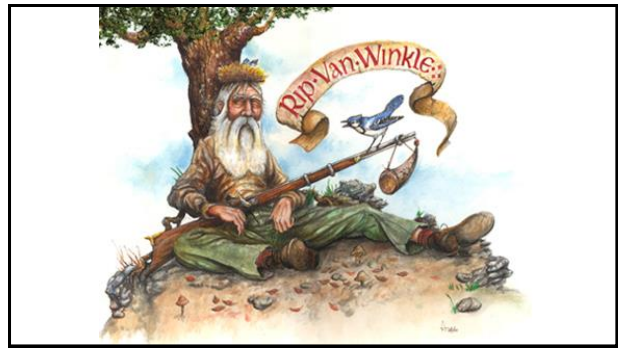


Becoming a Successful Online Instructor: Increasing Online Student Engagement with Some TEC-VARIETY

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

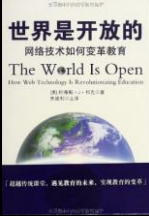


Learning is Changing...





The World is Open: How Web Technology Is Revolutionizing Education



TEN OPENERS: (WE-ALL-LEARN)

1. Web Searching in the World of E-Books
2. E-Learning and Blended Learning
3. Availability of Open Source and Free Software
4. Leveraged Resources and OpenCourseWare
5. Learning Object Repositories and Portals
6. Learner Participation in Open Information Communities
7. Electronic Collaboration
8. Alternate Reality Learning
9. Real-Time Mobility and Portability
10. Networks of Personalized Learning



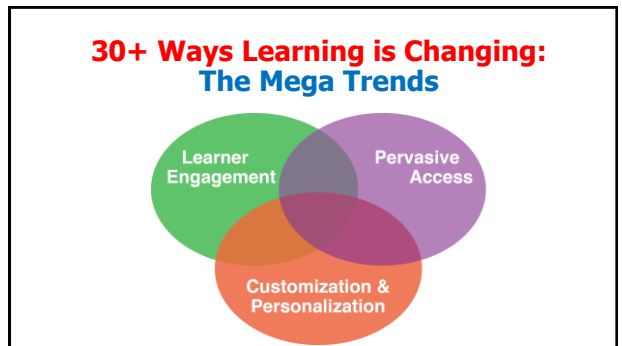


Fast Forward 30+ More Years...

"Anyone can now learn anything from anyone at any time."







How Learning is Changing: Mega Trend #1. Learner Engagement

February 27, 2017 (Engagement) Learning is More Immersive Augmented and Virtual Reality Spending to Double in 2017, Sri Ravipati, THE Journal

<https://thejournal.com/articles/2017/02/27/augmented-and-virtual-reality-spending-to-double-in-2017.aspx>
 Worldwide: "forecasts the AR/VR market to reach \$13.9 billion in 2017 — up 130.5 percent from the \$6.1 billion spent in 2016. Furthermore, AR/VR spending is expected to accelerate over the next several years, achieving a compound annual growth rate (CAGR) of 198 percent over the 2015-2020 forecast period and reaching \$143.3 billion in 2020."

February 17, 2016 (Engagement) Learning is More Mobile World's Cheapest Smartphone at \$3.67

<https://m.facebook.com/hanhsia/launched?refid=5226...in...%26>
https://m.facebook.com/story.php?story_fbid=1013339690123127&tid=102527920797
<http://gadgets.ndtv.com/videos/?feed=251-launched-as-world-s-cheapest-smartphone-at-rs-251-40401>

Samsung is hoping to have 10,000 apps by the time the Gear S3 launches this fall.

How Learning is Changing: Mega Trend #2. Pervasive Access

February 15, 2017 (Pervasive Access) Learning is More Synchronous

Shindig, Future Trends Forum, Bryan Alexander
<https://bryanalexander.org/the-future-trends-forum/>
<http://www.shindig.com/>
<http://events.shindig.com/event/ftf-anniversary>

January 2014 (Pervasive Access) Learning is More Online Grade Change: Tracking Online Education in the United States, 2013, The Sloan Consortium, L. Elaine Allen & Jeff Seaman,

2013 Survey of Online Learning Report and 2014 data from Indiana University
<http://sloanconsortium.org/publications/survey/grade-change-2013>
 Direct connect: <http://www.onlinelearningurvey.com/reports/gradechange.pdf>

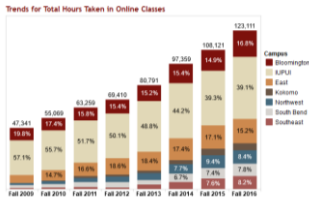
ONLINE ENROLLMENT AS A PERCENT OF TOTAL ENROLLMENT: FALL 2002 - FALL 2012

GROWTH RATE OF NUMBER OF STUDENTS TAKING AT LEAST ONE ONLINE/DISTANCE COURSE - 2003 TO 2013

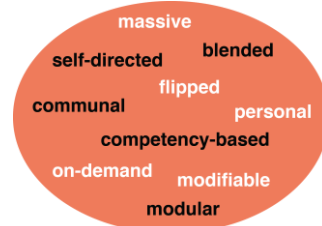
Year	Growth Rate
Fall 2003	23.0%
Fall 2004	18.2%
Fall 2005	36.5%
Fall 2006	9.7%
Fall 2007	12.9%
Fall 2008	16.9%
Fall 2009	21.1%
Fall 2010	10.1%
Fall 2011	9.2%
Fall 2012	6.1%
Fall 2013	3.7%

November 22, 2016 (Pervasive Access) Learning is More Online

Indiana University, Online Course Enrollments
<https://chi.bi.iu.edu/>

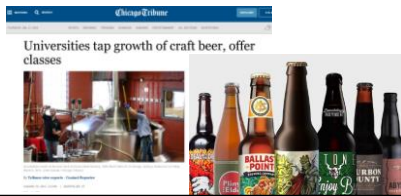


How Learning is Changing: Mega Trend #3. Customization



January 20, 2016 (Customization) Learning is More Blended

Universities tap growth of craft beer, offer classes, Chicago Tribune
<http://www.chicagotribune.com/business/ct-college-craft-beer-offer-classes-20160120-story.html>



30+ Ways Learning is Changing: Recapping the Three Mega Trends: Engagement, Access, and Customization



The Evolution of E-Learning (All 7 year cycles)



Phase I, 1994:
THE AGE OF PORTALS AND PAGES (NETSCAPE GOES PUBLIC).



Phase II, 2001:
THE AGE OF OPENNESS (MIT OCW & WIKIPEDIA BORN).



Phase III, 2008:
THE AGE OF MOOCS (FIRST MOOC OFFERED).

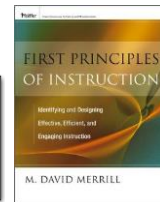
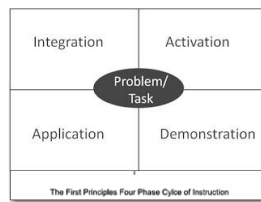


Phase IV, 2015:
THE AGE OF PERSONALIZATION.

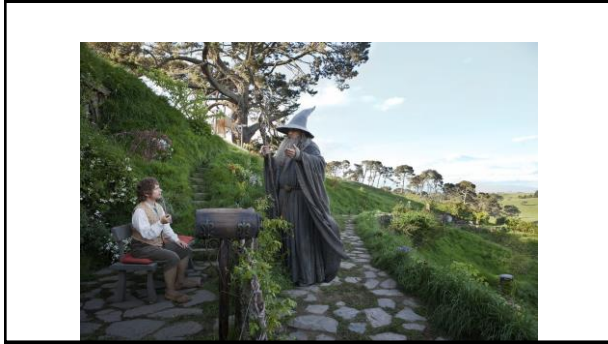
Other prior significant e-learning dates: 1985: FIRST ONLINE COURSE, LINDA HARASIM, UNIV. OF TORONTO
1987: HYPERCARD FIRST SHIPPED.

Merrill's First Principles of Teaching/Instruction

<http://travelindman.blogspot.com/2011/05/banks-list-principles-of-instruction.html>



The First Principles Four Phase Cycle of Instruction



Education 3.0...



"In Education 3.0, classrooms would move away from lectures, such as this one, to having class time be spent on discussions and projects, using digital technology."
(Per Wikipedia: https://en.wikipedia.org/wiki/Education_3.0)

Poll #1: How many of you cannot keep up with educational technology reports and are frustrated?



Introducing the free "TEC-VARIETY" Framework...

<http://tec-variety.com/>
<http://tec-variety.com/TEC-VARIETY-Chinese.pdf>



在线学习动机与激励： TEC-VARIETY 模型

——激励和留住在线学习者的 100 个活动

作者： Curtis J Bank & Elaine Khoo II

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.



Motivation Research Highlights (Jere Brophy, Michigan State University)

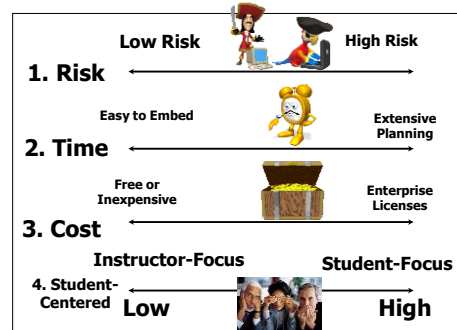
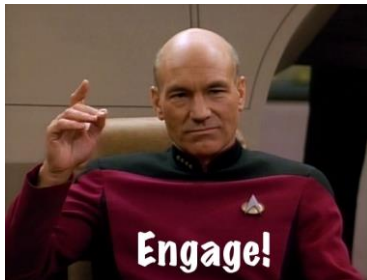
1. **Supportive**, appropriate **challenge**, **meaningful**, moderation/optimal.
2. Teach **goal** setting and self-reinforcement.
3. Offer **rewards** for good/improved performance.
4. Novelty, **variety**, **choice**, adaptable to interests.
5. Game-like, **fun**, fantasy, curiosity, suspense, active.
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.



Framework #1: 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

What did Jean-Luc Picard say?



Examples of TEC-VARIETY

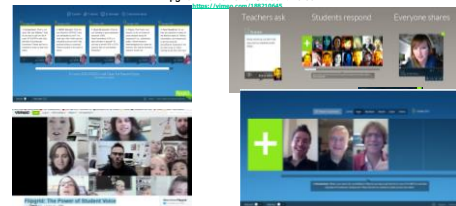


November 10, 2016


1. Tone/Climate: A. Threaded Video Discussions and Questions (e.g., Flipgrid)

<http://flipgrid.com/#429f88c5>

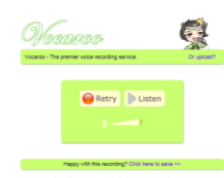
Flipgrid: The Power of Student Voice



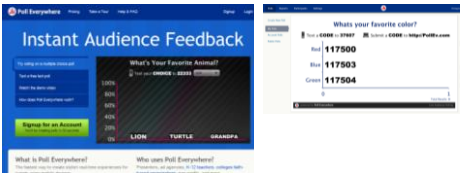
1. Tone/Climax:
B. Instructor Course Introductions
 (Theatre 10 Intro Video, October 7, 2014, Elizabeth Dale, West Valley College)
<https://www.youtube.com/watch?v=-Wzbz3QjIA>
 Chuck Severance, U Michigan/Coursera) in Barcelona
<http://www.youtube.com/watch?v=3zN1vms5v8I>
 Chuck Severance, University of Michigan
<https://www.coursera.org/course/pythonlearn>



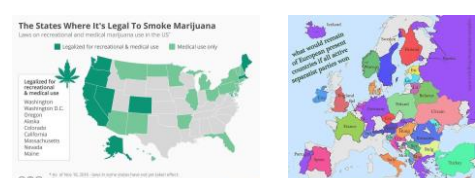
2. Encouragement, Feedback, etc.: **A. Voice/Audio Feedback**
 Vocaroo: <http://vocaroo.com/>
<http://vocaroo.com/delete/sDx8moQAYAiU/a37bb9408bb8c95>
 (Recorded by Curt Bank for the Open University of China)



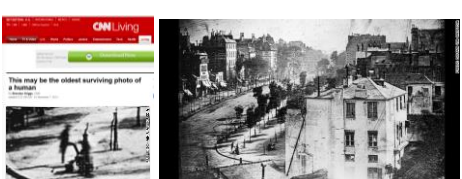
2. Encouragement, Feedback:
B. Blog and Website Polling
 (e.g., Poll Everywhere, BlogPolls, BlogPoll, MicroPoll)
<http://www.poleverywhere.com/>



January 8, 2017
3. Curiosity, Surprise, Inigue, Unknowns:
A. Summary and Comparison Maps
#GeoawesomeMapOfTheDay
<https://twitter.com/geoawesomeus>
<https://www.instagram.com/p/BNwgv3JDaq3/>
<https://twitter.com/hashtag/GeoawesomeMapOfTheDay?src=hash>



3. Curiosity, Inigue, 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)
http://www.cnn.com/2014/11/06/brvng/oldest-photograph-human-daguerre/index.html?utm_hp_hp_34_kimg



January 17, 2016
3. Curiosity, Surprise, Inigue, Unknowns:
C. World Records in the News
http://www.cnn.com/2014/12/17/health/healthy-ageing/index.html?hpt=hp_12
http://www.cnn.com/2014/12/17/health/healthy-ageing/index.html?hpt=hp_12
<http://www.abc.com.au/news/2016-01-17/101-year-old-fauja-singh-runs-marathon/7155554>



February 16, 2017

3. Curiosity, Intrigue, Unknowns:
D. Immediate Science

Woolly Mammoth Could Be 'De-Extinct' In 2 Years, Scientist Says
Hillary Hanson, CNN (video: 3:22)
<https://www.huffpost.com/entry/woolly-mammoth-scientist-ca-38462474603763268427>
<http://www.huffpost.com/entry/woolly-mammoth-scientist-ca-38462474603763268427>



Ancient human ancestor was a big mouth



February 19, 2017


3. Curiosity, Intrigue, Unknowns:
E. New Theories in the News

We thought New Zealand was an island nation. Scientists say it's the tip of a 'hidden continent.'
Avi Seik, The Washington Post
<http://www.denverpost.com/2017/02/19/new-zealand-zealandia/>



Poll #2:
Which of these ideas might you use?

- A. Threaded video discussions (e.g., Flipgrid)
- B. Voice/Audio feedback (Vocaroo)
- C. Something in the news
- D. Summary and Comparison Maps
- E. Immediate Science



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

RANDOM.ORG

Coin Flipper

You flipped 2 coins of type 100-EE.



Timestamp: 2017-08-13 04:43:17C

[Flip Again](#) | [Go Back](#)

RANDOM.O

Dice Roller

You rolled 2 dice:



Timestamp: 2017-08-13 04:18

[Roll Again](#) | [Go Back](#)

List Randomizer

These are 20 items in your list. How they are in random order.

[Randomize Sequence Generator](#)


Item	Order
1. 100	20
2. 100	19
3. 100	18
4. 100	17
5. 100	16
6. 100	15
7. 100	14
8. 100	13
9. 100	12
10. 100	11
11. 100	10
12. 100	9
13. 100	8
14. 100	7
15. 100	6
16. 100	5
17. 100	4
18. 100	3
19. 100	2
20. 100	1

Timestamp: 2017-08-13 04:18


[Roll Again](#) | [Go Back](#)

October 5, 2016


4. Variety, Novelty, Fun, Fantasy:
B. Online Test/Quiz Review Games
(e.g., Jeopardy Rocks, Decision Making Wheels)
<https://www.jeopardy.rocks/r511merve/>
<http://wheeldeide.com/>



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




December 8, 2015
5. Autonomy, Choice:
B. Design Multimedia Glossaries
 P540 Final Assignment: Nate Wynne, Super-sized Personal Course Glossary
<http://natewynne1982.wix.com/p540courseglossary>
 Ozgur Ozdemir, December 2012
<http://r685glossary.shutterstock.com/>
 Umida Kholmattaliev, Dec. 2011, P540
<http://learningplanet.shutterstock.com/>



Poll #3:
Any light bulbs going off in your head so far...?


A. Yes definitely***
B. Yes maybe!
C. Not yet (but hopefully soon...)




Jan. 20, Oct. 13, & Nov. 2016 (Zoom)
6. Relevance, Meaningfulness:
A. Weekly Guest Expert Chats
 R511 Chat with Mike Molenda, IU



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



September 20, 2016
6. Relevance, Meaningfulness:
C. Editing Wikipedia Pages
 College students take to Wikipedia to rewrite the wrongs of Internet science, Rosanna Xia, LA Times
<http://www.latimes.com/local/la-me-wikipedia-science-20160920-story.html>



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. (David Butow / For The Times)

January 20, 2017
6. Relevance, Meaningfulness:
D. The Changing Earth
<http://thechangingearth.com/>



7. Interactive, Collaborative:
A. Negotiate Meanings Online

(e.g., PiratePad: <http://meetingwords.com/>)
<http://blogs.elsevier.com/technology/5-collaborative-writing-applications-for-group-projects-or-courses/>
 MeetingWords, Google Docs, NowComment, MixedInk



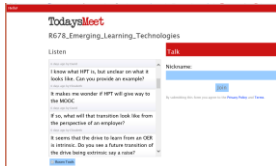
7. Interactive, Collaborative:
B. Virtual Sharing Walls

e.g., **Padlet** (What is your secret recipe to engage?)
http://padlet.com/zaid_alsaqoff/engage

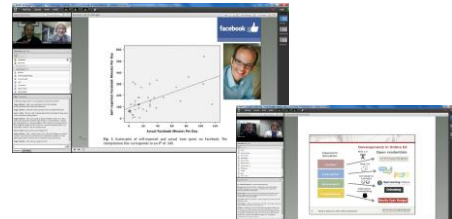


7. Interactive, Collaborative:
C. Backchannel Chat (TodaysMeet)

<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)



Poll #11:
Which of these ideas might you use?

- A. Student designed multimedia glossaries
- B. Edit Wikipedia pages
- C. Guest chats with former students and experts
- D. Discussion in Zoom
- E. Case-based learning



8. Engagement, Involvement:
A. Interactive Timelines

(Dipity, xtimeline, Simile, etc.)
<http://www.oxfordjournals.org/doi/pdf/10.1093/oxfordjournals.oxfam.a0121475>
<http://usatoday30.usatoday.com/tech/news/story/2013-09-22/steve-jobs-dies/50672408/1>
<http://www.cnet.com/news/steve-jobs-a-timeline/>



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
<http://www.usatoday.com/story/news/nation/2014/10/22/diversity-increase-immigration/1811132/>

Rising diversity, state by state
 The USA TODAY Diversity Index shows on a scale from 0-100 the chance that two random people are different by race and ethnicity.

Source: USA TODAY analysis by Paul Overberg of data from Census Bureau, NHGIS at University of Minnesota and ProximityOne
 Frank Pompei, USA TODAY

8. Engagement, Involvement:
C. Videos with Test Questions (e.g., TEDEd)
(Lessons about every single element on the periodic table)
<https://www.youtube.com/watch?v=3254-4aLm88&list=PL544E92305E64E425484E>

December 13, 2016
9. Tension, Challenge, Controversy, etc.:
A. Controversial Issue Debates
Librarians for Instructional Technology, Latrice Booker, R511, Fall 2016
<http://booker2000.wixsite.com/librariansforit/cognitivism>
https://www.youtube.com/watch?v=8037-R0t_LAC_2Q&list=watch

October 16, 2015
9. Tension, Challenge, Controversy, etc.:
B. Case Learning from the News (e.g., Newseum Ed)
<https://www.newseum.edu/>


10. Yields Products, Goals:
A. Database Collection Tools
Design Article Database in Pinterest, Meina Zhu and Jennifer Weebeck
<https://www.pinterest.com/zhuaina0000/r-678-emerging-learning-technology/>
<https://www.pinterest.com/jenniferweebeck/emerging-learning-technologies/>

March 12, 2016
10. Yields Products, Goals:
B. Student Generated Timelines, Taxonomies, and Concept Maps
R678 John Falchi, Timeglider, An Abbreviated History of Distance Education
http://timeglider.com/038658905e606876m_www%3Awww%3A09

- Emergence of MOOCs in Canada
- Three Views on Propelling Educational Technology
- Connectivism - George Siemens
- Operant Conditioning - Response and Stimulus (1928-)
- U.S. DOE Establishes Distance Learning
- First Fully Online University (1990)
- 3 Million Americans Studying via Correspondence
- Online Learning Enabled via WWW and LMS
- Open Universities Emerge Around the World
- Emergence of MOOCs in United States

Poll #4:
Which of these ideas might you use?

- A. Interactive map timelines
- B. Facebook course page (or Pinterest)
- C. Issue challenges, role plays, and debates
- D. Student created websites
- E. Interactive timeline tools
- F. Videos with test questions



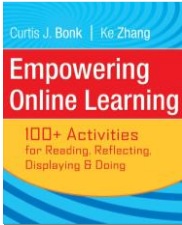


Commitments:
Stop and Share:
Which principle(s) of TEC-VARIETY will you use?

Tone/Climate
Encouragement, Feedback
Curiosity

Variety
Autonomy
Relevance
Interactive
Engagement
Tension
Yields Products




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.

Read 1a.
Reading Life Histories
(OER, bio.com; Mozart: <http://www.mozartproject.org/>)
<http://www.biography.com/people/bob-marley-9399524>





May 14, 2016 (Access)

Read 1b. Open Access Scientific Reports/Studies
Mastodon bones offer clues of earliest humans in North America, Faith Karimi, CNN



Abstract: <http://advances.sciencemag.org/content/2/5/1600375>
 Full Article: <http://advances.sciencemag.org/content/2/5/1600375/full>
 Supplemental materials (PDF): <http://advances.sciencemag.org/content/suppl/2016/05/10/2.5.1600375.DCI>
 PDF: http://advances.sciencemag.org/content/suppl/2016/05/10/2.5.1600375.DCI/1600375_SM.pdf

Mastodon bones offer clues of earliest humans in North America



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





October 6, 2016

Reflect 2a. What-if Reflections
What if Aaron Burr had missed Alexander Hamilton?, Thomas Fleming, CNN

<http://www.cnn.com/2016/10/06/politics/alexander-hamilton-aaron-burr-what-missed/index.html>

What if Aaron Burr had missed Alexander Hamilton?




Reflect 2b.
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-in-your-chocolate-bar/>



Land-Use Change Emissions in Miles Driven

2,000 Ha of cleared rainforest = 1.5B miles driven by passenger car = 58,819 trips around the earth




3. Visual Learners

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

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



Display 3b. Map Animations
Yes, Mr. President, We Remade Our Atlas to Reflect Shrinking Ice
 Christine Dell'Amore, National Geographic, August 3, 2015
<http://metrocosm.com/category/cartograms/>

World Population: The fall of Asia and the rise of Africa

2100
11.2 billion
World population

Population of the World, 1850-2100* Country size = share of world population * 2100 population. Figures are projections from the UN's Population Division of 2008 for thousands of years. Asia has been the population center of the world. But...

Source: WorldPop
 Year: 2100
 Min: 0.000
 Max: 0.000
 Step: 0.000

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

March 2, 2016
Display 3e. Weekly 1 minute Video Updates
 (e.g., Pinkcasts from Daniel Pink)
<http://www.danpink.com/pinkcast/>

Pinkcast 2.
 Advice from Adam Grant: Look for "disagreeable givers"

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. Goal Setting Tools
 (e.g., I Done This, Milestone Planner, and 43 Things)

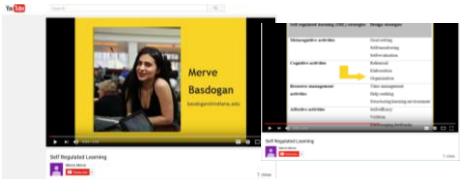
iDoneThis

Changing your life is hard. Doing it by yourself is harder.



Start listing your goals here...

October 26, 2016
Do 4b. Student Created Marketing and Explanatory Videos
 R511, Kai Westerfield, Jennifer Blankenship, And Colbi Lehman, Online Degree Programs, (11:54) Go Animate

October 26, 2016
Do 4c. Student Exploration Video
R511, Merge Basdogan, Self-Regulated Learning (6:08)
https://www.youtube.com/watch?v=5U9p9p9mUj4&list=PLC3_346121



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

What motivates?

1. Time/Space: Psychological Safety, Comfort, Sense of Belonging
2. Encouragement, Feedback, Responses, Praise, Support
3. Curiosity, Stories, Inteqal, Utilities
4. Variety, Novelty, Fun, Playful
5. Autonomy: Choice, Control, Flexibility, Opportunities
6. Relevance: Meaningful, Authentic, Interesting
7. Interactivity: Collaborative, Team-Based, Community
8. Engagement: Effort, Investment, Involvement
9. Tension: Challenge, Obstacles, Controversy
10. Yielding Products: Goal Driven, Purposeful, Vision, Ownership

Things are heating in higher ed!



**Education 3.0 is coming
 within reach!**



Remember:
"I cannot do this alone."
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**Any Questions or
 Comments?**

Slides at: TrainingShare.com
 Papers: PublicationShare.com
 Free book: <http://tec-variety.com/>
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