botany,
bio-info, IP, BRIT, UNESCO, UN, Sigma Xi,
from authors worldwide
Usage (December 2009)
1.6m unique users
4 million page views
72 million hits
More than 1m unique users from nearly 200 countries

18. 'One Laptop Per Child' program collides with reality, Toronto Globe and Mail, Oct 15, 2009
Bhutan, Khendum Gyabak (Univ. of Texas at El Paso)

19. Moodle
(620,000 registered users in 204 countries speaking 78 languages, 2/10/2009)

On to Storm 2...
Escalating (Learner) Demands

Growth of Online Learning in Secondary Schools
(Florida Virtual School; AP American History)

Michigan Virtual School
(11,000+ students, Dan Schultz, October 2008)

Indiana University High School
(4,000 students and 1,400 in diploma programs)

Adora Svitak, age 12, World’s Youngest Teacher
We’re in the Midst of Storm 3: Erased Budgets

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

School Closings
Poll #2: Which of these have you experienced?

1. SARS
2. Earthquake
3. Tsunami
4. Winter Blizzard or Ice Storm
5. Major Flood
6. Hurricane, Typhoon, or Serious Tropical Storm
7. Swine Flu, Asian Flu, or Similar
8. Tornado
9. Near death weather-related situation
10. Other (not listed above)
More from Solution #1.
Free Lessons from Smithsonian Education
http://www.smithsonianeducation.org/educators/

More from Solution #1.
Department of Education free lesson plans
http://www.freete.gov/

H1N1 Solution #2.
Public TV
E.g., Mongolian teachers addressing H1N1
(Olgo Ohno, Nov 10, 2009)

H1N1 Solution #3.
Create Online Class Space for H1N1
(E.g., Microsoft Office Live, Google Sites)

H1N1 Solution #4.
Streaming Class Video for Remote Students
(E.g., Tegrity, Univ of Central Florida)

H1N1 Solution #5.
Webinars
(Elluminate, Dimsim, WebEx, Adobe Connect Pro)
What can you do?
- Take home course packets
- Post syllabus and content online
- E-books and other resources
- Fully online courses

What else can you do?
- Videotape master teachers
- Learning packets to be sent home
- Interactive study guides online
- Phone hotline for homework
- Online resources, textbooks, instructional websites, online databases, and Google Docs (EdWeek.org)

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

Some Online Motivational Ideas

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

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

1. Tone/Climate: (open, inviting)
   A. Create a Class Wiki (Wikispaces)

2. Encouragement, Feedback, etc.:
   B. Practice Reading, Math, and Geography Skills (e.g., A Grain of Rice)

3. Curiosity, Fun:
   A. Virtual Field Trips

Web brings national parks closer to kids

With virtual field trips, students can have a personal tour of Hawaii Volcanoes National Park.

Ranger Rachel Zimmer speaks with Syler Peralta-Ramos, a fourth-grader at Jackson Hole's Journeys School.
3. Curiosity, Fun:
B. Online News
(Giant jellyfish, Tiny T. rex, and Ardi)

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

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

6. Relevance, Meaningfulness:
A. 60 Second Recap
http://www.60secondecomics.com/
Actress to students: Send me your earbuds!
English major, 26, bumblingly recaps the classics in 60-second Web videos; By Greg Toppo; USA TODAY, September 2009
7. Interactive, Collaborative: A. Collaborative Documents (Google Docs)

7. Interactive, Collaborative: B. Instructor Wiki portal page

7. Interactive, Collaborative: C. International Children's Digital Library (XCCL) project (Univ. of Maryland, Black Beauty, Aesop's Fables, Little Red Riding Hood, Grimm's Fairy Tales, Robinson Crusoe, and Mother Goose)

7. Interactive, Collaborative: D. Monster Writing (describe monster in writing to partner and must draw it): monsterproject.wikispaces.com

7. Interactive, Collaborative: E. Online Community and World Teams in Ning, Google Groups, or Yahoo Groups

8. Engagement, Effort: A. 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, September 9, 2009
9. Tension, Challenge, etc.: A. Adventure Learning (e.g., Aaron Doering, Discovery Channel)

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

Poll #3: 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

Addressing Learning Styles

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.

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Read 1a.
Listen to Podcasts of Famous Literature, History, Politics, or Religion (e.g., Shakespeare, Dalai Lama,)

Poll #4: 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?

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Read 1b.
Articles in Science Portals
(e.g., Complete Works of Charles Darwin, Einstein, etc.)

Read 1c. Art and History Exhibits
Read 1d. Online Portal & Resource Explorations
(Encyclopedia of Life, history, science, poetry, literature, etc.)

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. Partner & Team Blogs
-especially English writing class-

Reflect 2b. ORL or Library Day
(Bank, 1999)
- Have students spend a day in the library or online finding and summarizing a set number of articles.
- Have them bring to class or post abstracts to an online forum.
- Share in small groups interested in similar topics.
- Perhaps give each student 1-2 minutes to describe what found in a chat.

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

Display 3a. Online Timelines
(US Presidents)
Display 3b. Video iPod Vocabulary Training

One of Michelle Tanner's deaf students at Gerald Wright Elementary holds an iPod and watches a video of her signing the week's vocabulary words. The iPods were purchased with a grant from Qwest.

Classrooms go high-tech. By Erin Stewart, Doorent
Morning News, March 6, 2007

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


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

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

Display 3g. Download and Use Online 3D Sketches (Google SketchUp; download http://sketchup.google.com/3dwarehouse)
Display 3h. Explore Virtual Worlds and Online Representations (UCLAs CVRLab, Univ. of Virginia)

Display 3i. Shared Online Video (WatchKnow, Monkeysee, TV Lesson, TeacherTube, Link TV, CNN Video, FoTa TV, etc.)

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

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. Student Podcast (in schools—kids have power!)

Do 4b. Wikis for Kids to Share
Do 4c. Junior Wikibooks

Do 4d. Hands-On Frog Dissection (Net Frog, Univ. of Virginia)

Do 4e. Using Online Video (e.g., YouTube) to Memorize Sonnets and Poems

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

Poll #5: How many ideas did you get from this talk?
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.

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