Adding Some TEC-VARIETY and Thrilling R2D2 Adventures into Online and Blended Learning (and any type of class for that matter)

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Needed: New Models of Motivation and Engagement

Poll: What did Jean-Luc Picard say?

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)


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.

Introducing the free “TEC-VARIETY” Framework...
http://tec-variety.com/
### Examples of TEC-VARIETY

#### 1. Risk
- **Low Risk**
- **High Risk**

#### 2. Time
- **Easy to Embed**
- **Extensive Planning**

#### 3. Cost
- **Free or Inexpensive**
- **Enterprise Licenses**

#### 4. Student-Centered
- **Low**
- **Student-Focus**

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### April 3, 2017

**1. Tone/Climate:**

**A. Sli.do**

https://www.sli.do/

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**C. Instructor Course Introductions**

(Theatre 10 Intro Video, October 7, 2014, Elizabeth Dale, West Valley College)

https://www.youtube.com/watch?v=_Wzbzc3QiiA

Chuck Severance, University of Michigan

https://www.coursera.org/course/pythonlearn

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### June 18, 2018

**1. Tone/Climate:**

**B. Threaded Video Discussions and Questions**

(e.g., Flipgrid)

Microsoft acquires social learning platform Flipgrid, Brian Heater, TechCrunch

https://techcrunch.com/2018/06/18/microsoft-acquires-social-learning-platform-flipgrid/

**C. Instructor Course Introductions**

(Barcelona)

http://www.youtube.com/watch?v=JzNHvmSv8TI

Chuck Severance, University of Michigan

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**2. Encouragement, Feedback:**

**A. Blog and Website Polling**

(e.g., Polleverywhere, BlogPolls, BlogPoll, MicroPoll)

http://www.polleverywhere.com/
2. Encouragement, Feedback:
B. Voice/Audio Feedback
Vocaroo: http://vocaroo.com/
http://vocaroo.com/delete/s0x8moQAYAiu/a37bbc9408bb8c95
(Recorded by Curt Bonk for the Open University of China)

3. Curiosity, Intrigue, Unknowns:
B. Multimedia 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)

3. Curiosity, Surprise, Intrigue, Unknowns:
A. Summary and Comparison Maps
A Map Showing How Much Time It Takes to Learn Foreign Languages: From Easiest to Hardest, Open Culture

3. Curiosity, Intrigue, Unknowns:
C. 1st woman to officially run Boston Marathon does it again, 50 years later
Emanuella Grinberg, CNN, USA Today

3. Curiosity, Intrigue, Unknowns:
D. Immediate Science
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-airport/

3. Curiosity, Intrigue, Unknowns:
E. Dinosaur Discoveries
'Holy Grail' of dinosaur fossils discovered in Egyptian desert
Doyle Rice, USA Today
February 16, 2017

3. Curiosity, Intrigue, Unknowns:
F. Crowdsourced Science

NASA wants you — to find a missing planet
Doyle Rice, USA Today (includes 1:09 video)
http://www.usatoday.com/story/tech/sciencefair/2017/02/16/planet-9-nasa/98007144/

October 5, 2016

4. Variety, Novelty, Fun, Fantasy:
B. Online Test/Quiz Review Games
(e.g., Jeopardy Rocks)
https://www.jeopardy.rocks/r511merve/

April 3, 2017

4. Variety, Novelty, Fun, Fantasy:
C. Kahoot!
https://getkahoot.com/
July 31, 2017
I'm in 'Kahoots' with Technology in the Classroom
Cassandra OSullivan Sachar, Faculty Focus

July 26, 2017

5. Autonomy, Choice:
A. Enroll in a MOOC and Reflect
(e.g., see Class Central)

8/9/2018

5. Autonomy, Choice:
B. Design Multimedia Glossaries
P540 Final Assignment: Nate Wynne, Supersized Personal Course Glossary
http://natewynne1982.wix.com/p540courseglossary
Ozgur Ozdemir, December 2012
http://r685glossary.shutterfly.com/
Umida Khikmatillaeva, Dec. 2011, P540
http://learningplanet.shutterfly.com/
Jan. 20, Oct. 13, & Nov. 2016 (Zoom)

6. Relevance, Meaningfulness:
   A. Weekly Guest Expert Chats
      RS11 Chat with Mike Molenda, IU

6. Relevance, Meaningfulness:
   B. Case-Based Learning: Instructor Cases
      (e.g., Mark Braun, IU)

March 20, 2018

6. Relevance, Meaningfulness:
   C. Editing Wikipedia Pages
      Women's-Studies Students Across the Nation Are Editing Wikipedia
      Emma Kerr, The Chronicle of Higher Education
      https://www.chronicle.com/article/Women-Studies-Students/242866
      Samantha Erickson, left, of the Wiki Education Foundation; Tina Brock, a dean of the School of Pharmacy at UC San Francisco; and professor Amin Azzam discuss implementing the integration of Wikipedia pages on medical topics with students' work

7. Interactive, Collaborative:
   A. Negotiate Meanings Online
      (e.g., PiratePad: http://meetingwords.com/)
      http://blogs.elon.edu/technology/6-collaborative-writing-applications-for-group-projects-or-papers/
      MeetingWords, Google Docs, NowComment, MixedInk

7. Interactive, Collaborative:
   B. Virtual Sharing Walls
      e.g., Padlet (What is your secret recipe to engage?)
      http://padlet.com/zaid_alsagoff/engage

7. Interactive, Collaborative:
   C. Backchannel Chat (TodaysMeet)
      https://todaysmeet.com/
      R678_Emerging_Learning_Technologies
      https://todaysmeet.com/R678_Emerging_Learning_Technologies
7. Interactive, Collaborative: D. Guest Speaker Quotes (Rey Junco, February 25, 2013)

1:38 video: https://vialogues.com/vialogues/play/38337/
Relevant link: http://phet.colorado.edu/en/simulation/energy-skate-park

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

8. Engagement, Involvement: C. Interactive Labs and Simulations
http://phet.colorado.edu/en/simulation/energy-skate-park

February 14, 2018 8. Engagement, Involvement: D. Maps (This map shows where more Americans are willing to support free speech, The Monkey Cage, The Washington Post)

July 28, 2017 9. Tension, Challenge, Controversy, etc.: A. Scenario-Based Learning and Challenges
Modern medicine breathes new life into virtual training
2:26 (entire video): http://phet.colorado.edu/vr/mindset.html
2:26: http://phet.colorado.edu/vr/mindset.html
0.56: http://phet.colorado.edu/vr/mindset.html
1.56-2:27: http://phet.colorado.edu/vr/mindset.html
December 13, 2016
9. Tension, Challenge, Controvery, etc.: B. Controversial Issue Debates
Librarians for Instructional Technology, Latrice Booker, R511, Fall 2016
http://bookerlr2000.wixsite.com/librariansfort/cognitivism

February 16, 2017
9. Tension, Challenge, Controversy, etc.: D. Immediate Science
Wooly Mammoth Could Be 'De-Extinct' In 2 Years, Scientist Says
Hillary Hansan, CNN (video: 3:22)
http://www.huffingtonpost.com/entry/woolly-mammoth-elephant_us_58a62fa7e4b037d17d264477?gn4kyqd2ystpousor&

March 12, 2016
10. Yields Products, Goals: C. Student Generated Timelines, Taxonomies, and Concept Maps
R678 John Falchi, Timeglider, An Abbreviated History of Distance Education
http://timeglider.com/t/50843d8903a48008?min_zoom=1&max_zoom=100

10. Yields Products, Goals: A. Facebook Course Page (R546)
https://www.facebook.com/JennyBELTT/

10. Yields Products, Goals: B. Database Collection Tools
Design Article Database in Pinterest,
Meina Zhu and Jennifer Weebeck
https://www.pinterest.com/zhumeina000/r-678-emerging-learning-technology/
https://www.pinterest.com/jennifertwebeck/emerging-learning-technologies/

9. Tension, Challenge, Controversy, etc.: C. Yes, Mr. President, We Remade Our Atlas to Reflect Shrinking Ice
Christine Dell'Amore, National Geographic, August 3, 2015

10. Yields Products, Goals: A. Facebook Course Page (R546)
September 3, 2017
Yields Products, Goals:
D. Mindmap Recaps of Online Discussions
Mindmap of Week 2 of R511

October 12, 2017
10. Yields Products, Goals:
E. Goal Setting Tools
(e.g., iDoneThis, Milestone Planner, and 43 Things)

December 12, 2017
10. Yields Products, Goals:
F. Student Website Development
R511 Final Projects, April 2016
IT and HPT Comparison (Website), Doug Hsu:
http://dougandindira.wix.com/r511finalproject

December 12, 2017
10. Yields Products, Goals:
F. Student Website Development
R511 Final Projects, April 2016
IST Construction, Co.
Rob Elliot, Patrick Walsh, Erin Milanese, R511, December 2016:
http://relliott.net/istconstruction/index.php

“Cousins but Not Twins: Instructional Technology and Human Performance Technology,” Merve Basdogan and Brett Gary, R511, December 2016:
http://educbasdogan.wixsite.com/511final

R511 Student Final Projects, Lisa Milsom and Michale Siverio:
https://msiverio.wixsite.com/r511

TEC-VARIETY Recap
What motivates?
1. Time/Climate: Psychological Safety, Comfort, Sense of Belonging
2. Encouragement: Feedback, Responsiveness, Praise, Supports
3. Curiosity: Surprises, Inquire, Unknowns
4. Variety: Novelty, Fun, Fantasy
5. Autonomy: Choice, Control, Flexibility, Opportunities
6. Relevance: Meaningful, Authentic, Interesting
7. Interactivity: Collaborative, Team-Based, Community
8. Engagement: Effort, Involvement, Investment
9. Tension: Challenge, Dissonance, Controversy
10. Yielding Products: Goal-Driven, Purposeful Vision, Ownership

Addressing Learning Styles with R2D2

Question: How can technology address diverse learner needs?
Model #2: The R2D2 Model: Read, Reflect, Display, Do...

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.

February 11, 2018
Read 1a. Online Referenceware
The Magical Power of Dictionaries
Alberto Manguel, The Chronicle of Higher Education
https://www.chronicle.com/article/The-Magical-Power-of/242513

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

May 28, 2015
Read 1c. Immediate Science and Open Access Science
Ancient jawbones put new species on the human family tree, researchers say, Laura Smith-Spark, CNN
http://www.nature.com/nature/journal/v521/n7553/full/nature14448.html
January 28, 2015
Read 1d. Twitter Fed Class Discussions
Live-Tweeting Assignments: To Use or Not to Use?
The Chronicle of Higher Education, Adeline Koh
http://chronicle.com/blogs/profhacker/live-
tweeting-assignments-to-use-or-not-to-use/58949

February 14, 2018
Read 1f. Reading Online News
racing the tangled tracks of humankind’s evolutionary journey
Hannah Devlin, The Guardian

February 28, 2018
Reflect 2a. Reflect on and Debate News
Did Homo erectus speak?
Daniel Everett, Bentley University, Aeon
https://aeon.co/essays/tools-and-voyages-suggest-that-homo-erectus-invented-language

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

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 2b. Big Issue Reflections
(Big Questions Online (BQO)), Feb 3, 2015
(e.g., Can a Living Creature Be as Big as a Galaxy?)
https://www.bigquestionsonline.com/
October 6, 2016
Reflect 2c. What-if Reflections
What if Aaron Burr had missed Alexander Hamilton?, Thomas Fleming, CNN

April 13, 2016
Reflect 2e. Interpreting Interactive Graphs and Infographics
How much rainforest in that chocolate bar?

July 5, 2018
Reflect 2f. Vialogues
EdLab Seminar -- Engaging Educators with Digital Collections
Vialogue, Sara Hartman, New Learning Times
https://newlearningtimes.com/cms/article/5426/how-academic-publishing-is-changing-in-the

Reflect 2g. Workplace Internship, Practicum, and Field Experiences

3. Visual Learners
• Visual learners prefer diagrams, flowcharts, timelines, pictures, films, and demonstrations.
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. Student Created Recap Videos

Piercarlo Abate: [http://www.youtube.com/watch?v=________TURzHO0aU](http://www.youtube.com/watch?v=________TURzHO0aU)
Qi Li, Gangnam: [http://www.youtube.com/watch?v=7Q429lqxZaU&feature=youtu.be](http://www.youtube.com/watch?v=7Q429lqxZaU&feature=youtu.be)
Miguel Lara (Web 2.0 FREEDOM): [http://www.youtube.com/watch?v=8cmCFWi9lW8](http://www.youtube.com/watch?v=8cmCFWi9lW8)
Kendal Rasnake (Is IT Right For You?): [https://www.youtube.com/watch?v=MJ3GUDICIGw](https://www.youtube.com/watch?v=MJ3GUDICIGw)

March 11, 2018
Do 4b. PBL in Puerto Rico
[https://sites.google.com/iu.edu/pbl-in-puerto-rico/home](https://sites.google.com/iu.edu/pbl-in-puerto-rico/home)

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

Poll: 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: Three Words from this Session...
  e.g., “I am happy!” and...
  My minions are happy!

Any Questions or Comments?
Slides at: TrainingShare.com
Papers: PublicationShare.com
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8/9/2018