

IT as a Pedagogical Tool: E-Learning to Cultivate Student Engagement (The TEC-VARIETY Model)

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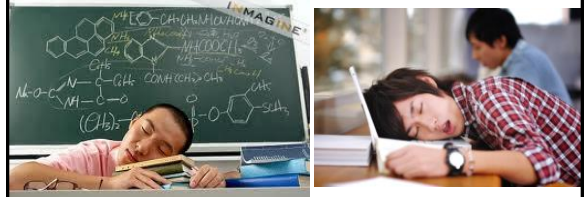
Academos Plato Circa 428–347 BCE



This Generation of Students



Motivation and Engagement



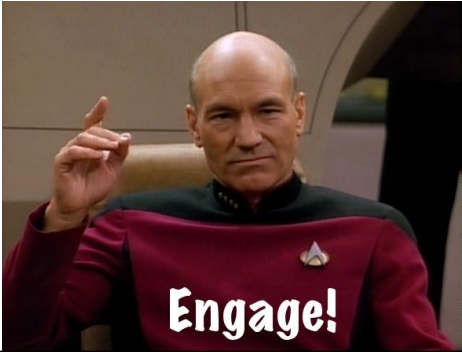
How do
we engage
online?



What did Jean-Luc Picard say?



That's right, Engage!



Ok, how do you now view the instructor in the Open World of Education?



From Instructor as Credit Manager...



Instructor as Curator



Instructor as Concierge



Instructor as Counselor



Instructor as Consultant



Instructor as Conductor



Instructor as Camping Trip Guide



Poll #1: 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.



Drive: The Surprising Truth About What Motivates Us

Daniel Pink (2009)

Motivation 3.0



Mindset:

The New Psychology of Success

Carol Dweck (2006)

<http://mindsetonline.com/index.html>
<http://mindsetonline.com/testyourmindset/step1.php>

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. **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

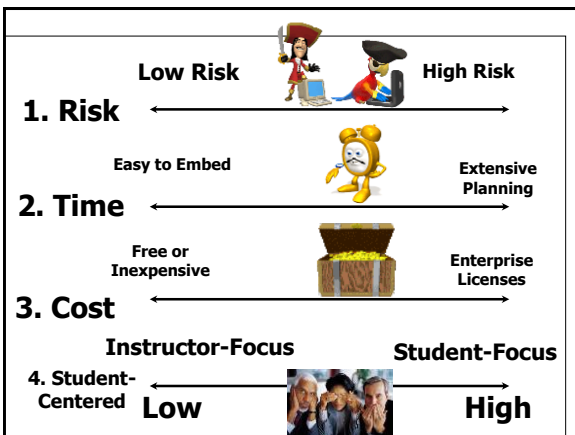
Introducing the free “TEC-VARIETY” Framework...

<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

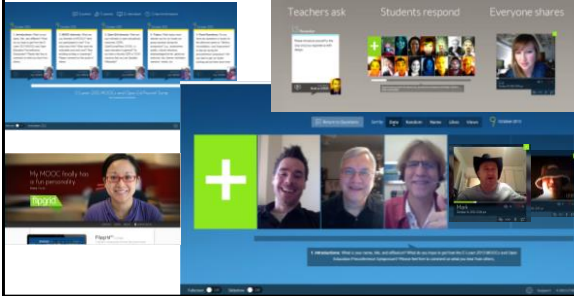
—激励和留住在线学习者的 100 个活动

作者：Curtis J Bonk & Elaine Khoo IU

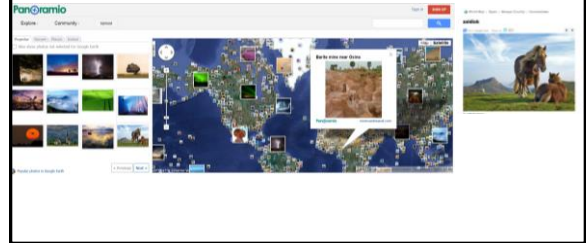


Examples of TEC-VARIETY

1. Tone/Climate: A. Threaded Video Discussions, e.g., Flipgrid
<http://flipgrid.com/#429f88c5>

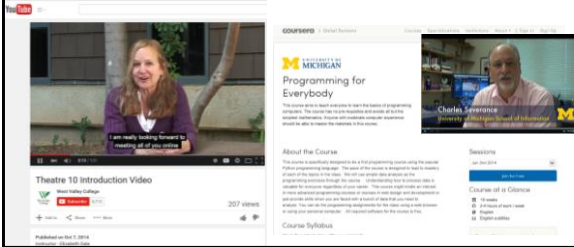


1. Tone/Climate: B. Share Visuals of Favorite Places (e.g., Panoramio, <http://www.panoramio.com/>)



1. Tone/Climate: C. Instructor Course Introductions

(Theatre 10 Intro Video, October 7, 2014, Elizabeth Dale, West Valley College)
<https://www.youtube.com/watch?v=Wzbzc3Qjia>
 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. 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>

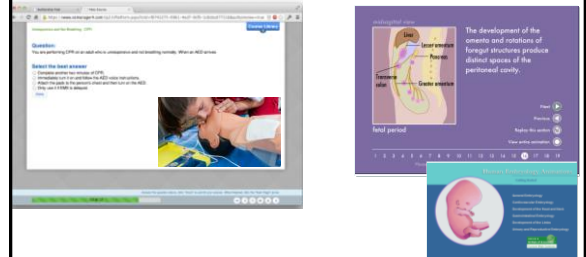


2. Encouragement, Feedback, etc.: B. Voice/Audio Feedback

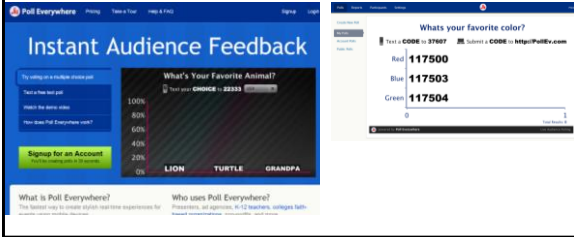
Vocaroo: <http://vocaroo.com/>
<http://vocaroo.com/delete/s0x8moQAYAiu/a37bbc9408bb8c95>
 (Recorded by Curt Bank for the Open University of China)



2. Encouragement, Feedback, etc.: C. Online Practice Tests and Quizzes (e.g., CPR, Human Embryology Animations)



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



May 25, 2015
3. Curiosity, Fun:
A. Something in the News

(e.g., Chinese universities move up in world rankings, China Daily)

http://www.cnn.com/2015/05/25/health/healthy-aging/index.html?hpt=hp_12
<http://enjin.as.com/sports/referencenews/story.../10979457/faju-singh-101-career-career-10k-hong-kong>
http://www.chinadaily.com.cn/china/2015-05/25/content_20805854.htm



3. Curiosity, Fun:
B. 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

<http://www.sfgate.com/news/animals/article/Goofy-dinosaur-blends-Barney-and-Jar-Jar-Binks-5860951.php>

January 20, 2015: Naomi Ng, for CNN

<http://www.cnn.com/2015/01/20/asia/china-japan-dinosaur/index.html>

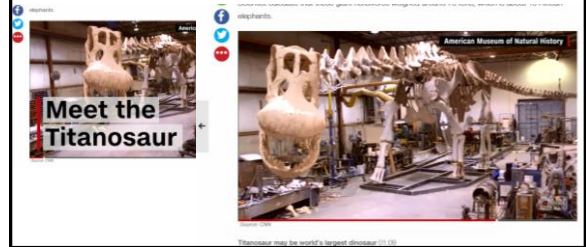


January 14, 2016
3. Curiosity, Fun:

C. Something in the News

Move over T. rex, new dinosaur unveiled, Amanda Jackson, CNN

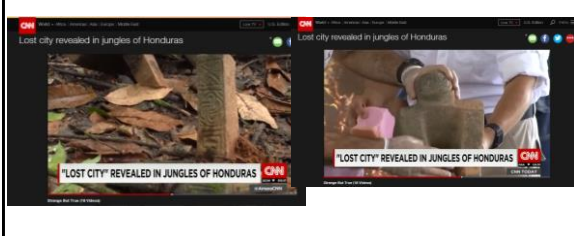
<http://www.cnn.com/2016/01/14/living/titanosaur-new-dinosaur-on-display-new-york-1/rpt/>



January 18, 2016
3. Curiosity, Fun:
D. Something in the News

Lost city revealed in jungles of Honduras, CNN

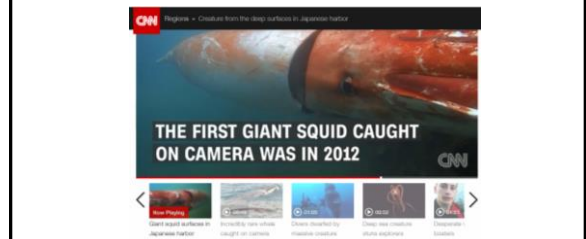
<http://www.cnn.com/videos/world/2016/01/18/lost-city-found-in-honduras-dnt-walker.cnn>



December 28, 2015
3. Curiosity, Fun:
E. Something in the News

Creature from the deep surfaces in Japanese harbor, giant squid, Euan McKirdy and Junko Ogura, CNN

<http://edition.cnn.com/2015/12/28/asia/toyama-japan-giant-squid/index.html>



September 3, 2015

**3. Curiosity, Fun:
F. Something in the News**

Deep sea creature stuns explorers, CNN, While mapping uncharted waters near Hawaii, NOAA explorers captured incredible footage of deep sea creatures.

<http://www.cnn.com/videos/world/2015/09/03/deep-sea-creature-stuns-explorers-orig-dlewis.cnn>



November 19, 2015

**3. Curiosity, Fun: G. Something in the News
New daddy longlegs named after 'Lord of the Rings' character Smeagol, Mary Bowerman, USA Today**

<http://www.usatoday.com/story/tech/nation/2015/11/19/new-daddy-longlegs-named-after-lord-of-the-rings-character-smeagol/76037208/>

New daddy longlegs named after 'Lord of the Rings'



September 7, 2015

**3. Curiosity, Fun:
H. Something in the News
New 'Superhenge'? Remains found near Stonehenge, Monica Sarkar, CNN**

<http://www.cnn.com/2015/09/07/europe/new-superhenge-discovery/index.html>

New 'Superhenge'? Remains found near Stonehenge

By Monica Sarkar, CNN
Updated 11:17 PM ET, Mon September 7, 2015 (CNN Source: CNN)



**3. Curiosity, Fun:
I. 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_44_log



November 20, 2015

**3. Curiosity, Fun:
J. Something in the News**

Treasure trove: Farmer discovers 4,000 Roman coins in Swiss orchard, Will Heilpern, CNN

<http://www.cnn.com/2015/11/20/luxury/roman-coins-switzerland-farmer/index.html>

Treasure trove: Farmer discovers 4,000 Roman coins in Swiss orchard

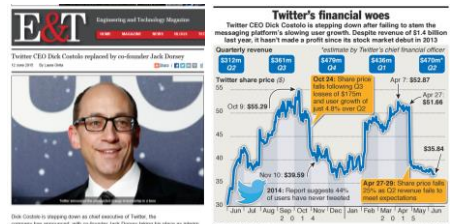
By Will Heilpern, CNN
Updated 12:04 PM ET, Mon November 20, 2015



June 12, 2015

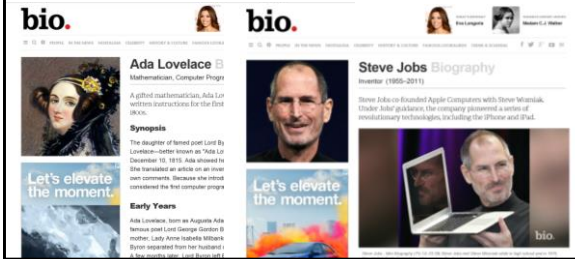
**3. Curiosity, Fun: K. Something in the News and Infographic
Twitter CEO Dick Costolo replaced by co-founder Jack Dorsey, Laura Onita**

<http://nandt.theist.org/news/2015/jun/twitters-costolo-dorsey.cm>



3. Curiosity, Fun: L. 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>



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

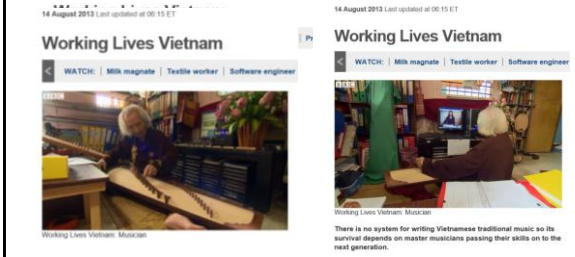
- A. Threaded video discussions (e.g., Flipgrid)
- B. Video introductions (instructor or student)
- C. Demonstrations and tutorials (Jing, Screenr, etc.)
- D. Voice/Audio feedback (Vocaroo)
- E. Online practice tests
- F. Something in the news
- G. Tracking life of scientist



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-23497552>

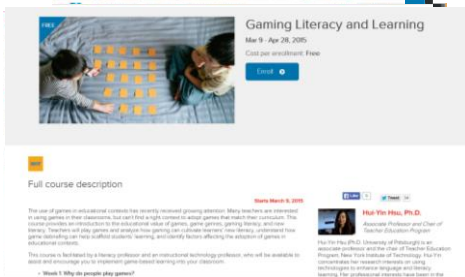


4. Variety, Novelty, Fun, Fantasy:

B. Random Lists (Random.org—clocks, coins, playing cards, dice, integers, passwords, jazz scales, lists, sequences, etc.)



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, Supersized Personal Course Glossary
<http://natwynne1982.wix.com/p540courseglossary>
Ozgur Ozdemir, December 2012
<http://r685glossary.shutterstock.com/>
Umida Khikmatilloeva, Dec. 2011, P540
<http://learningandshutterfly.com/>



5. Autonomy, Choice: C. Explore OpenCourseWare and Open Educational Resources

(e.g., MIT OCW, <http://ocw.mit.edu/courses/sloan-school-of-management/15-963-management-accounting-and-control-spring-2007/>)



5. Autonomy, Choice: D. Video Repositories and Portals

(e.g., Khan Academy, Computer Programming)



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

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



6. Relevance, Meaningfulness: A. Guest Chats

(e.g., Emily Hixon, January 20, 2015)

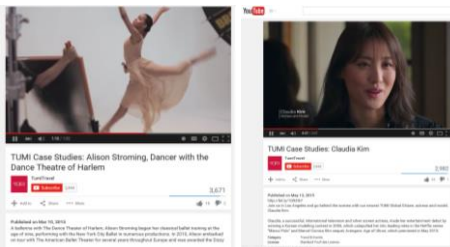
<https://connect.iu.edu/p259wpiabg9/>



6. Relevance, Meaningfulness: B. Case-Based Learning:

TUMI Case Studies: Claudia Kim and Alison Stroming, *Dancer with the Dance Theatre of Harlem* (March 20, 2015 and May 13, 2015)

<https://www.youtube.com/watch?v=onhgDnsIHqY>
<https://www.youtube.com/watch?v=v5c7PT5tEFO>



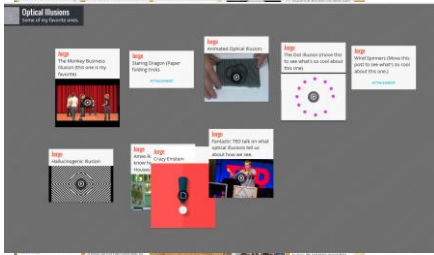
7. Interactive, Collaborative: A. Negotiate Meanings Online

(e.g., PiratePad: <http://meetingwords.com/>)

<http://diss.alison.edu/technology/6-collaborative-writing-applications-for-group-projects-or-panels/>
MeetingWords, Google Docs, NowComment, MixedInk



7. Interactive, Collaborative:
B. Virtual Sharing Walls, April 6, 2015
 e.g., Padlet (What is your secret recipe to engage?)
http://padlet.com/zaid_alsagoff/engage



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



January 20, 2016
7. Interactive, Collaborative:
D. Guest Chats (e.g., Zoom)
 R511 Chat with Dr. Mike Molenda



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

- A. Student designed multimedia glossaries
- B. Online cases
- C. Guest chats with former students
- D. Negotiate meanings online (e.g., PiratePad)
- E. Enroll in a MOOC
- F. Discussion in Google Hangouts



July 27, 2015
8. Engagement, Effort:
A. iPhone Virtual Tour and Games

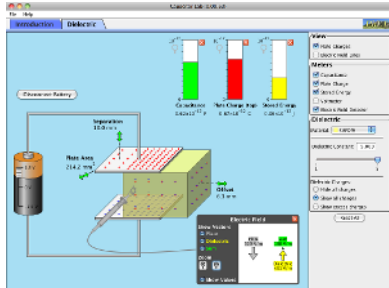


8. Engagement, Effort:
B. Intercultural learning

Virtual and on-site exchanges between York University students, refugee students on the Thai Burma border and displaced migrant students in Ranong, Thailand, and York University, Toronto, Canada
<http://aifprojects.yorku.ca/projects/intercultural-learning-thailand-2012-13/>

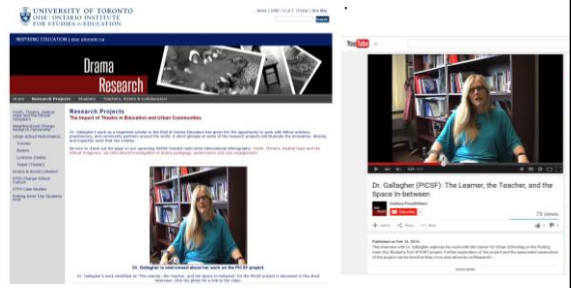


8. Engagement, Effort: C. Simulations



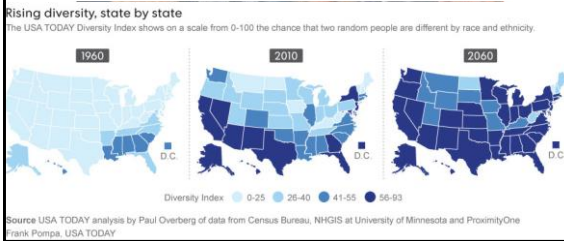
8. Engagement, Effort: D. Expert Question and Answer Sessions

http://www.oise.utoronto.ca/dr/Research_Projects/index.html



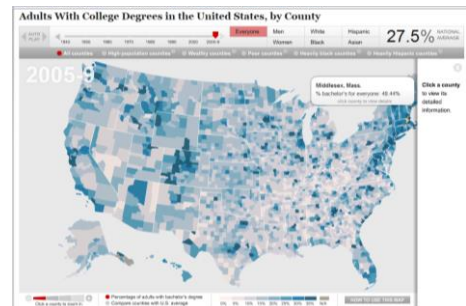
8. Engagement, Effort: E. Interactive Timeline Maps, October 22, 2014, Second immigration wave lifts diversity to record high, Edward Greg Toppo and Paul Overberg, USA Today

<http://www.usatoday.com/story/news/nation/2014/10/22/diversity-index-2014/1741233>



8. Engagement, Effort: F. Interactive Map Timelines (adults with college degrees by county, May 7, 2012)

http://data.boston.com/data4/edu/college-degrees_by_county.html

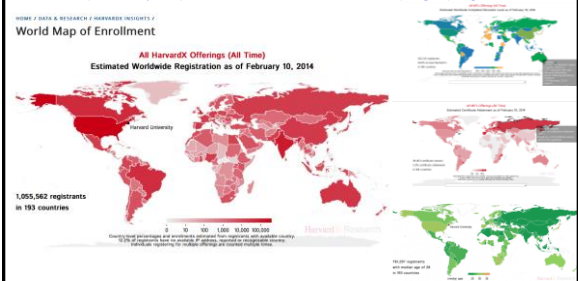


8. Engagement, Effort: G. Google Map Gallery September 16, 2014 <http://maps.google.com/gallery/>



8. Engagement, Effort: H. Data Visualization Tools (Harvard and MIT MOOCs) Lawrence Biemiller, February 20, 2014, Chronicle of Higher Education

<http://chronicle.com/blogs/article/harvard-and-mit-offer-online-education-tools-for-mass-education/20140220>



**8. Engagement, Effort:
I. Simulations**



March 13, 2015

**9. Tension, Challenge, etc.:
A. 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



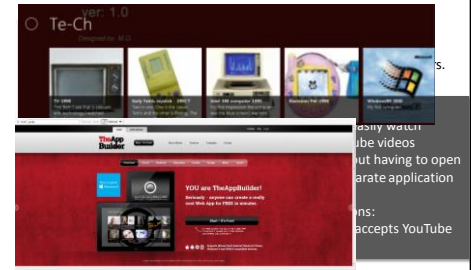
**10. Yields Products, Goals:
A. Uploading Mobile Books and Wikibooks
(e.g., BookRix, <http://www.bookrix.com/>)**



10. Yields Products, Goals:

B. Student Created Mobile Apps

The App Builder: <http://www.theappbuilder.com/>
Mintian Guo: <http://myapp.is/r685final>



**10. Yields Products, Goals:
C. Student Created Videos**

Piercarlo Abates: <http://www.youtube.com/watch?v=-TURzH00aU>
Qi Li, Gangme: <http://www.youtube.com/watch?v=7Q429qzZu8&feature=youtu.be>
Miguel Lara (Web 2.0 FREEDOM): <http://www.youtube.com/watch?v=8omCFW91W8>
Kendal Rasnake (Is IT Right for You?): <https://www.youtube.com/watch?v=MJ3GUD1CIG>



Poll #5:

Which of these ideas might you use?

- A. Guest speaker quotes
- B. Data visualization tools
- C. Issue challenges, role plays, and debates
- D. Student designed video productions
- E. Student designed e-books
- F. Map trends
- G. Interactive timeline tools





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



Recap and Reflect with Neighbor:
 Explore Websites from this Session!

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

Part 2: IT as a Pedagogical Tool:
E-Learning to Cultivate Student Engagement
The Read, Reflect, Display, Do (R2D2) Model


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Addressing Learning Styles



Question: How can technology address diverse learner needs?



Framework #2: The R2D2 Model



Curtis J. Bonk | Ke Zhang

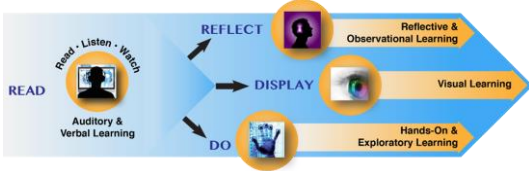
Empowering Online Learning

100+ Activities for Reading, Reflecting, Displaying & Doing

August 12, 2015 Create Engaging Learning Experiences

Image adapted from Bonk, C.J. & Zhang, K. (2008). Empowering online learning: 100+ activities for reading, reflecting, displaying, & doing. San Francisco, CA: Jossey-Bass.

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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.

A circular diagram with four quadrants: Reading (top), Reflecting (right), Doing (bottom), and Displaying (left). Below the diagram are two photos: one of a person reading a book and one of a person holding a 'READING RAINBOW' sign.

Read 1a. Collect and Listen to Interactive Stories

(e.g., Meograph: <http://www.meograph.com/>)

A screenshot of the Meograph website interface showing a globe and buttons for 'Education' and 'Play demo'. To the right is a photo of a woman sitting at a desk with a computer.

Read 1b.
Exploring the Life of a Prominent People (Wikipedia)
http://en.wikipedia.org/wiki/Vannevar_Bush

JULY 1945
As We May Think
 VANNEVAR BUSH | JUL 1 1945, 12:00 PM ET

Makes its debut as a book would usually bring this and material on one subject in the appropriate way. Nothing but the most reliable sources are used. The book is published by the American Library of Congress. It is a book of the future. It is a book of the future. It is a book of the future.

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

Grammarly
 The World's Best Grammar Checker

Grammarly is an automated proofreader and your personal grammar coach. Check up to 10 times more mistakes than paper-based proofreaders. Correct grammar errors with the help of Grammarly's writing powers.

Grammarly is used by 1,000,000+ people. Used at hundreds of universities worldwide.

January 20, 2016
Read 1d. Podcasts
IU Bloomington podcast series to launch Jan. 24, Steve Hinnefeld, IU Newsroom
http://media.indiana.edu/bloomington/2016-01-20-new-campus-podcast.html?utm_source=2016-01-20&utm_medium=newsletter&utm_content=Something-in-the-air&utm_campaign=2016-inside-sub-distribution

IU's Media School dean James Shanahan, at left, will host a new campus podcast. Senior Luqmann Ruth will read the news for the inaugural podcast. | PHOTO BY JENNIFER PIUREK, OFFICE OF THE PROVOST

January 28, 2015
Read 1e. Twitter Fed Class Discussions
Live-Tweeting Assignments: To Use or Not to Use? The Chronicle of Higher Education, Adeline Koh
<http://chronicle.com/blogs/profacker/live-tweeting-assignments-to-use-or-not-to-use/58949>

Live-Tweeting Assignments: To Use or Not to Use?

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
June 12, 2015
Google vs. Apple
<https://visual.ly/google-vs-apple-%E2%80%93-facts-figures-app-stores-race>

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



Reflect 2c. Reflect on Virtual Timelines (Dipity, xtimeline, Simile, etc.)

<http://www.usatoday.com/news/education/story/2011-09-22/steve-jobs-dies/50672498/1>
<http://usatoday30.usatoday.com/tech/news/story/2011-09-22/steve-jobs-dies/50672498/1>
<http://www.cnet.com/news/steve-jobs-a-timeline/>

The Encyclopedic Mind of Jimmy Wales
 The Wikipedia entrepreneur started out as a PhD student in economics and ended up unleashing a revolution in knowledge. —Eliot Crisp

1969	1994	1996
A visit from a traveling salesman leaves Wales with his first encyclopedia, a World Book. Educated by his mother and grandfather in a nontraditional school, he spends hours reading encyclopedias, including Britannica.	Drops out of his PhD program in economics at the Indiana University and takes a job as a teacher at Chicago's Hopkins Associates, a futures and options firm. For fun, he writes code other work, building a web browser.	Books. Ted Sullard through an online philosophy mailing list and the pair join up to found the male-oriented search engine Stripes. The site allows users to organize content and even features photos of "Stripes babies."

Click the arrows to move through the timeline.

Wales: When did you first hear the word wiki?

Wales: I'm not sure, but the first time this concept became clear to me was in December 2000, when Jimmy Hounshell, who worked with me at the time, proposed using a wiki on the encyclopedia project. We decided to give it a try, and we got more work done in four weeks than we had done in four years.

Reflect 2d. Cultural Blogs (e.g., Dr. Kim Foreman, San Fran State Univ, Come and See Africa Blog; <http://comeandseeafrica.blogspot.com/>)

Come and See Africa (CASA)
 Kim Foreman's reflections on working in Africa, as First Southern Baptist Church in San Antonio, and at San Francisco State University.

A Day in Botswana, Rwanda
 When people ask me "What do you do in Africa?" I say, "I do all kinds of different things. We start at the Center and See Africa (CASA) House. We teach. We visit." I then I moved to work for a UN mission about four days before summer. We worked there for an incredible time in a hot and dry Botswana that had been hit by a drought.

Light of around 4 am (around that time a very bright parent, did not study. My study is still confused from California time and Rwanda time. I check my email and prepare a sermon to share at the morning devotion. At 7 am, I check the night weather program for news for the morning devotion. Adults usually sit at tables, and children sit on the floor. Around 7:30 people start reading scriptures. It was my turn to give a message.

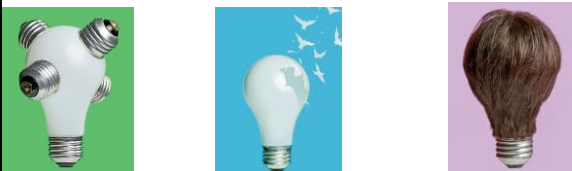
Reflect 2e. Case and Online Discussion (Kelley Direct, IU)

Meeting with the CEO
 The CEO of the company is coming to the office for a meeting. The meeting will be held in the conference room on the 10th floor. The CEO will be meeting with the following people: Mr. Smith, Mr. Jones, and Mr. Brown.

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Poll #6: Any light bulbs going off in your head so far...?

- A. Yes definitely
- B. Maybe
- C. No



3. Visual Learners

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

Display 3a. More 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/>



Display 3b. Short Educational Videos: CNN, BBC, TED, TED-Ed, ForATV

BBC One-Minute World News (August 31, 2015) <http://www.bbc.com/news/business-34105708>



Can Indian GDP continue to outstrip China?

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



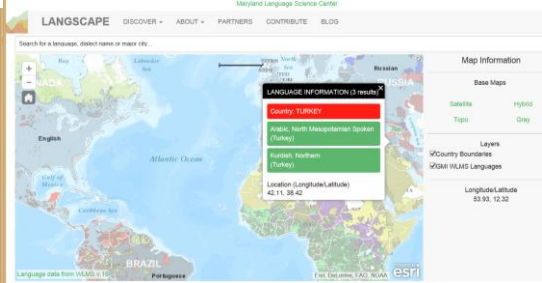
Display 3d. Map Animations Yes, Mr. President, We Remade Our Atlas to Reflect Shrinking Ice

Christine Dell'Amore, National Geographic, August 3, 2015 <http://news.nationalgeographic.com/2015/08/03/atlas-ice-shrinks-atlanta-0803/>



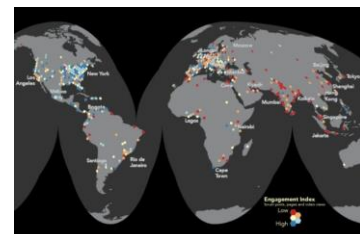
March 24, 2015 Display 3e. Maps of Languages Langscape, Language at Maryland

<https://languagescience.umd.edu/beyond-umd/langscape> <http://theweek.com/articles/245768/cool-interactive-map-lets-explore-worlds-languages> <http://lanscape.umd.edu/map.php>

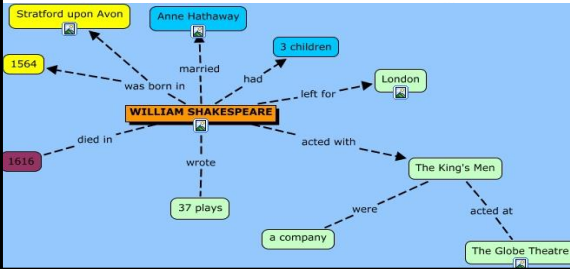


January 11, 2016 Display 3f. Mapping a MOOC Reveals Global Patterns in Student Engagement, Chronicle of Higher Education, Anthony C. Robinson

<http://chronicle.com/article/Mapping-a-MOOC-Reveals-Global-Patterns-in-Student-Engagement/23018>



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



Display 3h. October 31, 2014
Penguin Science (Penguin Cam), Jean Pennycook

<http://www.penguin-science.com/>
<http://www.thistle.org/pcam2/images.shtml>



Display 3i.
Educational Videos:
 CNN, BBC, TED, TED-Ed, ForATV

Patsy Rodenburg: Why I Do Theater: https://www.ted.com/talks/patsy_rodenburg_why_i_do_theater
 Ben Cameron: The true power of the performing arts: https://www.ted.com/talks/ben_cameron_the_true_power_of_the_performing_arts
 Kanchan Elash: My magic moves: http://www.ted.com/talks/kanchan_elash_my_magic_moves
 Marina Sambrot: Dance to change the world: https://www.ted.com/talks/marina_sambrot_dance_to_change_the_world
 Wayne McGregor: A choreographer's creative process in real time: http://www.ted.com/talks/wayne_mcgregor_a_choreographer_s_creative_process_in_real_time
 Bill T. Jones: The dancer, the singer, the cellist... and a moment of creative magic: http://www.ted.com/talks/bill_t_jones_the_dancer_the_singer_the_cellist_and_a_moment_of_creative_magic



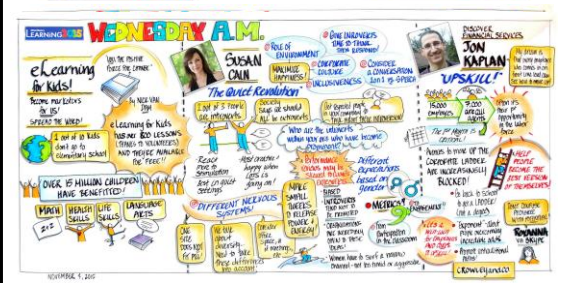
January 20, 2016
Display 3j. Embedded videos
Why the Future Is Bright for the World's Poorest Farmers, Gates Notes, the blog of Bill Gates

https://www.gatesnotes.com/Development/The-Future-of-Farming?WT.mc_id=01_20_2016_20_FutureofFarming_BG-LI_&WT.bsrc=BGLI



December 17, 2015
Display 3k. Conference Resource
Visuals

Elliott Masie's Learning 2015, Nov 1-4, 2015
<http://learningtalks.com/learning-2015-visuals/sabrina-kay-the-learner/>



Display 3L.
Tracking the Life of a Scientist
 (e.g., Brian J. Ford, independent scientist)

<http://www.youtube.com/user/tellymonitor#p/a/u/1/LhGeApsKjasr>
<http://www.labnews.co.uk/news/prehistoric-revolution/>


LaboratoryNews



Display 3m.

Video Tutorials, Demonstrations, and How-To's

WonderHowTo and Howcast
<http://www.howcast.com/>
<http://www.wonderhowto.com/>
<http://www.howcast.com/?s=tune+a+drum>



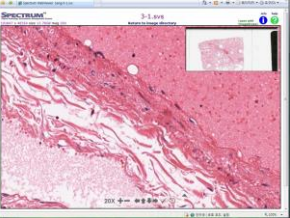
Display 3n. Videos for clinical education

(Sungkyunkwan University School of Medicine, www.mededu.or.kr)

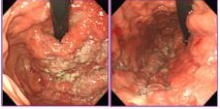


환자의 앞쪽에서, 왼손으로 환자의 오른쪽 갈상선을 반대편으로 밀고,

Display 3o. Virtual Microscopes



Stomach, endoscopic examination and biopsy:
 Poorly differentiated tubular adenocarcinoma



Final conclusion:
 Advanced gastric carcinoma with multiple lung metastasis with lymphangitic growth

4. Tactile/Kinesthetic Learners

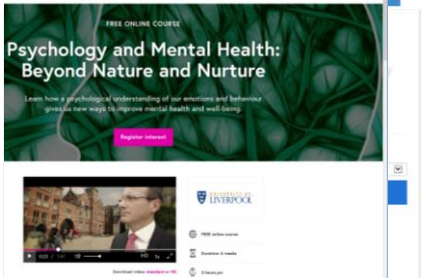
- Tactile/kinesthetic senses can be engaged in the learning process are role play, dramatization, cooperative games, simulations, creative movement and dance, multi-sensory activities, manipulatives and hands-on projects.




December 8, 2015

Do 4a. Take a MOOC

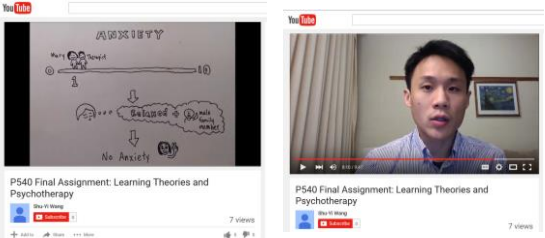
P540 Final Assignment for Meina Zhu: MOOC, Coursera, Introduction to Psychology, University of Toronto
<https://www.coursera.org/course/intropsych>



December 8, 2015

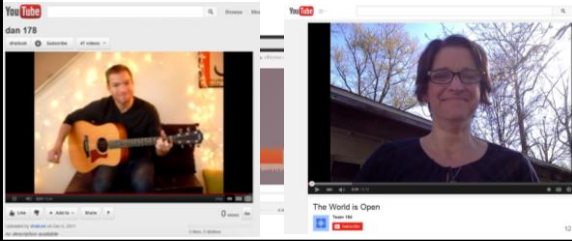
Do 4b. Student Final Project Videos

P540 Final Assignment: Learning Theories and Psychotherapy, Shu-Yi Wang
<https://www.youtube.com/watch?v=PNMpGjnXAJM>



Do 4c. Student Music Recordings of Course Content April 26, 2015

IST Groove Song, Jeffrey Jenkins, R511: <https://soundcloud.com/jeffjenkins25/ist-groove>
The World is Open, Jill Kaufman, R678: <https://www.youtube.com/watch?v=2R6V0Ma5Vmw&feature=youtu.be>
Daniel Halluska, P540: <http://www.youtube.com/watch?v=tOL7iRqsnw>



Poll #7: Which do you prefer... (A) TEC-VARIETY or (B) R2D2?



What motivates?

1. Tone/Climate: Psychological Safety, Comfort, Sense of Belonging
2. Encouragement: Feedback, Responsiveness, Praise, Support
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 Drives, Purposeful Vision, Ownership

Poll #8: 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.



We are entering a jumping off point...

(South University of Science and Technology of)



Audience Participation!

WE

ALL

LEARN!!!



Poll #9: Any Questions?

Try TEC-VARIETY...Try R2D2

Slides at: TrainingShare.com

Papers: PublicationShare.com



Free Book: <http://tec-variety.com/>

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

Dr. Curt Bonk – CJBonk@Indiana.edu

