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

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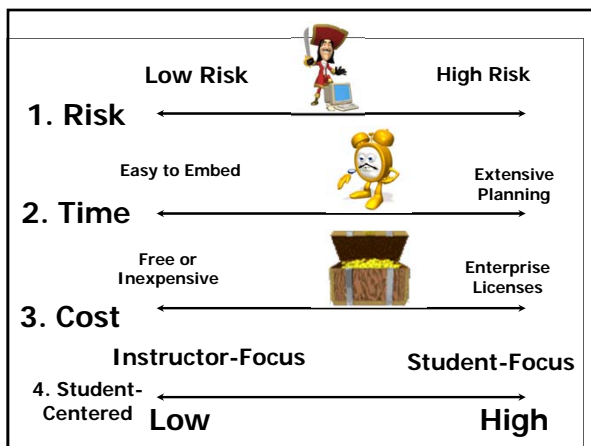## How can technology address diverse learner needs?

What did Jean-Luc Picard say?

That's right, Engage!

Framework #1: The R2D2 Model

3/13/2013

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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1. Risk — Low Risk / High Risk

2. Time — Easy to Embed / Extensive Planning

3. Cost — Free or Inexpensive / Enterprise Licenses

4. Student-Centered — Instructor-Focus / Student-Focus — Low / High

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Read 1a. Interactive Flashcards
(e.g., Study Stack
http://www.studystack.com/flashcard-136259)

Read 1b. Interactive Stories
(e.g., Meograph
http://www.meograph.com/)

Read 1c. Online Crossword Puzzles
(e.g., http://www.eclipsecrossword.com/)

Read 1d. Talking Dictionaries for Rare Languages
The Wall Street Journal, February 18, 2002
http://online.wsj.com/article/SB10001424052970204880404577228982976760026.html#articleTabs%3Dvideo

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.
Virtual Timelines (HyperHistory)
http://simile.mit.edu/timeline/
http://www.usatoday.com/tech/news/story/2011-09-22/steve-jobs-dies/50672498/1

Reflect 2b.
Timeline Tools
(e.g., MLK Memorial Timeline)
http://www.usatoday.com/news/destinations/story/2011-08-25/Martin-Luther-King-Jr-Memorial-in-Washington-A-closer-look/50136470/1?csp=34news

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 Internship, Practicum, and Field Reflections

3. Visual Learners

- **Visual learners prefer diagrams, flowcharts, timelines, pictures, films, and demonstrations.**
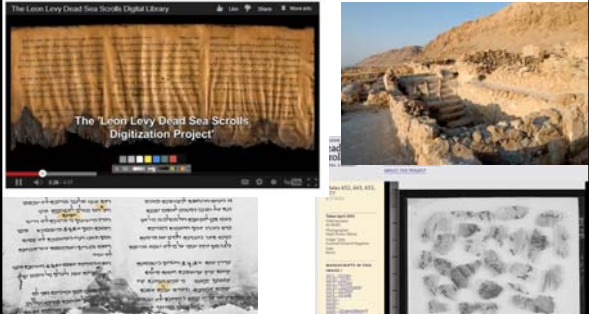
Display 3a. TV Lesson
(expert videos)

Display 3b.
Unique OER (e.g., Dead Sea Scrolls)

http://www.deadseascrolls.org.il/explore-the-archive
http://www.deadseascrolls.org.il/explore-the-archive/search?q=site_en:'Qumran__Cave_4'
http://www.deadseascrolls.org.il/home

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

Display 3d. Wordle
APedagogy of Abundance or a Pedagogy to Support Human Beings? Participant Support on Massive Open Online Courses, IRRODL, Kop, Fournier, & Sui Fai Mak, November 2011
http://www.irrodl.org/index.php/irrodl/article/view/1041/2025
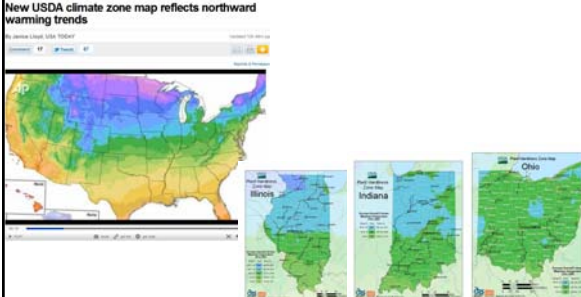
Figure 4. PLENK2010 Wordle.

Display 3e. Interactive Weather Maps
(e.g., New USDA climate zone map reflects northward warming trends, By Janice Lloyd, USA TODAY, January 26, 2012)
http://www.usatoday.com/news/nation/environment/story/2012-01-26/USDA-climate-zone-map/52787142/1

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. World Trends and Indices (e.g. Worldmapper)

Display 3h. Online Timelines
(US Presidents)

Display 3i. Video Art Tutorials
ArtMaker.com
http://artmaker.com

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. Negotiate Meanings Online
(e.g.m 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 4c. Virtual Microscopes
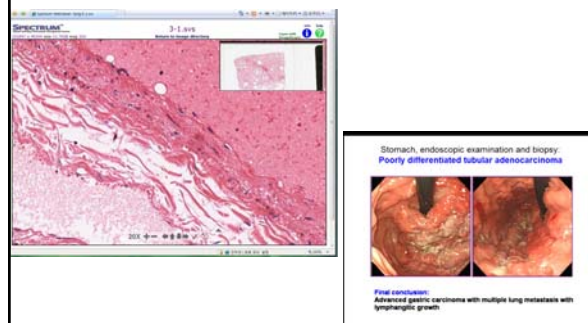
Do 4d. Student Class Documentaries
Umida's R546 Documentary Project
http://www.youtube.com/watch?v=EMLTzqCV_5A

Do 4e. Student Expertise
(e.g., Learnist
http://learni.st/category/featured#/category/featured)
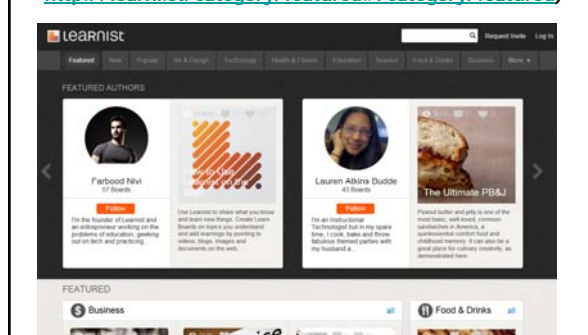
Do 4f. December 21, 2012
Community Oral Histories
(e.g., The History Harvest)
http://historyharvest.unl.edu/collections

Poll #1: 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)

Poll #2: How many new ideas did you get from Part 1?

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.
7. More than 10.

Mooresville's Shining Example (It's Not Just About the Laptops)
By ALAN SCHWARZ, New York Times. February 12, 2012
http://www.nytimes.com/2012/02/13/education/mooresville-school-district-a-laptop-success-story.html?_r=1&pagewanted=all

BREAK TIME Matthew Ward regroups during class, where each student has a school-issued laptop.

What was it that he said?

That's right, Engage!
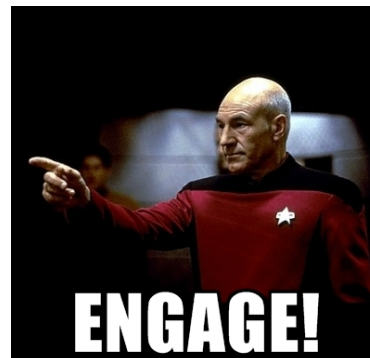
ENGAGE!

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)

See: Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. NY: Plenum Press.

How do we engage online?

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

Motivation Research Highlights
(Jere Brophy, Michigan State University)

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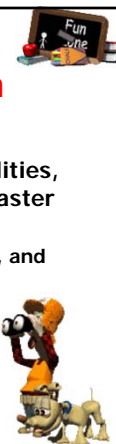3. Offer rewards for good/improved performance.
4. Novelty, variety, choice, adaptable to interests.
5. Game-like, fun, fantasy, curiosity, suspense, active.
6. Higher levels, divergence, dissonance, peer interaction.
7. Allow to create finished products.
8. Provide immediate feedback, advance organizers.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

Framework #2: TEC-VARIETY for Online Motivation and Retention

1. **T**one/Climate: Psych Safety, Comfort, Belonging
2. **E**ncouragement, Feedback: Responsive, Supports
3. **C**uriosity: Fun, Fantasy, Control
   ...
4. **V**ariety: Novelty, Intrigue, Unknowns
5. **A**utonomy: Choice: Flexibility, Opportunities
6. **R**elevance: Meaningful, Authentic, Interesting
7. **I**nteractive: Collaborative, Team-Based, Community
8. **E**ngagement: Effort, Involvement, Excitement
9. **T**ension: Challenge, Dissonance, Controversy
10. **Y**ields Products: Goal Driven, Products, Success, Ownership

Examples of TEC-VARIETY

1. **T**one/Climate: A. React to Visuals
The happiest and saddest states according to Twitter
Heather Kelly, CNN Tech, February 19, 2013
http://www.cnn.com/2013/02/19/tech/social-media/twitter-happiness/index.html

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

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

2. Encouragement, Feedback, etc.:
C. Vocab Sushi ($25 for 3 months)
http://www.vocabsushi.com/

3. Curiosity, Fun:
A. Something in the News
(e.g., Fauja Singh, 101, finishes last race, February 24, 2013)
http://espn.go.com/sports/endurance/story/_/id/8979487/fauja-singh-101-caps-career-10k-hong-kong

Fauja Singh, 101, finishes last race

3. Curiosity, Fun: B. Track a Scientist, Scholar, Celebrity, Writer
(e.g., Biography.com, biography online, FamousPeople.com)

3. Curiosity, Fun:
C. Tracking the Life of a Scientist
(e.g., Brian J. Ford, independent scientist)
http://www.youtube.com/user/tellymonitor#p/a/u/1/LhGeApsKjasr
http://www.labnews.co.uk/news/prehistoric-revolution/

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

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

4. Variety, Novelty:
B. 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)
http://www.youtube.com/user/historyteachers

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

4. Variety, Novelty:
D. Cool Resource Provider or Tech Demos

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

5. Autonomy, Choice:
B. Web Exploration Assignments

1. Complete Works of Charles Darwin Online: http://darwin-online.org.uk/
2. The Complete Works of William Shakespeare: http://shakespeare.mit.edu/
3. Edgar Allan Poe Society of Baltimore: http://www.eapoe.org/
4. Einstein Archives Online: http://www.alberteinstein.info/
5. Federal Resources for Educational Excellent project: http://free.ed.gov/
6. Global Text Project: http://globaltext.org/
7. iBerry (Open Courseware Directory): http://iberry.com/
8. Jane Austen: http://www.janeausten.org/
9. The Jane Goodall Institute: http://www.janegoodall.org/
10. Timeless Hemmingway: http://www.timelesshemingway.com/

5. **A**utonomy, Choice:
C. Watch Shared Online Videos
(LearningZillion; http://learnzillion.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

Poll #4:
Any light bulbs going off in your head so far…?
A. Yes definitely
B. Maybe
C. No

6. **R**elevance, Meaningfulness:
A. Tour an Online Oil Drilling Site or Role Play Situations (i.e., BP)
http://www.youtube.com/watch?v=ts45BkAnqTs

6. **R**elevance, Meaningfulness:
B. **Virtual field trips** (e.g., teach the history of immigration in America, eSchool News, March 21, 2012)

7. **I**nteractive, Collaborative:
A. Online Language Learning
(Skype, MSN, ECpod, Mixxer, Livemocha, Babbel, KanTalk etc.)

8. Engagement, Effort:
A. Visualizing Emancipation (June 12, 2012,
Chronicle of HE, Angela Chen, Interactive Map Traces Slaves' Path to Emancipation)
http://dsl.richmond.edu/emancipation/

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

8. Engagement, Effort: C. Arab spring:
an interactive timeline of Middle East protests, The
Guardian, Garry Blight, and Sheila Pulham, July 12, 2011
http://www.guardian.co.uk/world/interactive/2011/mar/22/middle-east-protest-interactive-timeline

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

10. Yields Products, Goals:
A. Student YouTube Products
Qi Li: R685 Gangnam Style, December 2012
http://www.youtube.com/watch?v=7Q429IgxZaU&feature=youtu.be

10. Yields Products, Goals:
B. Teacher Created Video Products
Lorma International School, the Philippines
(Hannah Kimberly Obar, 1st Grade teacher, 2/24/2012)
http://www.youtube.com/watch?v=1C435Ut-GzA
http://www.youtube.com/watch?v=JZp1rEjgAak
http://www.youtube.com/watch?feature=player_embedded&v=UHMuTfAc6Ec (1st grade kids)

10. Yields Products, Goals:
C. Interactive Timelines
(e.g., The Big Sleep, Kate Hurd)
http://hurdinsuranceagency.com/thebigsleep/

Poll #5:
Which of the last 5 motivational principles will you use the most?
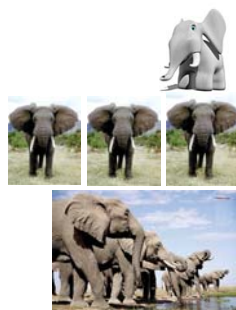
A. Relevance/Meaningfulness

B. Engagement/Effort

C. Interactive/Collab/Community

D. Tension/Challenge/Dissonance

E. Yielding Products/Goals

Poll #6:
How many ideas did you get from Part II?

1. 0 if I am lucky.
2. 1 or 2.
3. 3-5.
4. 6-10.
5. More than 10.

Commitments:
Stop and Share:
Which principle(s) of TEC-VARIETY will you use?

Tone/Climate
Encouragement, Feedback
Curiosity

Variety
Autonomy
Relevance
Interactive
Engagement
Tension
Yields Products

DON'T JUST WISH FOR A GREAT 2013,
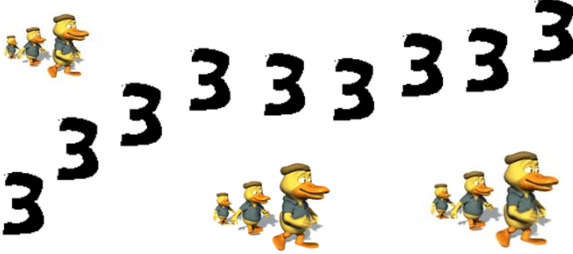MAKE IT SO.

Poll #7:
Do you feel "MOTIVATED" to try any of this out?
A. Yes, both
B. Yes, R2D2
C. Yes, TEC-VARIETY
D. Neither

Stop and Share:
Three Words from Today's Session!

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

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