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

Curtis J. Bonk, Professor, Indiana University
cjbonk@indiana.edu
http://mypage.iu.edu/~cjbonk/

Part I. How can technology address diverse learner needs?

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.

Framework #1: The R2D2 Model

1. Risk
   - Low Risk
   - High Risk
   - Easy to Embed
   - Extensive Planning
2. Time
   - Free or Inexpensive
   - Enterprise Licenses
3. Cost
   - Instructor-Focus
   - Student-Focus
   - Low Cost
   - High Cost
4. Student-Centered
   - Low Focus
   - High Focus

Empowering Online Learning
100+ Activities for Reading, Reflecting, Displaying & Doing

1. Reading
   - Problem Orientation
   - Knowledge Construction
2. Reflecting
   - Problem Generation
   - Knowledge Construction
3. Displaying
   - Solution Orientation
   - Knowledge Construction
4. Doing
   - Back-on-Track
Read 1a. Collect and Listen to Interactive Stories (e.g., Meograph: http://www.meograph.com/)

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

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

Read 1d. Twitter Fed Class Discussions https://twitter.com/HSI_Brands

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

Read 1f. Emergency Preparedness Information
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. Big Issue Reflections (Big Questions Online (BQO)), January 8, 2013 (e.g., Do We Have Souls?)
https://www.bigquestionsonline.com/content/do-we-have-souls

Reflect 2b. Reflect on Virtual Timelines (Dipity, xtimeline, Simile, etc.)
http://www.usatoday.com/story/life/movies/2013/04/10/harrison-ford-jackie-robinson/2001783/

Reflect 2c. Workplace and Field Reflections

Reflect 2d. Scenario Learning

3. Visual Learners

• Visual learners prefer diagrams, flowcharts, timelines, pictures, films, and demonstrations.
Display 3a. Anchored Instruction in Shared Online Videos (e.g., WonderHowTo)

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

Display 3c. Educational Videos: TED-Ed
http://education.ted.com/

Display 3d. Medical Animations (e.g., YouTube, CNN, BBC)
http://www.youtube.com/watch?v=gMp5rk2_Qzc

Display 3e. Video Demonstrations (e.g., chest compressions child)

Display 3f. Virtualize Words Used (e.g., Wordle, Tagzedo, Tagul, WordSift, Word It Out)
http://shellyterrell.com/2010/02/14/12-word-cloud-resources-tips-tools/
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. Student Collaborative Knowledge Building and Sharing

(e.g., Popplet: http://popplet.com/)
Do 4c. Virtual Quizzes
(Sungkyunkwan University School of Medicine, www.mededu.or.kr)

Do 4d. Visual presentations (e.g., Prezi)
http://prezi.com/ihmhhl59xd46/is-the-world-open/
http://prezi.com/8h7grxlyaymv/the-world-is-open/

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

Poll #1: What phase of the R2D2 Method did you get the most ideas from?
A. Read (Auditory and Verbal Learners)
B. Reflect (Reflective Learners)
C. Display (Visual Learners)
D. Do (Tactile, Kinesthetic, Exploratory Learners)

Poll #2: Any light bulbs going off in your head so far...?
A. Yes definitely
B. Maybe
C. No

We’re not done yet...
Part II. Motivation and Engagement

What did Jean-Luc Picard say?

That’s right, Engage!

How do we engage online?

What was it that he said?

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.

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 #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. Video Course Intros
   http://www.youtube.com/watch?v=kOdFRFDlbW0

MAKE IT SO

1. **Tone/Climate**: A. Video Course Intros
   http://www.youtube.com/watch?v=kOdFRFDlbW0
1. **Tone/Climate: B. Video Introductions**, e.g., Flipgrid
   [http://flipgrid.com/#429f88c5](http://flipgrid.com/#429f88c5)

2. **Encouragement, Feedback, etc.: A. Voice Feedback**
   [http://vocaroo.com/i/s1SnBUXdxFDF](http://vocaroo.com/i/s1SnBUXdxFDF) (Oct 30)

2. **Encouragement, Feedback, etc.: B. Blog and Website Polling**
   (e.g., Poll Everywhere, BlogPolls, BlogPoll, MicroPoll)

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

2. **Encouragement, Feedback, etc.: D. Quizlet (online quiz tools)**

3. **Curiosity, Fun: A. Something in the News**
   (e.g., Fauja Singh, 101, finishes last race, February 24, 2013)
3. Curiosity, Fun:
B. Demonstrate Skill in Action
(e.g., In the Right Place at the Right Time - CPR Save Caught on Camera, March 5, 2013, Kristine Rice, ASHI)
http://www.hsi.com/Blog/bid/95941/In-the-Right-Place-at-the-Right-Time-CPR-Save-Caught-on-Camera

3. Curiosity, Fun:
C. Online Quiz Games
Jeopardy Labs
https://jeopardylabs.com/play/ganttpardy

3. Curiosity, Fun:
D. Infographics
(October is Sudden Cardiac Arrest Month)
http://www.hsi.com/Blog/bid/102242/October-is-Sudden-Cardiac-Arrest-Month

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

5. Autonomy, Choice:
A. Online Database Activities
(e.g., WolframAlpha)
http://www.wolframalpha.com/

5. Autonomy, Choice:
B. Demonstrate, Explore, and Share Websites
Commonwealth of Learning, March 2013
5. Autonomy, Choice:
c. Online Resource Search
(Class Google Jockeys)
(links to text, soundtracks, video clips, etc.)

6. Relevance, Meaningfulness:
A. Video Scenario Learning
(Franklin University, cost and forensic accounting course)
http://video.franklin.edu/Franklin/acct/managerialAccounting/cost-behavior-player.html
http://video.franklin.edu/Franklin/acct/342/common/fraudScenario02.html
http://www.youtube.com/watch?v=cJmosLSUgQ8&list=TLzymmALKW1TI

6. Relevance, Meaningfulness:
B. Design Multimedia Glossaries
Ozgur Ozdemir, December 2012
http://r685glossary.shutterfly.com/
Umida Khikmatillaeva, Dec. 2011, P540
http://learningplanet.shutterfly.com/

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

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

7. Interactive, Collaborative:
B. Negotiate Meanings Online
(e.g., PiratePad: 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!
8. Engagement, Effort:
A. Online Experiments (e.g., psychology)
B. Interactive Simulations
http://phet.colorado.edu/en/simulation/energy-skate-park

9. Tension, Challenge, etc.:
A. Decision-Making Scenarios (e.g., Articulate Storyline)

10. Yields Products, Goals:
A. Final Product Video Summaries
Piercarlo Abate: http://www.youtube.com/watch?v=_TURzHO0aU
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

B. Final Product Presentations
Kristen Needler, Self-Directed Simulation
http://www.youtube.com/watch?v=aTYzj-b8-g

C. I Done This, Milestone Planner, and 43 Things
10. Yields Products, Goals:  
D. Uploading Mobile Books  
(e.g., BookRix, http://www.bookrix.com/)

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

Poll #3:  
Do you feel “MOTIVATED” to try any of this out?  
A. Yes, R2D2  
B. Yes, TEC-VARIETY  
C. Yes, both  
D. Neither

Poll #4: How many new ideas did you get?  
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.  

Any Questions?  
Try the R2D2 Model!  
Try TEC-VARIETY too...  
Slides at: TrainingShare.com  
Papers: PublicationShare.com  
Book: http://worldisopen.com/  
Dr. Curt Bonk – CJBonk@Indiana.edu

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