Masterclass: Where Are You R2D2?: Addressing Diverse Learner Needs with the Read, Reflect, Display, and Do Model

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February 9, 2012
A first-hand look inside a flipped classroom,
eSchool News, Meris Stansbury
http://www.eschoolnews.com/2012/02/09/a-first-hand-look-inside-a-flipped-classroom/

February 2012
SMILE: Stanford Mobile Inquiry-based Learning Environment (Tanzania)

February 2012
Seeds for Empowerment, Tanzania (Alex Bonk and the kids...)

February 21, 2012
Rethinking Learning with Salman Khan, Stanford Graduate School of Business
Khan Academy Founder Finds Simplicity Appeals in Online Education Experimentation
Let’s use video to reinvent education, TED, March 2011
http://www.ted.com/talks/salman_khan_let’s_use_video_to_reinvent_education.html

March 12, 2012
Single-District Virtual Ed. Seen Growing Fastest
Education Week, Katie Ash
http://www.edweek.org/ew/articles/2012/03/15/25deploy.h31.html?tkn=RZMFu043KKKpisLyQbTZG5LUKO8NInElFg8u&cmp=clp-edweek&intc=TC12EWH

Roma Choksi, a junior at Springfield High School in Springfield, Ohio, works at home on an online course she is taking as part of a program that gives more advanced students the opportunity to take virtual classes for additional credits.
March 13, 2012,
Britannica to Stop Publishing Books
CNN Money Tech, Julianne Pepitone

March 24, 2012,
In South Korean classrooms, digital textbook revolution meets some resistance, Washington Post

April 12, 2012
TEDx WallStreet, Michelle Rhee
Under Spending, Overspending, or Misspending, April 12, 2012
http://www.studentsfirst.org/blog/entry/under-spending-overspending-or-misspending
http://www.youtube.com/watch?v=RsiLLNzi-cM

April 18, 2012
Online-Education Start-Up Teams With Top-Ranked Universities to Offer Free Courses, Chronicle of Higher Education (e.g., Coursera)
(https://www.coursera.org/)

What words come to mind for addressing diverse learner needs?
### 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. Online Crossword Puzzles
(e.g., [http://www.eclipsecrossword.com/](http://www.eclipsecrossword.com/))

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

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

Reflect 2d. Workplace and Internship Reflections

3. Visual Learners

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

Display 3a. Timeline Tools (e.g., USA Today, August 26, 2011)
**Display 3b. Tracking the Life of a Scientist**
(e.g., Brian J. Ford, independent scientist)

- [Origins of Humans, Brian J. Ford, Microbiologist, Cambridge, UK](http://www.youtube.com/user/tellymonitor#p/a/u/1/LhGeApsKjasr)
- [BBC programs omit living cells:](http://www.youtube.com/watch?v=rdNpTh6Cx6Y)
- [Secret Weapons:](http://www.youtube.com/user/tellymonitor#p/u)

**Display 3c. Online Art**

- [Google Art Project, NBC Nightly News, April 3, 2012](http://www.msnbc.msn.com/id/3032619/vp/46945508#46945508)

**Display 3d. Shared Online History Videos**

(e.g., “History for Music Lovers” with over 50 songs including: Trojan War “Tainted Love” by Soft Cell; Charlemagne “Call Me” by Blondie, Cleopatra, Napoleon, Shakespeare, the Vikings)

**Display 3e. Using Online Encyclopedias**

(e.g, the Encyclopedia of Earth: [http://www.eoearth.org/](http://www.eoearth.org/))

**Display 3f. Educational Videos: TED-Ed**

[http://education.ted.com/](http://education.ted.com/)
Display 3g. Radical Cartography
http://www.radicalcartography.net/index.html?chicagodots

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

Display 3i. World Trends and Indices (e.g. Worldmapper)
http://apps.forskning.se/infactPlaneten/index.html?lang=eng

Display 3j. The Planet (In Fact)
http://apps.forskning.se/infactPlaneten/index.html?lang=eng

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

Display 3l. Weather-Related Visuals and Animations
Display 3m. Wordle
APedagogy of Abundance or a Pedagogy to Support Human Design? Participant Support on Massive Open Online Courses, IRRODL, Kop, Fournier, & Sui Fai Mak, November 2011

Figure 4. PLENK2010 Wordle.

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

Display 3o. Virtual Bones
The Virtual Zooarchaeology of the Arctic Project (VZAP) is a virtual, interactive, osteological reference collection for the study of northern vertebrates...examine the complete skeletal anatomies of multiple bird, mammal, and fish species in both 2D and 3D.
(Anthropologist Puts an Idaho Museum's Many Bones Within Virtual Reach, Peter Monaghan, July 10, 2011, Chronicle of HE)

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

Display 3q. Student Collaborative Knowledge Building and Sharing (e.g., Popplet: http://popplet.com/)

Display 3r. Chemistry Videos
(Videos of the Periodic Table, Univ of Nottingham)
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. Podcast Productions and Shows

Do 4b. Students/Instructors Publish Own Books
(e.g., Apple’s new electronic textbook initiative)

Do 4c. Negotiate Meanings Online
(e.g., MeetingWords: http://meetingwords.com/)
MeetingWords is a simple text editor for the web. Your text is saved on the web, and more than one person can edit 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!

Do 4d. Virtual Microscopes

Do 4e. Virtual Worlds
(e.g., Dr. Monica Rankin’s class, UT Dallas, Cuban Revolution)
http://www.youtube.com/watch?v=D4u8h2N90os
Do 4f. Singing YouTube Summaries
Daniel Haluska, PS40, Fall 2011
http://www.youtube.com/watch?v=1O7h9Gagmwe

Do 4g. Visual presentations (e.g., Prezi)
http://prezi.com/ihmhh59x046/ is-the-world-open/
http://prezi.com/ @7/hp7xpy5/p/the-world-is-open/
http://prezi.com/zsagbyx8l/d/learning-theories-in-
p540/7auth_key=fcocdd640794bd2158267616e1786a0dd9a701
http://prezi.com/ihmhh59x046/ is-the-world-open/

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

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.

Cards and Commitments: Stop and Share: Which Phase of the R2D2 model do you use the most?

Mooresville’s Shining Example (It’s Not Just About the Laptops)

BREAK TIME Matthew Ward regroups during class, where each student has a school-issued laptop.
Jumbo Motivation is Needed!

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

Framework #2: 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

Ok, Million Dollar Question: What words come to mind when I say that I want to motivate learners?

Examples of TEC-VARIETY

1. Tone/Climate: Social Ice Breakers
   A. 8 nouns (adjectives, verbs)
      - List of nouns: (e.g., pirate, computer, traveler, roadrunner, wind, bookworm, musician, mentor, etc.)
      - List of adjectives: (e.g., lazy, powerful, shy, bored, exotic, cooperative, sloppy, rebel, etc.)
      - List of verbs: (e.g., coordinate, entertain, amuse, push, unite, beg, dream, publicize, etc.)
2. Encouragement, Feedback, etc.: A. Poll Everywhere  
http://www.polleverywhere.com/

2. Encouragement, Feedback, etc.: B. Student response systems, Socrative 
http://www.socrative.com/how-it-works.php

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

3. Curiosity, Fun:  
A. Adventure and Environmental Learning  
PenguinScience, Impossible2Possible, EARTHducation

3. Curiosity, Fun:  
B. Create Cartoons, Movies, and Animations  
(slide from Zaid Ali Alsagoff [zaid.alsagoff@gmail.com])

3. Curiosity, Fun:  
C. Record Webinars and Guest Expert Talks  
(slide from Zaid Ali Alsagoff [zaid.alsagoff@gmail.com])

Record Webinars/Online Talks!
3. Curiosity, Fun:
D. Online Social Networking Games (e.g., scrabble, hangman, etc.)

3. Curiosity, Fun: E. Online Database Activities (e.g., WolframAlpha)
   http://www.wolframalpha.com/

4. Variety, Novelty, Fun, Fantasy:
A. Random Lists (Random.org—clocks, coins, playing cards, dice, integers, passwords, jazz scales, lists, sequences, etc.)

4. Variety, Novelty, Fun, Fantasy:
B. Timers (Stopwatches, Countdown Timers, Stopwatch Bombs, etc.; http://www.online-stopwatch.com/countdown-timer/)

5. Autonomy, Choice, Control:
A. LearningZillion
   http://learnzillion.com/

5. Autonomy, Choice:
B. Web Exploration Assignments
1. Complete Works of Charles Darwin Online: http://darwin-online.org.uk/
4. Einstein Archives Online: http://www.alberteinstein.info/
6. Relevance, Meaningfulness: A. 60 Second Recap, Jenny Sawyer
http://www.60secondrecap.com/
Actress to students: Lend 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. Touch, Highlight, and Take Notes on the Tablet Computer (e.g., Apple starts selling interactive iPad textbooks, Yahoo! News, Peter Svensson, Assoc Press, Sat, Jan 21, 2012)
http://www.viddler.com/explore/engadget/videos/3937/

http://www.guardian.co.uk/world/interactive/2011/mar/22/middle-east-protest-interactive-timeline

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

8. Engagement, Effort: C. National Geographic Prehistoric Timeline

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

10. Yields Products, Goals:
A. Student and Teacher Created Video Products
February 24, 2012
Lorma International School, the Philippines
(Hannah Kimberly Obar, First Grade teacher)
http://www.youtube.com/watch?v=1C435Ut-GzA
http://www.youtube.com/watch?v=JZp1rEpqA
http://www.youtube.com/watch?feature=player_embedded&v=UHMuTfAc6Ec (1st grade kids)

Cards and Commitments:
Stop and Share:
Which principle of TEC-VARIETY do you use?

Recap #1:
The R2D2 Method
1. Read (Auditory and Verbal Learners)
2. Reflect (Reflective Learners)
3. Display (Visual Learners)
4. Do (Tactile, Kinesthetic, Exploratory Learners)

Recap #2:
The TEC-VARIETY Model
Tone/Climate
Encouragement, Feedback
Curiosity

Variety
Autonomy
Relevance
Interactive
Engagement
Tension
Yields Products

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

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