

Where Are You R2D2?:

Addressing Diverse Learner Needs with the Read, Reflect, Display, and Do Model

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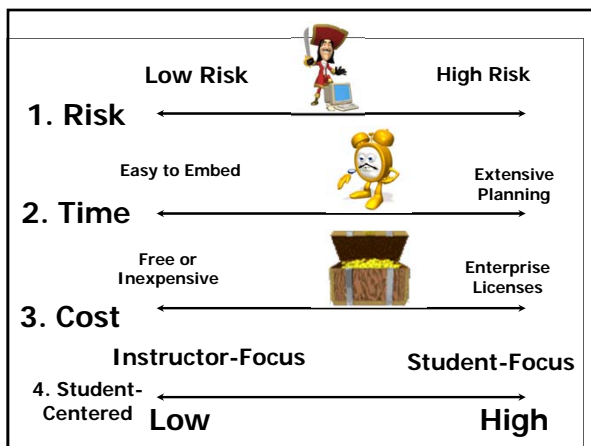
How can technology address diverse learner needs?



What did Jean-Luc Picard say?



That's right, Engage!



Framework #1: The R2D2 Model




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.



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 High →

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/>)

Create Online Crossword Puzzles!



<http://www.eclipsecrossword.com/>

Read 1d. Talking Dictionaries for Rare Languages

The Wall Street Journal, February 18, 2002
<http://online.wsj.com/article/SB1100142405497024880404577285942976750026.html?articleTabs=3Dguides>

The screenshot shows a world map with red dots indicating the locations of rare languages. A video player is embedded in the article, showing a man speaking. The article title is 'Talking Dictionaries for Rare Languages' and the source is 'The Wall Street Journal, February 18, 2002'.

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

The diagram is a circular flow with four quadrants: 'Reflecting' (top, blue), 'Doing' (left, yellow), 'Planning' (bottom, green), and 'Watching' (right, red). Arrows connect the quadrants in a clockwise cycle. To the right of the diagram are three small images: a person in a green hood, a man in a brown jacket, and a man in a white shirt.

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>

The screenshot shows a virtual timeline interface with a central horizontal axis and various event cards. One prominent card features a photo of Steve Jobs and the text 'Gates looks into PC's future on cyber kill approaches'. Another card below shows 'Steve Jobs, Apple co-founder, dies' with a photo of him.

Reflect 2b. Timeline Tools (e.g., MLK Memorial Timeline)

<http://www.usatoday.com/news/Obituaries/story/2011-08-25/DrMartinLutherKingJrMemorialInWashingtonA closerlook/504737017000110000>

The screenshot shows a timeline tool for the 'Martin Luther King Jr. Memorial in Washington: A closer look'. It includes a map of the memorial site and a large image of the memorial statue.

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

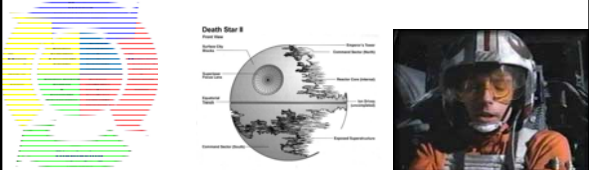
The screenshot shows a blog post titled 'Come and See Africa (CASA)'. The text includes a date 'WEDNESDAY, JULY 28, 2011' and a sub-heading 'A Day in Butara, Rwanda'. The post describes a visit to a school and mentions 'I got up around 4 am because like I am a very diligent person, but not really. My body is still confused from California time and Rwanda time. I check my email and prepare a lesson to share at the morning devotion. At 7 am, Jack the night watchman prepares the room for the morning devotion. Adults usually sit on chairs, and children sit on the floor. Around 7:30 people start singing, I join them. It was my turn to give a sermon this morning.' There are several photos of children in a classroom setting.

Reflect 2d. Workplace Internship, Practicum, and Field Reflections

The block contains three images: 1) Two students in lab coats and masks working with a patient in a clinical setting. 2) A group of students in lab coats gathered around a table, possibly in a classroom or lab. 3) A close-up of a student in a lab coat holding a petri dish and examining its contents.

3. Visual Learners

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

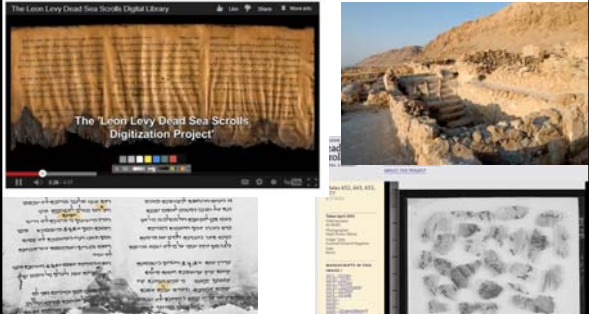


Display 3a. TV Lesson (expert videos)




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/Quaran_Cap_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, IRR0DL, Kop, Fournier, & Sui Fai Mak, November 2011
<http://www.irr0dl.org/index.php/irr0dl/article/view/1041/2023>


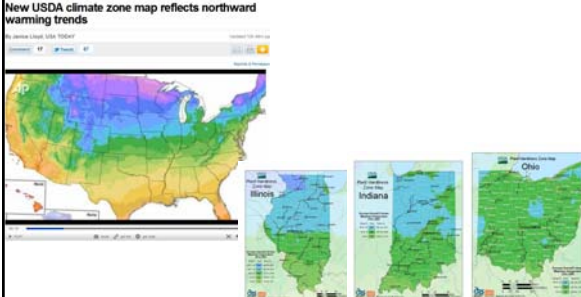


Figure 4. PLENK2010 Wordle.

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>

New USDA climate zone map reflects northward warming trends



Display 3f. Interactive Maps
(adults with college degrees by county, May 7, 2012)

<http://data.census.gov/tables/2010/decennial/interactive/geo/county/college-degrees>

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

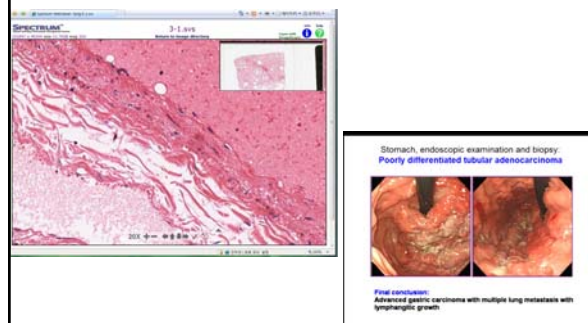
Do 4b. Negotiate Meanings Online

(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

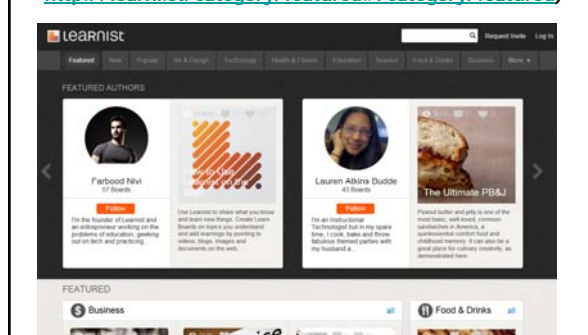
Umida's R546 Documentary Project

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.



**Mooreville's Shining Example
(It's Not Just About the Laptops)**

By ALAN SCHWARZ, New York Times. February 12, 2012

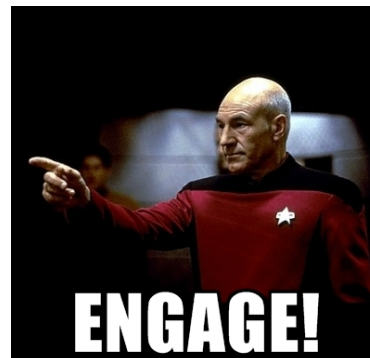


BREAK TIME Matthew Ward regroups during class, where each student has a school-issued laptop.

What was it that he said?



That's right, Engage!

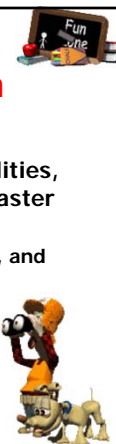


Intrinsic Motivation

“...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. **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. 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. Encouragement, Feedback, etc.: A. Create Screencasts

(Jing, GoView, Screenr, slide from Zaid Ali Alsagoff [zaid.alsagoff@gmail.com])

Create Screencasts!



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

LaboratoryNews

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])

Record Webinars/Online Talks!


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 Hemingway: <http://www.timelesshemingway.com/>


5. Autonomy, Choice:
C. Watch Shared Online Videos
 (LearningZillion; <http://learnzillion.com/>)



The screenshot shows the LearningZillion website interface. At the top, it says 'LEARNZILLION'. Below that, there's a navigation bar with 'ABOUT', 'HOW IT WORKS', and 'CAPABLE LEARNERS'. The main content area features a video player with the title 'Great video lessons from great teachers'. Below the video player, there's a section titled 'Write fractions using shapes (2)' with a grid of shapes and the number 3.


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



The image shows three light bulbs. The first is a standard white incandescent bulb with three sockets. The second is a glowing yellow light bulb against a blue background with birds. The third is a brown, hair-like light bulb.

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




The collage includes an offshore oil drilling rig at sea, a person on a beach cleaning up, and a screenshot of a video player showing a scene with a large fire or explosion.

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



The screenshots show educational resources for a virtual field trip on immigration. One screenshot is titled 'Immigration: An Interactive Tour of Ellis Island' and shows a historical photo of the ship 'The Arrival'. Another screenshot shows a 'Teachers' page with various resources and a video player.

7. Interactive, Collaborative:
A. Online Language Learning
 (Skype, MSN, ECpod, Mixer, Livemocha, Babbel, KanTalk etc.)



The collage includes a person wearing a headset and working at a computer, the Skype logo, and a screenshot of the 'SpeakENG Course' interface.

8. Engagement, Effort:
A. Visualizing Emancipation (June 12, 2012,
 Chronicle of HE, Angela Chen, Interactive Map Traces Slaves' Path to Emancipation)
<http://dsi.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=7Gd29lqxZaI&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=1C435U1-GzA>
<http://www.youtube.com/watch?v=7Zp1EjgAak>
http://www.youtube.com/watch?feature=player_embedded&v=UHMtTAc6Ec (1st grade kids)

**10. Yields Products, Goals:
C. Interactive Timelines**

(e.g., The Big Sleep, Kate Hurd)
<http://hurdsinsuranceagency.com/thebigsleep/>



Poll #5:

Which of the last 5 motivational principles will you use the most?

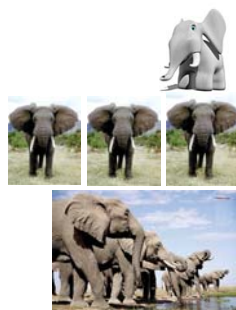
- A. Relevance/Meaningfulness
- B. Engagement/Effort
- C. Interactive/Collab/Community
- D. Tension/Challenge/Dissonance
- E. Yielding Products/Goals



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,



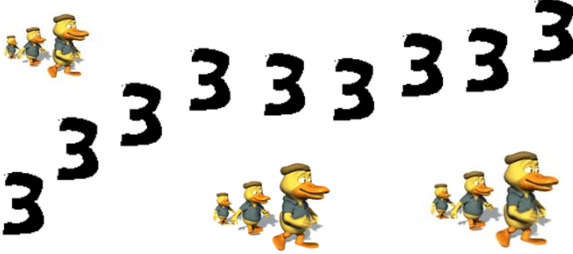
Poll #7:

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!



The graphic consists of a series of black numbers '3' arranged in a slightly upward-curving line from left to right. There are three cartoon ducks in blue uniforms and hats. One duck is at the top left, another is at the bottom center, and a third is at the bottom right.

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



The bottom section contains three small rectangular images. The first shows a person in a dark suit holding a glowing blue lightsaber. The second shows a man in a red Star Trek uniform pointing upwards. The third shows a person wearing a headset and glasses sitting at a desk with a laptop.