Learning is Changing Part 2: Addressing Diverse Online Learner Needs and Motivation with the Read, Reflect, Display, and Do (R2D2) and TEC-VARIETY Models

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Motivation and Engagement

What did Jean-Luc Picard say?

That’s right, Engage!

Ok, how do you now view the instructor in this more Open World of Education?
From Instructor as Credit Manager...

Instructor as Curator

Instructor as Concierge

Instructor as Counselor

Instructor as Conductor

Poll #1: 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.

**Drive: The Surprising Truth About What Motivates Us**  
Daniel Pink (2009)

**Motivation 3.0**

- Freedom, challenge, purpose
- Creative, interesting, etc.
- Self-directed work
- Intrinsic motivation
- Life as play and possibility
- Engagement and mastery
- Autonomy

**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)


**Mindset:**  
The New Psychology of Success  
Carol Dweck (2006)

http://mindsetonline.com/index.html
http://mindsetonline.com/testyourmindset/step1.php

**Framework: 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

**Introducing the free “TEC-VARIETY” Framework...**
http://tec-variety.com/
1. **Risk**

   - Low Risk
   - High Risk

2. **Time**

   - Easy to Embed
   - Extensive Planning

3. **Cost**

   - Free or Inexpensive
   - Enterprise Licenses

4. **Student-Centered**

   - Low
   - High

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**Examples of TEC-VARIETY**

1. **Tone/Climate: A. Threaded Video Discussions, e.g., Flipgrid**
   
   ![Flipgrid Screenshot](http://flipgrid.com/#429f88c5)

2. **Tone/Climate: B. Share Visuals of Favorite Places**
   
   ![Panoramio Screenshot](http://www.panoramio.com/)

3. **Tone/Climate: C. Instructor Course Introductions**
   
   - Theatre 10 Intro Video, October 7, 2014, Elizabeth Dale, West Valley College
   - https://www.youtube.com/watch?v=6Wzbz3vQiiA
   - Chuck Severance, U Michigan/Coursera in Barcelona
   - https://www.coursera.org/course/pythonlearn

4. **Encouragement, Feedback, etc.: A. Demonstrations and Tutorials**
   
   - Emerging technology specialist, IU UITS, Nitocris Perez,
   - May 29, 2014
2. Encouragement, Feedback, etc.: B. Voice/Audio Feedback
Vocaroo: http://vocaroo.com/
http://vocaroo.com/delete/s6x8msQAYAiu/s37bc9408bb8c95
(Recorded by Curt Bonk for the Open University of China)

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

May 25, 2015
3. Curiosity, Fun:
A. Something in the News
(e.g., Chinese universities move up in world rankings, China Daily)


3. Curiosity, Fun:
B. Something in the News
New 'massive' dinosaur skeleton discovered, USA Today, September 5, 2014 (Dreadnoughtus)

October 23, 2014: Goofy dinosaur blends Barney and Jar Jar Binks, SF Gate
Incredible 50-foot 'dragon' dinosaur unearthed by Chinese farmers
January 20, 2015:
http://www.cnn.com/2015/01/30/asia/china-dragon-dinosaur/index.html

January 14, 2016
3. Curiosity, Fun:
C. Something in the News
Move over T. rex, new dinosaur unveiled, Amanda Jackson, CNN
http://www.cnn.com/2016/01/14/living/titanosaur-new-dinosaur-on-display-new-york-irpt/

January 18, 2016
3. Curiosity, Fun:
D. Something in the News
Lost city revealed in jungles of Honduras, CNN
December 28, 2015
3. Curiosity, Fun:
E. Something in the News
Creature from the deep surfaces in Japanese harbor, giant squid, Euan McKirdy and Junko Ogura, CNN

September 3, 2015
3. Curiosity, Fun:
F. Something in the News
Deep sea creature stuns explorers, CNN, While mapping uncharted waters near Hawaii, NOAA explorers captured incredible footage of deep sea creatures.

November 19, 2015
3. Curiosity, Fun: G. Something in the News
New daddy longlegs named after 'Lord of the Rings' character Smeagol, Mary Bowerman, USA Today

September 7, 2015
3. Curiosity, Fun:
H. Something in the News
New 'Superhenge'? Remains found near Stonehenge, Monica Sarkar, CNN

November 20, 2015
3. Curiosity, Fun:
I. Something in the News
(e.g., This may be the oldest surviving Photo of a human, November 7, 2014, CNN, Brandon Griggs; But this image, taken in Paris, France, in 1838)

November 20, 2015
3. Curiosity, Fun:
J. Something in the News
Treasure trove: Farmer discovers 4,000 Roman coins in Swiss orchard, Will Heilpern, CNN
June 12, 2015
3. Curiosity, Fun: K. Something in the News and Infographic
Twitter CEO Dick Costolo replaced by co-founder Jack Dorsey, Laura Onita
http://www.biology.com/people/steve-jobs-9354805
http://www.biology.com/people/ada-lovelace-20825323

4. Variety, Novelty, Fun:
4. Variety, Novelty, Fun, Fantasy:
A. Teach from Vietnam to the World
BBC News Asia, August 14, 2013
Even though he is now very elderly Vinh Bao (age 96) still teaches music, using his computer to coach pupils across the globe.

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

5. Autonomy, Choice:
5. Autonomy, Choice:
A. Enroll in a MOOC and Reflect (e.g., see Class Central)
http://natewynne1982.wix.com/p540courseglossary
Ozgur Ozdemir, December 2012
http://r685glossary.shutterfly.com/
Ozgur Ozdemir, December 2012
http://r685glossary.shutterfly.com/
Umida Khikmatillaeva, Dec. 2011, P540
http://learningplanet.shutterfly.com/
5. Autonomy, Choice:
C. Explore OpenCourseWare and Open Educational Resources

5. Autonomy, Choice:
D. Video Repositories and Portals (e.g., Khan Academy, Computer Programming)

Poll #2:
Any light bulbs going off in your head so far...?
A. Yes definitely***
B. Yes maybe!
C. Not yet (but hopefully soon...)

6. Relevance, Meaningfulness:
A. Guest Chats (e.g., Emily Hixon, January 20, 2015)
https://connect.iu.edu/p259wpiabg9/

7. Interactive, Collaborative:
A. Negotiate Meanings Online
(e.g., PiratePad: http://meetingwords.com/)
MeetingWords, Google Docs, NowComment, MixedInk

7. Interactive, Collaborative:
B. Virtual Sharing Walls, April 6, 2015
e.g., Padlet (What is your secret recipe to engage?)
http://padlet.com/zaid_alsagoff/engage
7. Interactive, Collaborative:
C. Collaboration and Discussion in Google Hangouts, Jabber, Skype, etc
(January 29 and February 25, 2013)

8. Engagement, Effort:
B. Intercultural learning
Virtual and on-site exchanges between York University students, refugee students on the Thai Burma border and displaced migrant students in Ranong, Thailand, and York University, Toronto, Canada
http://aifprojects.yorku.ca/projects/intercultural-learning-thailand-2012-13/

8. Engagement, Effort:
C. Simulations

8. Engagement, Effort:
D. Interactive Timeline Maps,
October 22, 2014, Second immigration wave lifts diversity to record high, Edward Greg Toppo and Paul Overberg, USA Today

8. Engagement, Effort:
E. Interactive Map Timelines
(adults with college degrees by county, May 7, 2012)
8. Engagement, Effort: F. Simulations

9. Tension, Challenge, etc.: A. Controversial Issue Debates
RS11 Midterm Video How to Create an Authentic Environment in a Content-Driven School?, RS11, Nick and Nik
https://www.youtube.com/watch?v=Br3_aZT_xQg&feature=youtu.be

10. Yields Products, Goals:
A. Uploading Mobile Books and Wikibooks (e.g., BookRix, http://www.bookrix.com/)

10. Yields Products, Goals:
B. Student Created Mobile Apps
The App Builder: http://www.theappbuilder.com/
Mintian Guo: http://myapp.is/r685final

10. Yields Products, Goals:
C. Student Created Videos
Piercarlo Abate: http://www.youtube.com/watch?v=_TURzHO0aU0
Qi Li, Gangnam: http://www.youtube.com/watch?v=7Q429lqxZaU&feature=youtu.be
Miguel Lara (Web 2.0 FREEDOM): http://www.youtube.com/watch?v=8cmCFWi9lW8
Kendal Rasnake (Is IT Right For You?): https://www.youtube.com/watch?v=MJ3GUDICIGw

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
Framework #2: The R2D2 Model

Addressing Learning Styles with R2D2

Question: How can technology address diverse learner needs?

August 12, 2015
Create Engaging Learning Experiences


Southern Illinois University, Carbondale, Illinois
Heidi Jung and Cheryl L Bosarge
Instructional Designer
Center for Teaching Excellence
Heidi Lynn Jung hjung@siu.edu
Cheryl L Bosarge cbosarge@siu.edu
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. Collect and Listen to Interactive Stories
   (e.g., Meograph: http://www.meograph.com/)

Read 1b. Exploring the Life of a Prominent People (Wikipedia)

Read 1c. Grammer Checkers
   (e.g., Grammarly, Ginger, GrammarCheck, PaperRater, and SpellCheckPlus)
   http://www.grammarly.com/

January 20, 2016
Read 1d. Podcasts
   IU Bloomington podcast series to launch Jan. 24, Steve Hinnefeld, IU Newsroom

IU's Media School dean James Shanahan, at left, will host a new campus podcast. Senior Luqmann Ruth will read the news for the inaugural podcast.

| PHOTO BY JENNIFER PIUREK, OFFICE OF THE PROVOST |
January 28, 2015
Read 1e. Twitter Fed Class Discussions
Live-Tweeting Assignments: To Use or Not to Use?
He Chronicle of Higher Education, Adeline Koh
http://chronicle.com/blogs/profhacker/live-tweeting-assignments-to-use-or-not-to-use/58949

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 Experiences

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

Reflect 2c. Case and Online Discussion (Kelley Direct, IU)

3. Visual Learners
- Visual learners prefer diagrams, flowcharts, timelines, pictures, films, and demonstrations.
Display 3a. More Interpreting Infographics
August 5, 2015
How much rainforest in that chocolate bar?
Global Forest Watch, Nancy Harris, Octavia Payne and Sarah Mann
http://blog.globalforestwatch.org/2015/08/how-much-rainforest-is-in-that-chocolate-bar/

Land-Use Change Emissions in Miles Driven

2,000 Ha of forest lost

1.5B miles driven by
passenger car

= 58,819

trips around the earth

http://blog.national.chocolate

WORLD RESOURCES INSTITUTE

Display 3b. Virtualize Words Used
(e.g., Wordle, Tagzedo, Tagul, WordSift, Word It Out)

Display 3c. Map Animations
Yes, Mr. President, We Remade Our Atlas to Reflect Shrinking Ice
Christine Dell'Amore, National Geographic, August 3, 2015

Display 3d. Maps of Languages
Langscape, Language at Maryland
http://wwwlanguagescience.umd.edu/beyond-umd/langscape

http://theweek.com/articles/545768/cool-interactive-map-lets-explore-worlds-languages

http://langscape.umd.edu/map.php

Display 3e. (April 28, 2015)
Concept Mapping and Timeline Tools
(Bubbl.us, Cmap, Gliffy, Spicynodes, or Mindomo)
http://www.spicynodes.org/index.html

Display 3f. October 31, 2014
Penguin Science (Penguin Cam), Jean Pennycook
http://www.penguinscience.com/
http://www.thistle.org/pcam2/images.shtml
January 20, 2016
Display 3g. Embedded Videos
Why the Future Is Bright for the World’s Poorest Farmers, Gates Notes, the blog of Bill Gates

December 17, 2015
Display 3h. Conference Resource Visuals
Elliott Masie’s Learning 2015, Nov 1-4, 2015

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

Display 3j.
Videos for clinical education
(Sungkyunkwan University School of Medicine, www.mededu.or.kr)

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.

December 8, 2015
Do 4a. Take a MOOC
PS40 Final Assignment for Meina Zhu: MOOC, Coursera, Introduction to Psychology, University of Toronto
https://www.coursera.org/course/intropsych
Do 4b. Student Final Project Videos

December 8, 2015
PS40 Final Assignment: Learning Theories and Psychotherapy, Shu-Yi Wang
https://www.youtube.com/watch?v=PNmpQ0hXAM

Poll #3: Which do you prefer...
(A) TEC-VARIETY or (B) R2D2?

We are entering a jumping off point...
(South University of Science and Technology of China, Wednesday June 10, 2015)

Do 4c. Student Music Recordings of Course Content

April 26, 2015
IST Groove Song, Jeffrey Jenkins, R511: https://soundcloud.com/jeffjenkins25/ist_groove
The World is Open, Jill Kaufman, R678: https://www.youtube.com/watch?v=ZRGV0Mg5Vmw&feature=youtu.be
Daniel Halluska, PS40: http://www.youtube.com/watch?v=tOL7lrGsqnw

Poll #4: 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.

Poll #5: Any Questions?
Try TEC-VARIETY...Try R2D2
Slides at: TrainingShare.com
Papers: PublicationShare.com
Free Book: http://tec-variety.com/
Dr. Curt Bonk – CJBonk@Indiana.edu