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

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Audience Poll #1:
Has learning technology ever transformed your life.

Looking to the Past...

Change not possible as an accountant...
(Life as a CPA, 1981-1986)

Knowledge Navigator (1987)
Apple Computer
http://www.youtube.com/watch?v=hb4AzF6wEoc

Fast Forward 25+ Years...
“Anyone can now learn anything from anyone at any time.”
Learning is Changing
New Technologies = New Delivery Methods...

I. Learning is More Technology Driven
Robots teaching English and Virtual Worlds
Dr. Meeyong Kim, Dajeon, Korea, May 2012

II. Learning is More Video-Based
GETideas Channel, Cisco (Thought Leader Series uploaded to YouTube), July 22, 2011

Adora Svitak, WFP Youth Representative - 2013
ECOSOC Youth Forum
"Shaping tomorrow’s innovators: Leveraging science, technology, innovation and culture for today’s youth", 27 Mar 2013 - Statement by the World Food Programme Youth Representative, Ms. Adora Svitak at the 2013 ECOSOC Youth Forum.

III. Learning is More Mobile

S. Korea Medical University - BYOD
Moving from lecture-centered to student interaction centered model
Developed local evaluation rubrics
IV. Learning is More Open

V. Learning is More Massive
April 16, 2013 (NovoEd)
New MOOC Provider Says It Fosters Peer Interaction
Chronicle of Higher Education, Jake New
http://novoed.com/

VI. Learning is More Flipped

VII. Learning is More Empowering

VIII. Learning is More Social
Facebook to help overhaul ICT curriculum,
Money, Andrew Marszal, Telegraph, Oct. 19, 2012
IX. Learning is More Collaborative
Collaboration and Discussion in Google Hangouts or with iPad, Jan. 28, 2013
(Carrie Gong from Beijing Normal University)

X. Learning is More Modifiable
New Learning Space Designs

XI. Learning is More Bendable
Flexible displays bend what’s possible for computers, Jon Swartz, USA Today (May 4, 2012)

Components of the wrist-worn display prototype developed at HP Labs are shown in this illustration. When completed, the device will incorporate a working flexible display powered by solar cells.

XII. Learning is More Streamed
April 9, 2013
Computer fashions face social test: Can wearable computers fit in? Scott Martin, USA Today

February 22, 2013
NASA’s spacey Google+ Hangout shows off zero-G antics - and cats!

XIII. Learning is More Personal
iPotty Aims To Entertain Toddlers During Toilet Training, Mashable, Kate Freeman (January 10, 2013)

iPotty Aims To Entertain Toddlers During Toilet Training
XIV. Learning is More Global
(Book Review by Dr. Mimi Miyoung Lee: Ed Tech Magazine, May-June 2013)
(e.g., Taking it Global (TIG), RoundSquare, etc.)
RoundSquare (http://www.roundsquare.org/) and Taking it Global (http://www.tigweb.org/)

XV. Learning is More Web-Based
April 15, 2013
Google boss: Entire world will be online by 2020, Doug Gross, CNN

The Web of Learning
(Norway, the Philippines, Saudi Arabia, etc.)
We are entering a jumping off point…

I’m an Armchair Indiana Jones…

Framework #1: WE-ALL-LEARN: Ten Forces that Opened the Learning World

- Web Searching in the World of e-Books (i.e., Darwin)
- E-Learning and Blended Learning
- Availability of Open Source and Free Software (e.g., Moodle)
- Leveraged Resources and OpenCourseWare (e.g., MIT)
- Learning Object Repositories and Portals (i.e., shared content)
- Learner Participation in Open Info Communities (YouTube)
- Electronic Collaboration and Interaction (sync and async)
- Alternate Reality Learning (Online Massive Gaming, Simulations, and Virtual Worlds; e.g., Second Life)
- Real-Time Mobility and Portability (e.g., iPhone)
- Networks of Personalized Learning (Blogs, RSS)

What did Jean-Luc Picard say?

That’s right, Engage!

How can technology address diverse learner needs?
Framework #2: 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.

Read 1a. Twitter Fed Class Discussions

Read 1b. Grammar Checkers (e.g., Grammarly)
http://www.grammarly.com/
Read 1c. Interactive Stories (e.g., Meograph
http://www.meograph.com)

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

Read 1e. 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. Workplace Internship, Practicum, and Field Reflections

Reflect 2b. BQO (Big Questions Online), January 8, 2013
(e.g., Do We Have Souls?)
https://www.bigquestionsonline.com/content/do-we-have-souls
Reflect 2c. Cultural Blogs (e.g., Dr. Kim Foreman, San Fran State University, Come and See Africa Blog: http://comeandseeafrica.blogspot.com/)

Reflect 2d. Virtual Timelines with Media
http://simile.mit.edu/timeline/

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

Reflect 2f. Scenario Learning (e.g., Krispy Kreme Management 101)

3. Visual Learners
- Visual learners prefer diagrams, flowcharts, timelines, pictures, films, and demonstrations.
Display 3b. 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 3c. More Interactive Maps
Where and Who the College Graduates Are,
Chronicle of HE, February 24, 2013

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

Display 3e. More Interactive Maps
Mapping the Dead: Gun Deaths Since Sandy Hook,
Huffington Post, March 22, 2013
http://data.huffingtonpost.com/2013/03/gun-deaths

Display 3f. 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 3g. Visual Library Search
DPLA (Digital Public Library Of America)
http://dp.la/
Display 3h. Concept Mapping and Timeline Tools (VUE, Bubbl.us, Cmap, Freemind, Gliffy, Mindmeister, or Mindomo)

Display 3i. Human Embryology Animations (Valerie O'Loughlin, Indiana University)

Display 3j. Online Timelines (US Presidents)


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. Community Oral Histories**
(e.g., The History Harvest, December 21, 2012)
http://historyharvest.unl.edu/collections

**Do 4c. Student Expertise**
(e.g., Learnist)
http://learni.st/category/featured/#/category/featured

**Do 4d. Student Class Documentaries**
Umida's R546 Documentary Project
http://www.youtube.com/watch?v=EMLTzqCV_SA

**Do 4e. 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 two people 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 4f. Student Collaborative Knowledge Building and Sharing**
(e.g., Popplet: http://popplet.com/)

**Poll #2: 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 #3: 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.

What was it that he said?

That’s right, Engage!

Where would we all like to work?

Sleepy U?

April 15, 2012
Can Colleges Manufacture Motivation?, Dab Berrett, Chronicle of Higher Ed
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.
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.

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)


Framework #3: 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

MAKE IT SO
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
https://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])

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. Online Social Networking Games (e.g., scrabble, hangman, etc.)

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

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

3. Curiosity, Fun: D. Tracking the Life of a Scientist
(e.g., Brian J. Ford, independent scientist)
http://www.youtube.com/user/belfywendyrhoar51?list=ULbod7gyj9er
http://www.labnews.co.uk/news/pr/prehistoric-revolution/

3. Curiosity, Fun: E. Cross-Cultural Exchanges
(e.g., Georgetown Learning Initiatives in Soliya)
http://pl.georgetown.edu/soliya

3. Curiosity, Fun: F. Blog Adventures
Tracing the fate of Algal Carbon Export in the Ross Sea, Antarctica
TRACERS: The NBP13-02 Cruise, February 12 to April 5, 2013
http://tracers-egg32.blogspot.com/p/the-project.html

From: Cassandra Brooks [cbrooks1@stanford.edu]
Sent: Thursday, January 31, 2013 12:09 AM
Subject: I'm heading out today to New Zealand, then flying to Antarctica where we pick up
our NSF icebreaker. We'll be at sea for about 54 days.
3. Curiosity, Fun:
G. Something in the News
(e.g., Fauja Singh, 101, finishes last race, February 24, 2013)
Fauja Singh, 101, finishes last race

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

4. Variety, Novelty:
B. Sync Session with Guest Speakers
Designing a New Learning Environment
Professor Paul Kim, Stanford University
http://venture-lab.org/education/lectures/45

5. Autonomy, Choice:
A. Online Resource Search
(Class Google Jockeys)
1. Complete Works of Charles Darwin Online: http://darwin-online.org.uk/
4. Einstein Archives Online: http://www.alberteinstein.info/

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/

5. Autonomy, Choice:
C. Commonwealth of Learning, March 2013
5. Autonomy, Choice:
D. Center for Open Educational Resources and Language Learning
http://www.coerll.utexas.edu/coerll/LRC (Language Resource Center)
http://www.nflrc.org/

Poll #4:
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 #5:
Any light bulbs going off in your head so far...?
A. Yes definitely
B. Maybe
C. No

6. Relevance, Meaningfulness:
B. Multimedia Glossaries
Ozgur Ozdemir, December 2012
http://r685glossary.shutterfly.com/

6. Relevance, Meaningfulness:
A. Online Cases (e.g., Mark Braun, IU)

7. Interactive, Collaborative:
A. Online Language Learning
(Skype, MSN, ECpod, Mixter, Livemocha, Babbel, KanTalk etc.)
7. Interactive, Collaborative:
B. Online Teams
Paul Km, Stanford: Oct 28, 2012
17,380 students. I haven't met f2f. I am shocked to see students from places where Internet is very limited. You will find students from even Zanzibar!!! Many teams are formed and they meet f2f in the region where they live.
http://venture-lab.org/education/

7. Interactive, Collaborative:
C. Collaboration and Discussion in Google Hangouts
(January 29 and February 25, 2013)

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

8. Engagement, Effort: B. Life on Timeline.
How Jimmy Wales’ Wikipedia Harnessed the Web as a Force for Good, Ted Greenwald, March 19, 2013, Wired Magazine
http://www.wired.com/wiredenterprise/2013/03/jimmy-wales-wikipedia/2/

8. Engagement, Effort: C. Timelines with Oral Histories, Slavery and the Making of America Time and Place, PBS
http://www.pbs.org/wnet/slavery/timeline/1857.html

8. Engagement, Effort: D. Guest Speaker Quotes
(Rey Junco, February 25, 2013)
8. Engagement, Effort:
E. Interactive Simulations
http://phet.colorado.edu/en/simulation/energy-skate-park

8. Engagement, Effort:
F. Cyber-Anatomy
http://www.cyber-anatomy.com/

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

9. Tension, Challenge, etc.:
A. Google Hangouts/Google On Air (Jay Cross, 10 MOOC experts; February 27, 2013 http://www.jaycross.com/wp/2013/02/businessmoocs-the-hangout-recording/

9. Tension, Challenge, etc.:
B. Cage Match or Debate

9. Tension, Challenge, etc.:
C. Final Four Competitions; i.e., Math March Madness
9. Tension, Challenge, etc.:
D. Articulate Storyline

9. Tension, Challenge, etc.:
E. Peer Discussion on Final Projects
(from Paul Kim's MOOC, Stanford)

10. Yields Products, Goals:
A. Student YouTube Products
Qi Li: R685 Gangnam Style, December 2012
http://www.youtube.com/watch?v=7Q429lqxZaU&feature=youtu.be

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

10. Yields Products, Goals:
C. Wikibook Chapter
http://en.wikibooks.org/wiki/Web_2.0_and_Emerging_Learning_Technologies/Andragogy_and_Technology
Poll #6:
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

Commitments:
Stop and Share:
Which principle(s) of TEC-VARI ETY will you use?
Tone/ Climate
Encouragement, Feedback
Curiosity
Variety
Autonomy
Relevance
Interactive
Engagement
Tension
Yields Products

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

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

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

Any Questions?
Try the R2D2 Model!
Try TEC-VARI ETY too...
Slides at: TrainingShare.com
Papers: PublicationShare.com
Book: http://worldisopen.com/
Email: curt@worldisopen.com