

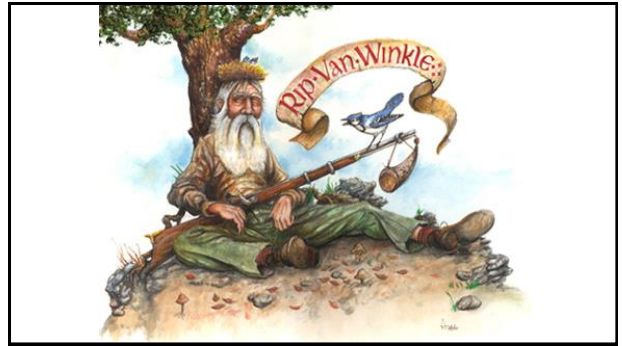


Learning is Changing: A (TEC-) VARIETY of Strategies for the Open Educational World

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

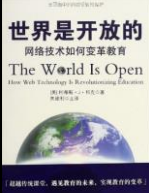





Learning is Changing...

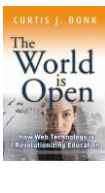



The World is Open: How Web Technology Is Revolutionizing Education



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



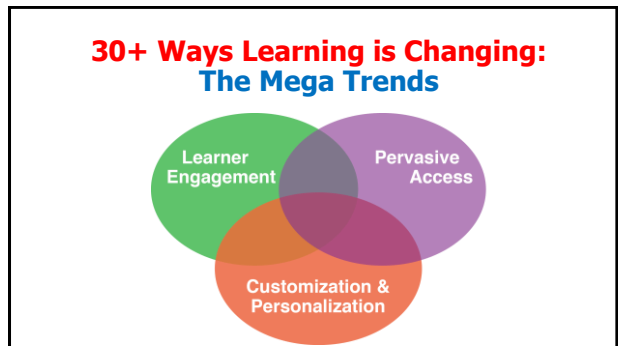


Fast Forward 30+ More Years...

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







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

social
mobile hands-on
visual touch-sensored
game-based adventurous
digital & resource rich
immersive
collaborative

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 \$14.3 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=528&_in=&_nc=26
https://m.facebook.com/story.php?story_fbid=10153396901211279&id=102527928797
<http://gadgets.ndtv.com/videos/readon-251-launched-as-world-s-cheapest-smartphone-at-rs-251-40404>





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

informal
free global
open video-based
synchronous ubiquitous
direct from experts
online
immediate

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>

May 4, 2016 (Access) Learning is More Free and Open This Mongolian Teenager Aced a MOOC


(140,000 people take the MIT MOOC on Circuits and Electronics, 1 of 900 to get a perfect score)
 The Chronicle of Higher Education, Jeffrey R. Young
<http://chronicle.com/article/This-Mongolian-Teenager-Aced-a-MOOC/236362>


THE CHRONICLE OF HIGHER EDUCATION

TECHNOLOGY

This Mongolian Teenager Aced a MOOC. Now He Wants to Widen Their Impact.


By Jeffrey R. Young | 1/27/16, 10:11a





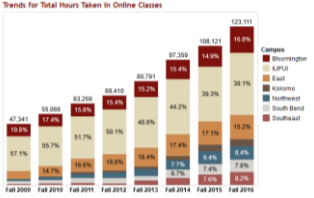
This is the latest episode of our new podcast series on the future of higher education. You can subscribe in iTunes to get new posts and future episodes.

May 7, 2014 (Access)
Learning is More Global
CNA - Speaking Exchange
<https://www.youtube.com/watch?v=-S-3EwpvF5k>
 FCB Brasil and the CNA language school network are launching the Speaking Exchange project, which connects CNA students in Brazil with Americans living in retirement homes. This meeting is carried out via an exclusive digital tool that uses video chat technology to bring the students




November 22, 2016 (Pervasive Access)
Learning is More Online
Indiana University, Online Course Enrollments
<https://cbi.bi.ju.edu/>

Trends for Total Hours Taken in Online Classes



Year	Total Hours	Central	Birmingham	SFLA	East	Kansas	Northwest	South Bend	Southeast
Fall 2009	47,341	19.8%	17.4%	18.6%	15.4%	15.4%	15.4%	15.4%	15.4%
Fall 2010	55,000	18.6%	15.4%	15.4%	15.4%	15.4%	15.4%	15.4%	15.4%
Fall 2011	63,200	15.4%	15.4%	15.4%	15.4%	15.4%	15.4%	15.4%	15.4%
Fall 2012	65,415	15.4%	15.4%	15.4%	15.4%	15.4%	15.4%	15.4%	15.4%
Fall 2013	85,793	15.4%	15.4%	15.4%	15.4%	15.4%	15.4%	15.4%	15.4%
Fall 2014	87,355	14.9%	14.9%	14.9%	14.9%	14.9%	14.9%	14.9%	14.9%
Fall 2015	108,121	14.9%	14.9%	14.9%	14.9%	14.9%	14.9%	14.9%	14.9%
Feb 2016	123,111	14.9%	14.9%	14.9%	14.9%	14.9%	14.9%	14.9%	14.9%


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>



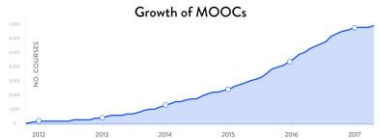
April 20, 2015 (Customization)
Learning is More Massive
250 MOOCs and Counting: One Man's Educational Journey, Chronicle of Higher Education
<http://chronicle.com/article/250-MOOCs-Counting-One/22939/>
 If the MOOC movement has faded, nobody told Jima Ngei. Mr. Ngei, who lives in Port Harcourt, Nigeria, has completed and passed 250.



Jima Ngei: "I had this unrelenting fear that this miracle of free access might evaporate soon."

December 25, 2016
By The Numbers: MOOCs in 2016
Dhawa Shah, Class Central
<https://www.class-central.com/report/mooc-stats-2016/>

Growth of MOOCs



Source: CLASS CENTRAL

March 3, 2017 (Customization) edX Expands MicroMasters Programs With Data Science

Digital Leadership and More, Sri Ravipati, Campus Technology
<https://campustechnology.com/Articles.aspx?ArticleID=321131>, MIT.edu, edX.com, Coursera.org, FutureLearn.com, FutureLearn.org, FutureLearn.net

edX Expands MicroMasters Programs With Data Science, Digital Leadership and More

By Sri Ravipati | 03/01/17

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.

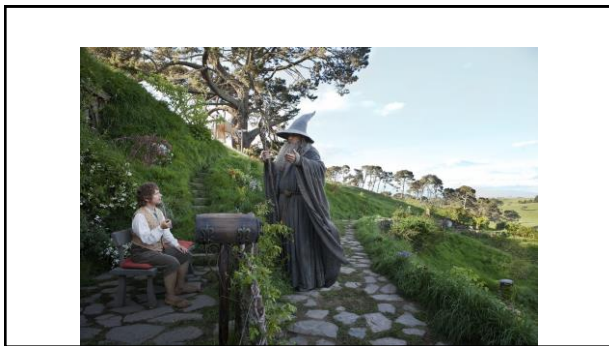
Other prior significant e-learning dates: 1985: FIRST ONLINE COURSE, LINDA HARASIM, UNIV. OF TORONTO
1987: HYPERCARD FIRST SHIPPED.

Merrill's First Principles of Teaching/Instruction

<http://travelinedman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html>

Integration	Activation
Problem/ Task	
Application	Demonstration

The First Principles Four Phase Cycle of Instruction



Bonk's 20 "Last" Principles of Instruction (LAST = Learning Activation System Template)

- Flexibility
- Support and Feedback
- Choice and Options
- Convenience
- Spontaneity
- Nontraditional Learning
- Passion and Inspiration
- Collegiality
- Organization
- Relevance and Meaningfulness
- Cheerfulness and Optimism
- Sharing
- Trial and Error (i.e., it is ok to fail)
- High Expectations
- Purpose and Vision
- Expanded Resources
- Empowerment and Autonomy
- Human Connectedness
- #20 ???
- Cognitive Apprenticeship

20 New Roles of the Instructor

Captain **Course Ambassador** **Consumer Advocate**
Counselor **Curator**
Conductor **Cook** **Change Catalyst**
Concierge **Comedian**
Camping Trip Guide **Coach**
Consultant **Course Expedition Leader** **Collaborator**
Community Organizer **Chemist**
Cultivator **Care Giver**
 Colleague

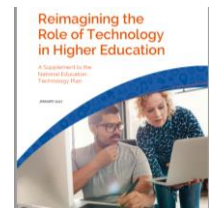


Education 3.0...Education 20/20



"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?



There's so much happening that...



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

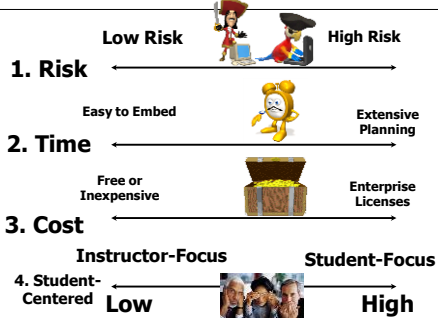
Motivation Research Highlights (Jere Brophy, Michigan State University)

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



Examples of TEC-VARIETY



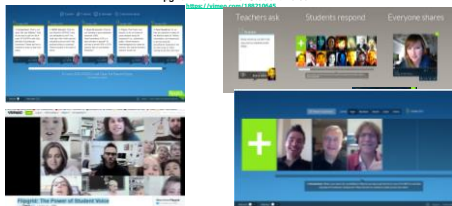
November 10, 2016

1. Tone/Climate:

A. Threaded Video Discussions and Questions (e.g., Flipgrid)

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

Flipgrid: The Power of Student Voice



1. Tone/Climate:

B. Instructor Course Introductions

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

https://www.youtube.com/watch?v=_W2bc3QjIA

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>



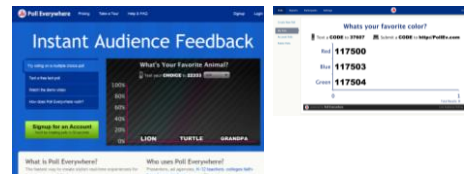
2. Encouragement, Feedback, etc.: A. Voice/Audio Feedback

Vocaroo: <http://vocaroo.com/>
<http://vocaroo.com/delete/s0x8moQAYAiU/a37bbc9408bb8c95>
 (Recorded by Curt Bunk for the Open University of China)



2. Encouragement, Feedback: B. Blog and Website Polling

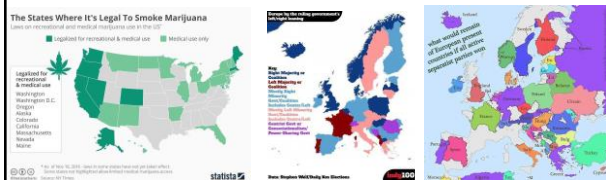
(e.g., Poll Everywhere, BlogPolls, BlogPoll, MicroPoll)
<http://www.pollerywhere.com/>



3. Curiosity, Surprise, Inigue, Unknowns: A. Summary and Comparison Maps

#GeoawesomeMapOfTheDay

<https://twitter.com/geoawesomeness>
<https://www.instagram.com/p/BNwgvjDQa3/>
<https://twitter.com/hashtag/GeoawesomeMapOfTheDay?src=hash>



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)

http://www.cnn.com/2014/11/07/orig-oldest-photos-gh-humans-eggs/index.html#hpt=hp_14



3. Curiosity, Surprise, Intrigue, Unknowns: C. World Records in the News

http://www.cnn.com/2014/11/17/health/healthy-aging/index.html#hpt=hp_12
<http://www.abc.com.au/news/2014-11-17/101-year-old-faiga-singh-101-cases-career-10k-hung-hung-hung>
<http://www.abc.com.au/news/2014-11-17/101-year-old-faiga-singh-101-cases-career-10k-hung-hung-hung>




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

Woolly Mammoth Could Be 'De-Extinct' In 2 Years, Scientist Says
 Hillary Hanson, CNN (video: 3:22)
http://www.huffpost.com/entry/woolly-mammoth-de-extinct-us-58629a7e-b65211e204d7?hpid=hp_hp-top-table-main-woolly-mammoth-de-extinct-us-58629a7e-b65211e204d7



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




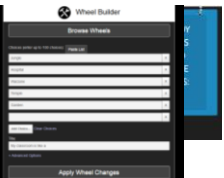
4. Variety, Novelty, Fun, Fantasy:
A. Random Lists
(Random.org—clocks, coins, playing cards, dice, integers, passwords, jazz scales, lists, sequences, etc.)










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/r511.merve/>
<http://wheeldecide.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://r669glossary.shutterstock.com/>
Umida Khikmatillaeva, 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/laow-jt-mc-wikipedia-science-classes-adv-snap-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/>)
 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

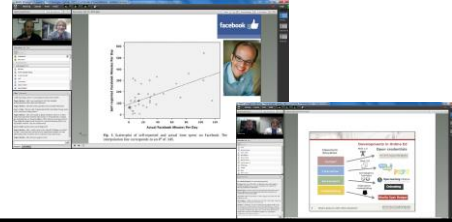


7. Interactive, Collaborative:
C. Backchannel Chat (TodaysMeet)

<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)



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



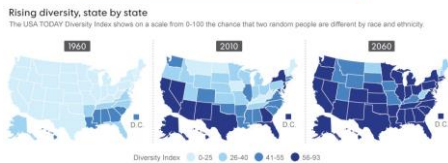
March 30, 2017

A. Interactive Timelines. Simplifying
Timeline Creation with TimeLineCurator
 Amy Cavender, The Chronicle of Higher Education
<http://www.chronicle.com/blogs/profbacker/simplifying-timeline-creation-with-timelinecurator/63822>
 (Dipity, xtimeline, Simile, etc.)



8. Engagement, Involvement:
B. Interactive Maps Timelines

October 22, 2014, Second immigration wave lifts
diversity to record high, Edward Greg Toppe and Paul
Overberg, USA Today
<http://www.usatoday.com/story/news/immigration/2014/10/22/second-immigration-wave-lifts-diversity-to-record-high/16211132>



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

8. Engagement, Involvement:
C. Videos with Test Questions (e.g., TEDEd)
 (Lessons about every single element on the periodic table)



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/librariansfort/cognitivism>

October 16, 2015

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

10. Yields Products, Goals:
A. Database Collection Tools
 Design Article Database in Pinterest,
 Meina Zhu and Jennifer Weebeck
<https://www.pinterest.com/zhuina0000/> / -578-emerging-learning-technology/
<https://www.pinterest.com/jennifertwebeck/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://www.timeglider.com/2016/03/12/abbreviated-history-distance-education/>

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/e1600375>
 Full Article: <http://advances.sciencemag.org/content/2/5/e1600375/full>
 Supplemental materials (PDF): <https://advances.sciencemag.org/content/suppl/2016/05/10/2.5.e1600375.DCI>
 PDF: http://advances.sciencemag.org/content/advances/suppl/2016/05/10/2.5.e1600375.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-died-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-is-in-that-chocolate-bar/>

Land-Use Change Emissions in Miles Driven

2,000 Ha of cleared rainforest = 1.5B miles driven by 1 passenger car = 58,819 trips around the earth



WORLD RESOURCES INSTITUTE

Reflect 2c. Big Think (April 1, 2017)
(short topical video interviews and blogs posts from famous people)
<http://bigthink.com/>
<http://bigthink.com/david-cryan-golfer-28-of-30-million-jobs-could-be-replaced-by-robots-according-to-awc-report>
<http://bigthink.com/paul-rather/elon-musk-creates-new-company-to-merge-human-brains-with-computers>




Andrew McAfee
 Co-author, *The Second Machine Age*

Big Think (April 2, 2017)
Reflect 3d. Short topical video interviews and blogs posts from famous people
<http://bigthink.com/>
<https://www.youtube.com/watch?v=TAYhj-qekw>
<http://bigthink.com/juan-ic-yaxquez/the-sooner-you-expose-a-baby-to-a-second-language-the-smarter-theyll-be>




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

Display 3b. Map Visualizations
<http://metrocosm.com/category/cartograms/>

The Shape of the US Economy

It's clear that the U.S. economy is heavily concentrated in certain locations (the Northeast, California, Chicago and New York), but what is the average American? Here's a map of the U.S. GDP from here.

Putting Canada's Population in Perspective

Canada is a big country, the second largest in the world behind only Russia. But most of its population is packed into a very small area. To see how small, follow the course of Great Lakes, where

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

April 2, 2017
Display 3d. 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. Setting your goals now.

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

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

What motivates?

1. Theoretical: Psychological Safety, Control, Sense of Belonging
2. Encouragement, Feedback, Recognition, Praise, Support
3. Curiosity, Stimuli, Integral, Utilities
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, Investment, Involvement
9. Tension, Challenge, Obstacles, Controversy
10. Yielding Products, Goal Driven, Purposeful, Vision, Ownership

Things are heating in higher ed!

Education 3.0 and Education 20/20 are coming within reach!

Remember:
"I cannot do this alone."
 "I cannot do this alone."
 "I cannot do this alone."
 "I cannot do this alone."

Any Questions or Comments?
 Slides at: TrainingShare.com
 Papers: PublicationShare.com
 Free book: <http://tec-variety.com/>
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