20TH ANNUAL
CENGAGE LEARNING COMPUTING CONFERENCE
MARCH 18-20, 2015 • PHOENIX, AZ

Masterclass Part 3: Adding Some TEC-VARIETY For Online Motivation and Retention

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CENGAGE Learning

#20CLCC

New Instructor Roles
(Concierge, Curator, Counselor, etc.)

2   2015 Cengage Learning Computing Conference   CENGAGE Learning

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#20CLCC

Motivation and Engagement

(e.g., students in Japan)

IMAGINE
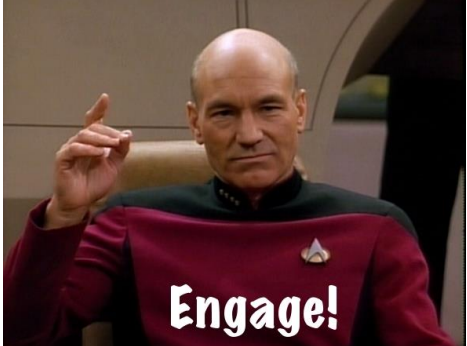
3   2015 Cengage Learning Computing Conference   CENGAGE Learning

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What did Jean-Luc Picard say?

That's right, Engage!

Engage!

Poll #1: Million Dollar Question: What words come to mind when I say that I want to motivate learners?

ONE BILLION DOLLARS

February 5, 2015
2014 Survey of Online Learning
Grade Level: Tracking Online Education in the United States, 2014, Online Learning Consortium (formerly the Sloan Consortium), by I. Elaine Allen and Jeff Seaman
http://www.onlinelearningsurvey.com/reports/gradelevel.pdf

RETAINING STUDENTS IS A GREATER PROBLEM FOR ONLINE COURSES THAN IT IS FOR FACE-TO-FACE COURSES: 2004, 2009, 2013 AND 2014

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)

See: Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. NY: Plenum Press.

Framework: TEC-VARIETY for Online Motivation and Retention

1. **T**one/Climate: Psych Safety, Comfort, Belonging
2. **E**ncouragement, Feedback: Responsive, Supports
3. **C**uriosity: Fun, Fantasy, Control
   …
4. **V**ariety: Novelty, Intrigue, Unknowns
5. **A**utonomy: Choice: Flexibility, Opportunities
6. **R**elevance: Meaningful, Authentic, Interesting
7. **I**nteractive: Collaborative, Team-Based, Community
8. **E**ngagement: Effort, Involvement, Excitement
9. **T**ension: Challenge, Dissonance, Controversy
10. **Y**ields Products: Goal Driven, Products, Success, Ownership

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Introducing the "TEC-VARIETY book…
http://tec-variety.com/

ADDING SOME TEC-VARIETY

10x Activities for Motivating and Retaining Learners Online

What motivates?
1. **Tone/Climate:** Psychological Safety, Comfort, Sense of Belonging
2. **Encouragement:** Feedback, Responsiveness, Praise, Supports
3. **Curiosity:** Surprise, Intrigue, 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

CURTIS J. BONK   ELAINE KHOO

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1. Risk — Low Risk ←→ High Risk
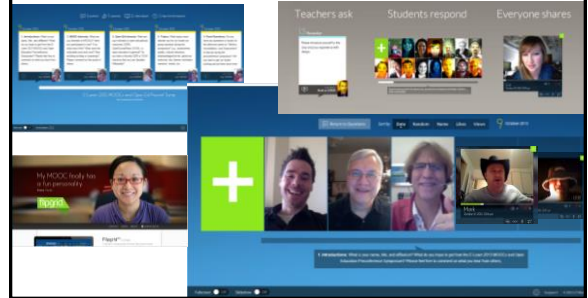
2. Time — Easy to Embed ←→ Extensive Planning

3. Cost — Free or Inexpensive ←→ Enterprise Licenses

4. Student-Centered — Instructor-Focus / Low ←→ Student-Focus / High

Examples of TEC-VARIETY

1. **T**one/Climate: A. Video Introductions, e.g., Flipgrid
http://flipgrid.com/#429f88c5)

1. **T**one/Climate: B. Video Introductions (Office Hours in Other Countries)
Chuck Severance, U Michigan/Coursera) in Barcelona
http://www.youtube.com/watch?v=JzNHvmSv8TI
Chuck Severance, University of Michigan
https://www.coursera.org/course/pythonlearn

2. **E**ncouragement, Feedback, etc.: A. Demonstrations and Tutorials
Emerging technology specialist, IU UITS, Nitocris Perez,
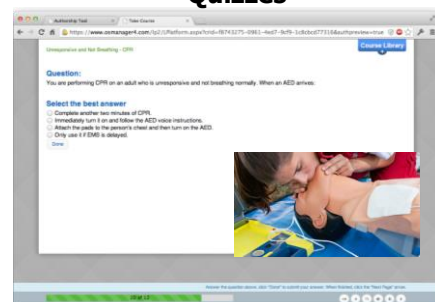**May 29, 2014**
http://inside.iub.edu/features/videos/2014-05-29-inub-vid-cib.shtml

2. **E**ncouragement, Feedback, etc.: B. Voice Feedback
Vocaroo; http://vocaroo.com/
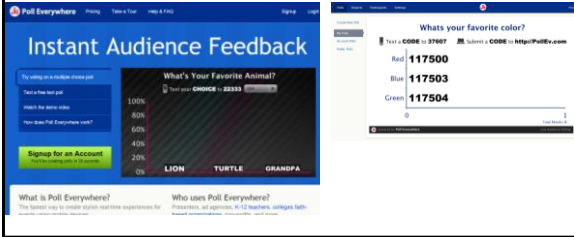**http://vocaroo.com/i/s1ao2YOFyPl3 (Singapore)**


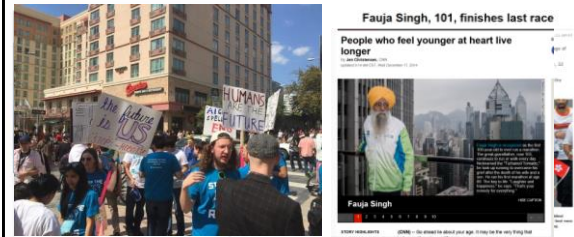## 2. **E**ncouragement, Feedback, etc.: C. Online Practice Tests and Quizzes

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

3. Curiosity, Fun:
A. Videos and Online Quizzes
(e.g., Want to be an activist? Start with your toys -
McKenna Pope , TEDEd)
http://ed.ted.com/lessons/want-to-be-an-activist-start-with-your-toys-mckenna-pope#watch
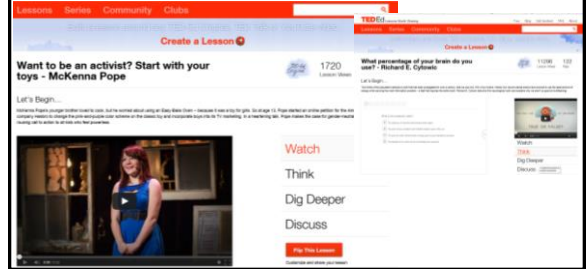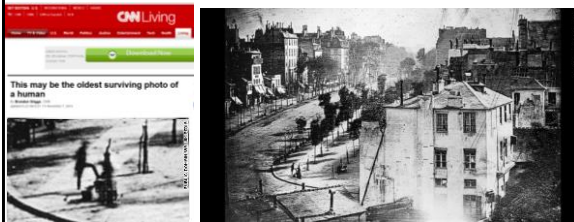

March 15, 2015
3. Curiosity, Fun:
B. Something in the News
(e.g., Protesters stage anti-robot rally at SXSW, USA Today, Jon Swartz)
http://www.cnn.com/2014/12/17/health/healthy-aging/index.html?hpt=hp_t2
http://money.cnn.com/2014/11/02/pf/college/for-profit-college-degree/index.html?hpt=hp_t5
http://espn.go.com/sports/endurance/story/_/id/8979487/fauja-singh-101-caps-career-10k-hong-kong
http://www.usatoday.com/story/tech/2015/03/14/sxsw-robot-ai-protest-artificial-intelligence/24777871/

3. Curiosity, Fun:
C. Something in the News
New 'massive' dinosaur skeleton discovered, USA Today,
September 5, 2014 (Dreadnoughtus)
http://www.usatoday.com/story/tech/2014/09/04/dinosaur-skeleton-discovered/15031803/
October 23, 2014: Goofy dinosaur blends Barney and Jar Jar Binks, SF Gate
Incredible 50-foot 'dragon' dinosaur unearthed by Chinese farmers
http://www.sfgate.com/news/science/article/Goofy-dinosaur-blends-Barney-and-Jar-Jar-Binks-5840093.php
January 20, 2015: Naomi Ng, for CNN
http://www.cnn.com/2015/01/30/asia/china-dragon-dinosaur/index.html

3. Curiosity, Fun:
D. 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)
http://www.cnn.com/2014/11/06/living/oldest-photograph-human-daguerre/index.html?hpt=hp_t4 kong

3. Curiosity, Fun:
E. Tracking the Life of a Computer
Scientist (bio.com)
http://www.biography.com/people/steve-jobs-9354805
http://www.biography.com/people/ada-lovelace-20825323

3. **Curiosity, Fun:**
F. Tracking the Life of a Computer Scientist (Wikipedia)
http://en.wikipedia.org/wiki/Vannevar_Bush

4. **Variety, Novelty, Fun:**
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.
http://www.bbc.com/news/world-asia-23497559

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

March 13, 2015
5. **Autonomy, Choice:**
A. 20% Time in Education
Kendal Rasnake & Troy Cockrum, IU
https://www.dropbox.com/s/tcsr5oae2lcgwuk/20_Time_in_Education-Cockrum_and_Rasnake.mov?n=57312573

March 5, 2015
Pink Time: New approach to student projects promotes passion, learning for its own sake, Virginia Tech News
http://www.collegiatetimes.com/news/virginia_tech/article_4140ba24-ad6b-11e4-b05a-47eb57d77a1e.html
http://www.vtnews.vt.edu/articles/2015/01/012315-cnre-pinktime.html
http://chronicle.com/blognetwork/theublogtousilibrarian/2015/03/04/confronting-the-unexpected-unlocking-intrinsic-learning/?cid=at&utm_source=at&utm_medium=en
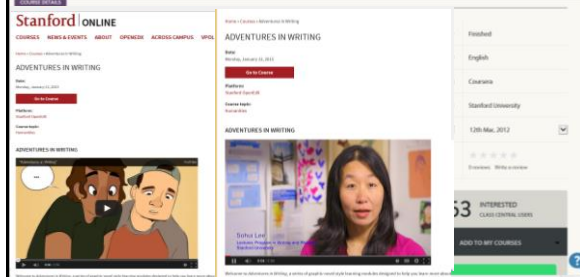

Dr. Tim Baird speaks about his concept of "Pink Time" during the Seventh Annual Conference on Higher Education Pedagogy, February 5, 2015.

5. **Autonomy, Choice:**
B. Class Central
Gaming Literacy and Learning, MOOC in Canvas, Hui-Yin Hsu & Dr. Shiang-Kwei Wang
https://www.class-central.com/
http://oedb.org/open/

5. Autonomy, Choice:
C. Attend Webinar (pick weeks and reflecti)
Cathy Davidson, The End of Higher Education
http://connectedcourses.net/thecourse/why-we-need-a-why/

5. Autonomy, Choice:
D. Design Multimedia Glossaries
Ozgur Ozdemir, December 2012
http://r685glossary.shutterfly.com /
Umida Khikmatillaeva, Dec. 2011, P540
http://learningplanet.shutterfly.com/

5. Autonomy, Choice:
**E. Design Article Database in Pinterest,
Jenny Webeck**
https://www.pinterest.com/jennifertwebeck/emerging-learning-technologies/

5. Autonomy, Choice:
**F. Design Article Database in Facebook,
Jenny Webeck**
https://www.facebook.com/JennyBELTT/timeline

5. Autonomy, Choice:
**G. Visual Library Search
Digital Public Library of America**
http://dp.la/
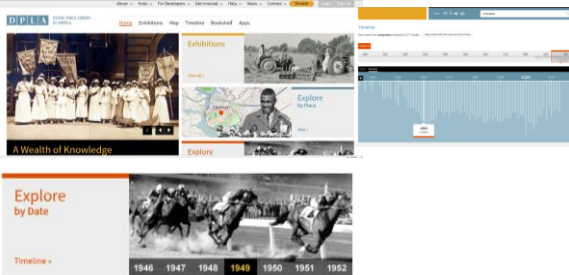
5. Autonomy, Choice:
**H. Online Learning Object Repositories
and Portals (e.g., Computer Programming)**
https://www.khanacademy.org/computing/computer-programming

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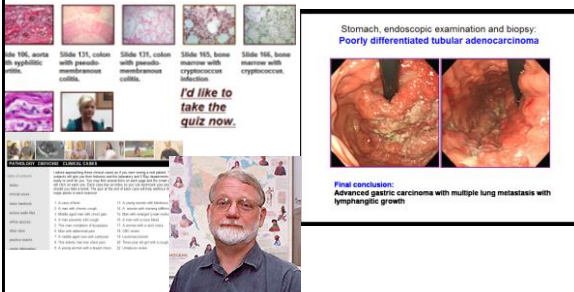https://connect.iu.edu/p259wpiabg9/

6. Relevance, Meaningfulness:
B. Video Scenario Learning Accounting Interviews
and Preparatory Course Review Modules (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


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

7. Interactive, Collaborative:
A. 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!
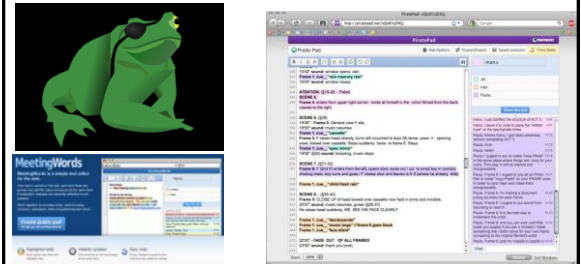
January 27, 2015
7. Interactive, Collaborative:
B. Backchannel Chat (TodaysMeet)
https://todaysmeet.com/
R678_Emerging_Learning_Technologies
https://todaysmeet.com/R678_Emerging_Learning_Technologies
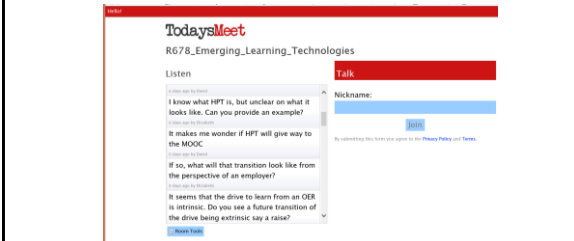
October 4, 2014
7. Interactive, Collaborative:
C. R546 Facebook Group
Dr. Bonk's creative fun time group (R546)
https://www.facebook.com/groups/830496290323899/

7. Interactive, Collaborative:
D. Multiple Guest Experts
Sara de Freitas and Jim Hensman, U of Coventry, UK
(https://connect.iu.edu/p2ie1yx6z6x/)
Jay Cross, Berkeley (https://connect.iu.edu/p4bytsoronh/)

7. Interactive, Collaborative:
**E. Collaboration and Discussion in
Google Hangouts, Jabber, Skype, etc**
(January 29 and February 25, 2013)

8. Engagement, Effort:
F. Guest Speaker Quotes
(Rey Junco, February 25, 2013)
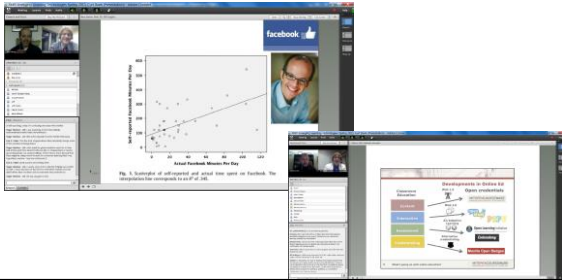
8. Engagement, Effort:
G. Map Trend Interpretations
e.g., Global Forest Watch (April 2014)
http://www.globalforestwatch.org/map/3/-3.72/27.00/ALL/grayscale/loss/596
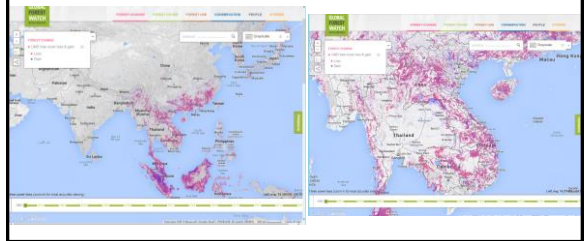
8. Engagement, Effort:
H. Google Map Gallery
September 16, 2014
http://maps.google.com/gallery/

8. Engagement, Effort:
**I. Data Visualization Tools (Harvard
and MIT MOOCs)** Lawrence Biemiller, February 20,
2014, Chronicle of Higher Education
http://chronicle.com/blogs/wiredcampus/harvard-and-mit-release-visualization-tools-for-trove-of-mooc-data/50631?cid=pm&utm_source=pm&utm_medium=en
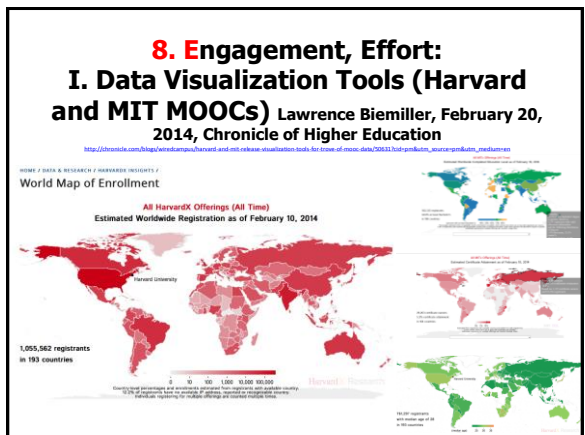
8. Engagement, Effort:
J. Interactive Multimedia E-Books
June 10, 2014, Chronicle of HE, 300 images, more than 700 notes and explanations, multimedia annotations, video commentary, and two dozen videos.
Digital Dubliners: http://digitaldubliners.com/
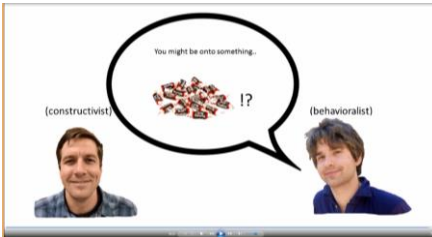**James Joyce: http://joyceways.com/**

9. Tension, Challenge, etc.:
A. Cage Matches or Debates
(with online audience topical suggestions)
Cage Match on MOOCs at SXSWedu 2013
(Curt Bonk & Chuck Severance)
http://chronicle.com/blogs/wiredcampus/at-south-by-southwest-education-event-tensions-divide-entrepreneurs-and-educators/42777
https://soundcloud.com/sxswedu/cage-match-the-massive-open
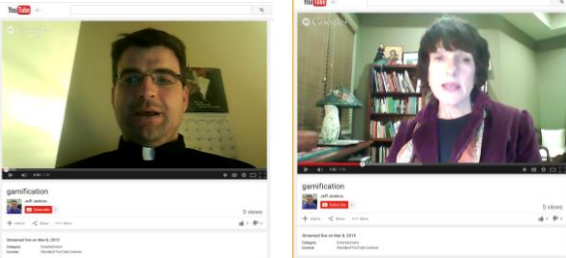
March 15, 2015
9. Tension, Challenge, etc.:
B. Controversial Issue Debates
SXSW: Tackling the growing gender gap in technology
Mike Snider, USA Today
http://www.usatoday.com/story/tech/2015/03/15/sxsw-geek-girls-chic-technology-gender-gap/24808699/
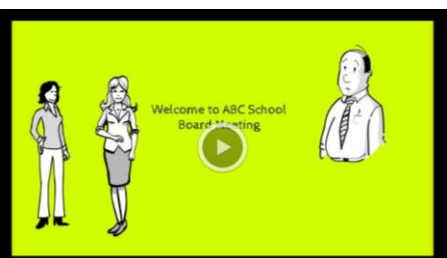
March 13, 2015
9. Tension, Challenge, etc.:
C. Controversial Issue Debates
R511 Midterm Video How to Create an Authentic Environment in a Content-Driven School?, R511, Nick and Nik
https://www.youtube.com/watch?v=Bcr3_aZT_xQ&feature=youtu.be

March 13, 2015
9. Tension, Challenge, etc.:
D. Controversial Issue Debates
Gamification, Jeff Jenkins and Melody Childs, IU
https://www.youtube.com/watch?v=DYe85LMiq5w

March 13, 2015
9. Tension, Challenge, etc.:
E. Controversial Issue Debates: Flipped Classroom, Board Meeting, Nora and Lauren, IU
https://www.dropbox.com/sh/geijknepvtjmxdc/AAAuQ9JCBcEtaiBcC-ZLxPuCa?dl=0#lh:null-b03ea104-0935-a723_1329.mp4

10. **Y**ields Products, Goals:
A. Course Video Summaries and Multimedia Team Assignments (April. 24, 2014)
Piercarlo Abate: http://www.youtube.com/watch?v=_-TURzHO0aU
Qi Li, Gangnam: http://www.youtube.com/watch?v=7Q429IqxZaU&feature=youtu.be
Miguel Lara (Web 2.0 FREEDOM): http://www.youtube.com/watch?v=8cmCFWi9lW8
http://chronicle.com/article/Multimedia-Assignments-Not/145939/?cid=at&utm_source=at&utm_medium=en

This video was made by Robert M. Demski, a professor of psychology at Adams State, who took Mr. Ledonne's course on filmmaking and went on to make a series of videos to use in his own courses.

10. **Y**ields Products, Goals:
B. Uploading Mobile Books
(e.g., BookRix, http://www.bookrix.com/)

10. **Y**ields Products, Goals:
C. Student Mobile App Creation
The App Builder: http://www.theappbuilder.com/
Mintian Guo (April 2013): http://myapp.is/r685final

January 23-25, 2015
10. **Y**ields Products, Goals:
D. Global Game Jam
25,000 participants. 518 jam sites. Egypt had more than 800 participants. Over 5,000 games made. Includes Belarus, Cuba, Ecuador, Faroe Islands, Georgia, Ghana, Guatemala, Guernsey and Luxembourg as first time participants.
http://globalgamejam.org/news/ggj15-closes (reflect, discuss, etc.)

10. **Y**ields Products, Goals:
E. Business Plans and Virtual Mentoring toward Goals,
September 22, 2014, Chronicle of HE
http://chronicle.com/article/Start-Up-Slow-Down/148923/?cid=at

10. **Y**ields Products, Goals:
F. Goal Setting Tools
(e.g., I Done This, Milestone Planner, and 43 Things)

10. Yields Products, Goals:
G. Fresh Writing, Interactive Archive
of Exemplary First-Year Writing Projects
(University of Notre Dame, September 24, 2014)
https://freshwriting.nd.edu/

Audience Poll #2:
Any light bulbs going off in your head so far...? If so, where?

A. Yes definitely
B. Maybe
C. No
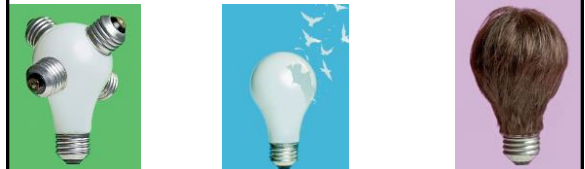
Commitments:
Stop and Share:
Which principle(s) of TEC-VARIETY will you use?

Tone/Climate
Encouragement, Feedback
Curiosity

Variety
Autonomy
Relevance
Interactive
Engagement
Tension
Yields Products

COMMITMENT

I just Love It when they "make it so!"

Addressing Learning Styles

Question: How can technology address diverse learner needs?

Framework #2: The R2D2 Model

Curtis J. Bonk | Ke Zhang

Empowering Online Learning

100+ Activities for Reading, Reflecting, Displaying & Doing

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/)

January 28, 2015
Read 1b. 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.
Interpreting Infographics
July 24, 2014
Woman in Computer Science
http://graduatedegrees.online.njit.edu/mscs-resources/mscs-infographics/women-in-computer-science/

Reflect 2b. **Workplace Internship, Practicum, and Field Experiences**

Reflect 2c. **Big Issue Reflections**
(Big Questions Online (BQO)), Feb 3, 3015
(e.g., Is curiosity essential for human flourishing?)
https://www.bigquestionsonline.com/content/do-we-have-souls

Reflect 2d.
Reflect on Virtual Timelines
(Dipity, xtimeline, Simile, etc.) (How Facebook changed our lives, Marco della Cava, USA Today, February 3, 2014)
http://www.usatoday.com/story/tech/2014/02/02/facebook-turns-10-cultural-impact/5063979/
http://www.usatoday.com/tech/news/story/2011-09-22/steve-jobs-dies/50672498/1
http://www.360doc.com/content/09/0326/15/78535_2925017.shtml

Reflect 2e.
Reflect on Virtual Timelines
(Dipity, xtimeline, Simile, etc.)
http://usatoday30.usatoday.com/tech/news/story/2011-09-22/steve-jobs-dies/50672498/1
http://www.cnet.com/news/steve-jobs-a-timeline/

3. Visual Learners

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

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

Display 3b. Interactive Timeline Maps, October 22, 2014
Second immigration wave lifts diversity to record high: Greg Toppo and Paul Overberg, USA Today
http://www.usatoday.com/longform/news/nation/2014/10/21/diversity-race-ethnicity-change-100-years/16211133/

Display 3c. Big Data Visualization Tools,
January 20, 2014, 6.00x Introduction to Computer Science and Programming MITx on EdX Course
http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2382322

Display 3d.
Student Collaborative Knowledge Building and Sharing
(e.g., Popplet: http://popplet.com/

Display 3e.
Concept Mapping and Timeline Tools
(Bubbl.us, Cmap, Gliffy, Mindmeister, or Mindomo)

Display 3f.
Anchored Instruction in Shared Online Videos (e.g., WonderHowTo)
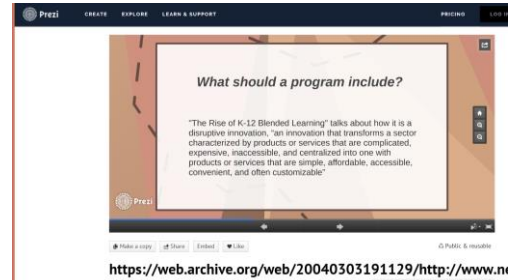
4. Tactile/Kinesthetic Learners

- **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.**
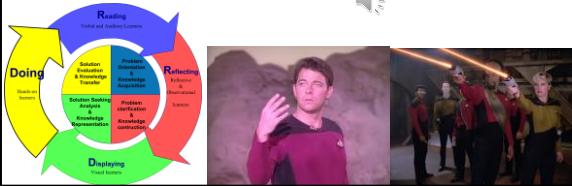
February 8, 2015
Do 4a. Recap Discusion (e.g., Prezi from Thuy Han for R678 class Week 4)

https://prezi.com/r4vkwqolkrn9/httpswebarchiveorgweb20040303191129httpwwwnetco/?utm_campaign=share&utm_medium=copy

https://web.archive.org/web/20040303191129/http://www.n

Do 4b. **Student Class Documentaries**
Umida's R546 Documentary Project
http://www.youtube.com/watch?v=EMLTzqCV_5A

Poll #3: Which do you prefer… R2D2 or TEC-VARIETY?

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.
7. More than 10.

Try TEC-VARIETY…Try R2D2

Slides at: TrainingShare.com
Papers: PublicationShare.com
Book: http://tec-variety.com/
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