Super Masterclass 0.0:
MOOCs: Activities for Motivating and Retaining Learners Online

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

March 4, 2016
MOOCs: vital tools in education of the future – or over-hyped online fad? (embedded video: 8:01)
Euro News, Sarah Chappell
MOOCs: vital tools in education of the future – or over-hyped online fad?
http://www.euronews.com/2016/03/04/moocs-vital-tools-that-are-shaping-the-future-of-education-or-over-hyped-online/

SPECIAL REPORTS | learning world

MOOCs: vital tools in education of the future – or over-hyped online fad?
By Sarah Chappell

MOOC Timeline

https://en.wikipedia.org/wiki/Massive_open_online_course

Milestones in Educational Technology
(All 7 year cycles)

- **1987: Hypercard first shipped.**
- **1994: Netscape goes public.**
- **2001: MIT OCW & Wikipedia Launched.**
- **2008: First MOOC Offered.**
- **2015: The Age of Personalization.**

October 19, 2015
MOOCs Are Still Rising, at Least in Numbers,
Ellen Wexler, Chronicle of Higher Education
http://chronicle.com/blogs/wiredcampus/moocs-are-still-rising-at-least-in-numbers/57527

Course Distribution by Provider

Coursera, with over 1,000 courses, offers more courses than any other provider.

Percentage | Number of courses

- Coursera 34%
- iversity (1.70%)
- NovoED (1.70%)
- CourseSites
- Udacity
- France Université Numerique
- Miriada X
- FutureLearn
- Canvas.net
- edX
- Others 20%

Source: Class Central Get the data

December 25, 2016
Class Central
https://www.class-central.com/report/mooc-stats-2016/

CLASS CENTRAL
By The Numbers: MOOCS in 2016
How has the MOOC space grown this year? Get the facts, figures, and pie charts.

58M Students
700+ Universities
6850 Courses

MOOCs in 2016. Analysis by Class Central

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

Here is a list of top five MOOC providers by registered users:

1. Coursera – 23 million
2. edX – 10 million
3. XuetangX – 6 million
4. FutureLearn – 5.3 million
5. Udacity – 4 million

December 22, 2016
6 Biggest MOOC Trends of 2016, Dhawa Shah, Class Central
https://www.class-central.com/report/biggest-mooc-trends-2016/

2. College Credit, Credentials, and Degrees

	Credentials	College Credit	Degrees
Coursera	✓	✓	✓
EdX	✓	✓	x
FutureLearn	✓	✓	✓
Udacity	✓	x	✓
Kadenze	✓	✓	x

CLASS CENTRAL

October 29, 2016
Open Education, Blackboard
https://openeducation.blackboard.com/home?tab_tab_group_id=_12_1
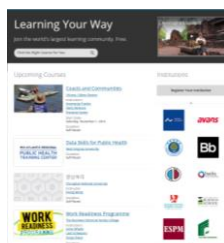
February 2, 2017
MOOCs in Thailand
JMOOC, K-MOOC, and T-MOOC?
https://sites.google.com/spu.ac.th/1st-apac-moocs-summit/home
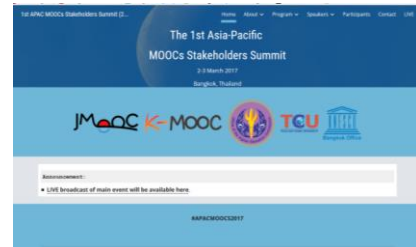
January 17-19, 2017
ThaiMOOC
ไอทีเพื่อการศึกษา (IT for Education)
https://thaimooc.org/
https://thaimooc.org/courses/course-v1:Chiang_Mai_University+IT_Education+IT_Education/about
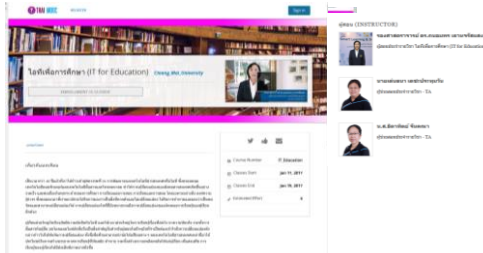
March 1, 2017-April 12, 2017
ThaiMOOC, หลักการจัดการโลจิสติกส์และโซ่อุปทานเบื้องต้น (Introduction to Principles of Logistics and Supply Chain Management)
https://thaimooc.org/courses/course-v1:SPU-MOOC+spu002+2007_T1/about

October 29, 2016
OpenLearning (Thailand)
https://www.openlearning.com/
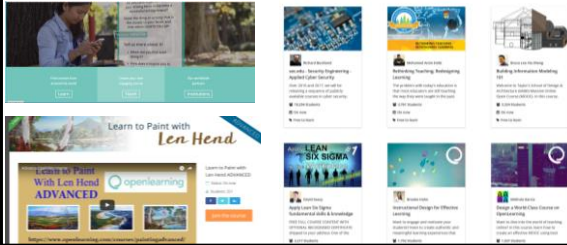
February 23, 2017
MOOCs in Thailand
21st EP8 Cloud Based Web Sites Creation04
https://www.youtube.com/watch?v=z9rDiDAjZS4&feature=youtu.be

February 23, 2017
MOOCs in Thailand
21st EP7 Cloud Based Online Documents01
https://www.youtube.com/watch?v=vgyt0Jbb4Xg

February 23, 2017
MOOCs in Thailand
21st EP3 Cloud Based Groups04
https://www.youtube.com/watch?v=fqcE3DTBVeI&feature=youtu.be

January 31, 2017
MOOCs in Thailand
[TEASER] Introduction of 21st Century Tools | {SPUx MOOCs-002}
https://www.youtube.com/watch?v=Eh1KCITLUK0

February 2, 2017
MOOCs in Thailand
ep0 begin
https://www.youtube.com/watch?v=Pexa_2QTPxQ

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

Course Distribution by Subjects
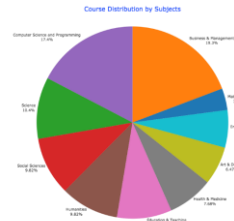
Audience Poll #2:
Who in here has used Opencourseware?
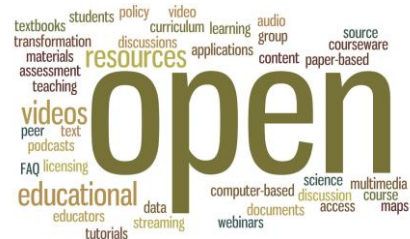
Audience Poll #3:
Who in here has taken a MOOC?

Duke MOOCs Around the World
https://www.youtube.com/watch?v=nL5QQRR6IOU&feature=youtu.be

Duke MOOCs Around the World

Audience Poll #4:
Who in here has taught a MOOC?
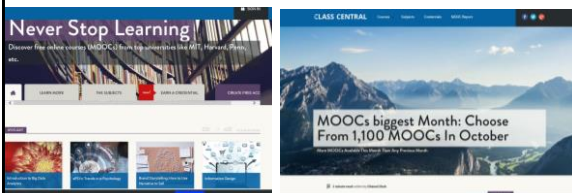
February 26, 2017
MOOC lists:
Class Central, the MOOC list, etc.
https://www.mooc-list.com/
https://www.class-central.com/
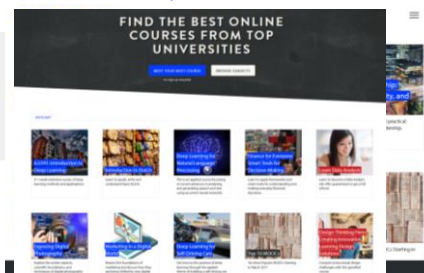
December 18, 2016
Best Online Courses of 2016, Class Central
https://www.class-central.com/report/best-free-online-courses-2016/

January 11, 2016
Maps and the Geospatial Revolution
Anthony C. Robinson, Penn State, Coursera
http://chronicle.com/article/Mapping-a-MOOC-Reveals-Global/234795?cid=at&utm_source=at&utm_medium=en&elq=bf52c7566e1d42d6ac7d42b49e1980ea&elqCampaignId=2208&elqaid=7501&elqat=1&elqTrackId=ed3e40a9614c4a5fb84d8851653a8839

December 30, 2016
Finance for Non-Finance Professionals
James Weston, Rice University, Coursera
https://www.coursera.org/learn/finance-for-non-finance?siteID=IpsebioGe3Q-8J3wPIEmboN4G3tEZyFQ8A&utm_content=10&utm_medium=partners&utm_source=linkshare&utm_campaign=IpsebioGe3Q
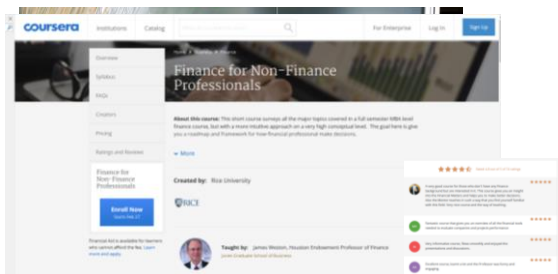
August 30, 2016
Thousands sign up for free online wine course, John Elmes, Wine News
http://www.decanter.com/wine-news/online-wine-course-adelaide-325646/

August 20, 2015
Unique Pedagogy
Syracuse professor offers free 'Star Trek' class to the public, USA Today, Amari D. Pollard, LeMayne College
http://college.usatoday.com/2015/08/20/syracuse-professor-offers-free-star-trek-class-to-the-public/ r

Mobile MOOCs
(e.g., mobile courses on smartphone)

Chapter 18: Canada/COL
Balaji Venkataraman

- **In the Mooc on mobiles for development the course team received requests from two groups of learners in Sierra Leone and Zambia for the course materials on DVD.**
- **AgMoocs initiative (http://www.agmoocs.in/) uses MooKIT platform designed for access in low bandwidth conditions. It includes a functionality for a learner to hear the voice track on a basic mobile phone.**
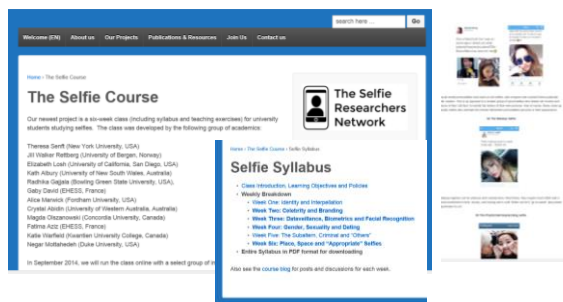
May 20, 2016
agMOOCs (India)
http://www.agmoocs.in/

September 2014
The Selfie Course
http://www.selfieresearchers.com/the-selfie-course/

MOOCs...
Ten Course/Instructional Design Guidelines

MOOC Instructor Guide #1.
Plan and Prepare for the Experience

MOOC Guide #2.
Build in Feedback for Each Experience (etc., Peer, Machine, Volunteer, and Self-Assessment)

MOOC Guide #3.
Create Interactivities
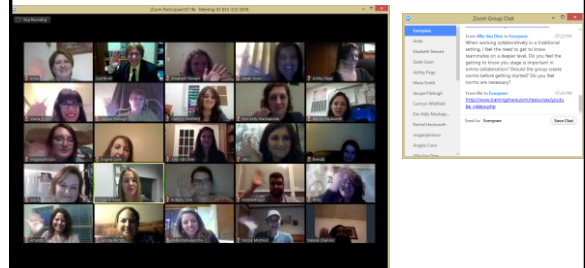**(e.g., use Polling Questions)**

MOOC Guide #4.
Provide Variation and Choice

MOOC Guide #5.
Combine Sync and Async Instruction
(e.g., David Merrill and Charlie Reigeluth)

March 1, 2016
Zoom
Tarleton State University, Texas
Dr. Credence Baker

MOOC Guide #6.
Design Responsive and Interactive Learning Communities

MOOC Guide #7.
Offer Weekly Recaps and Updates

MOOC Guide #8.
Personalize the Activity or Experience Where Possible!

MOOC Guide #9.
Engage in Resource Sharing

MOOC Guide #10.
Be Willing to Change Midstream.

Masterclass Part 1:
Adding Some TEC-VARIETY for Online Motivation and Retention

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

February 23, 2017
CoConqr Online Learning Report 2017
https://info.goconqr.com/files/2017/02/GoConqr-2017-Online-Learning-Report.pdf

February 23, 2017
CoConqr Online Learning Report 2017
https://info.goconqr.com/files/2017/02/GoConqr-2017-Online-Learning-Report.pdf

Slide 1
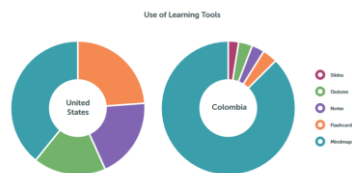
January 15, 2017
3 Reasons to Read the Higher Ed Supplement to National EdTech Plan
(e.g., conversation starter, examples of innovation, cross-section of expertise)
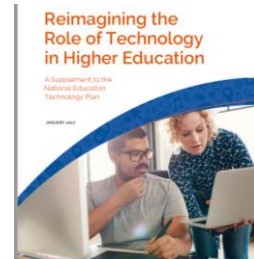**Joshua Kim, Inside Higher Ed**
https://www.insidehighered.com/blogs/technology-and-learning/3-reasons-read-higher-ed-supplement-national-edtech-plan-0

Slide 2

January 2017
Higher Education Supplement to the National Education Technology Plan
U.S. Department of Education, Office of Educational Technology
https://tech.ed.gov/files/2017/01/Higher-Ed-NETP.pdf

Slide 3

January 2017
Higher Education Supplement to the National Education Technology Plan
U.S. Department of Education, Office of Educational Technology
https://tech.ed.gov/files/2017/01/Higher-Ed-NETP.pdf

Slide 4

January 2017
Higher Education Supplement to the National Education Technology Plan
U.S. Department of Education, Office of Educational Technology
https://tech.ed.gov/files/2017/01/Higher-Ed-NETP.pdf

Slide 5

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

Slide 6

January 7, 2017
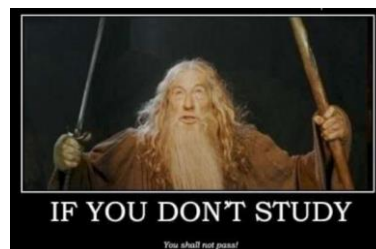**Overworked? Join the club. Here's how to handle It.**
Laura Petrecca, USA Today
http://www.usatoday.com/story/money/2017/01/07/overworked-americans/96235044/

Needed: New Models of Motivation and Engagement

Poll #2: Do you know what happens to sleeping students?

IF YOU DON'T STUDY

You shall not pass!

September 11, 2016
Welcome, Freshmen. Look at Me When I Talk to You
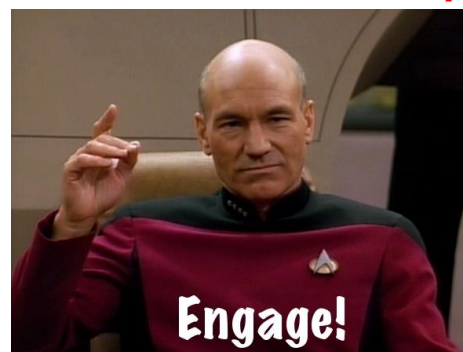Jonathan Zimmerman, The Chronicle of Higher Education
http://www.gite.education/events/2017conference/

No, Banning Laptops Is Not the Answer

What did Jean-Luc Picard say?

Engage!

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.

Poll #3: Million Dollar Question: What words come to mind when I say that I want to motivate learners?

Framework #1: 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
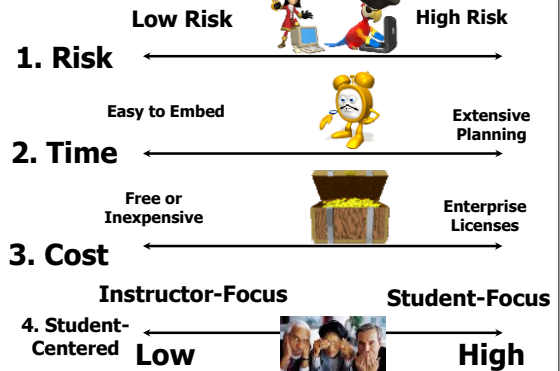
Introducing the free "TEC-VARIETY" Framework...
http://tec-variety.com/
http://tec-variety.com/TEC-VARIETY-Chinese.pdf

ADDING SOME TEC-VARIETY

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

Risk / Time / Cost / Student-Centered

Low Risk		High Risk
1. Risk		
Easy to Embed		Extensive Planning
2. Time		
Free or Inexpensive		Enterprise Licenses
3. Cost		
Instructor-Focus		Student-Focus
4. Student-Centered **Low**		**High**

Examples of TEC-VARIETY

November 10, 2016
1. Tone/Climate:
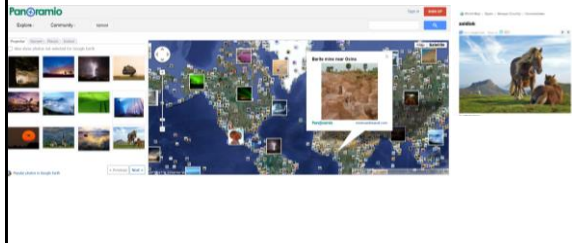### A. Threaded Video Discussions and Questions (e.g., Flipgrid)
http://flipgrid.com/#429f88c5
Flipgrid: The Power of Student Voice
https://vimeo.com/188210645
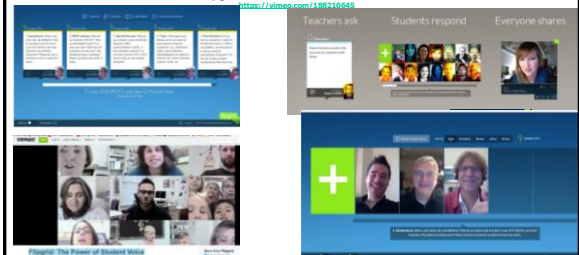
1. Tone/Climate:
B. Share Visuals of Favorite Places
(e.g., Panoramio)
http://www.panoramio.com/

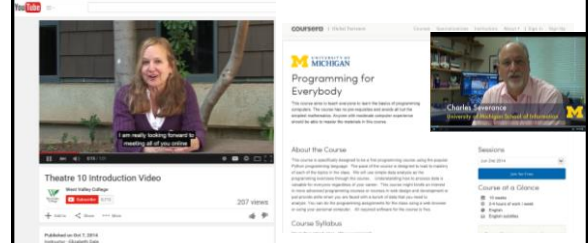**1. T**one/Climate:
C. Instructor Course Introductions
(Theatre 10 Intro Video, October 7, 2014, Elizabeth Dale, West Valley College)
https://www.youtube.com/watch?v=_Wzbzc3QiiA
Chuck Severance, U Michigan/Coursera) in Barcelona
http://www.youtube.com/watch?v=JzNHvmSv8TI
Chuck Severance, University of Michigan
https://www.coursera.org/course/pythonlearn

2. Encouragement, Feedback:
A. Demonstrations and Tutorials
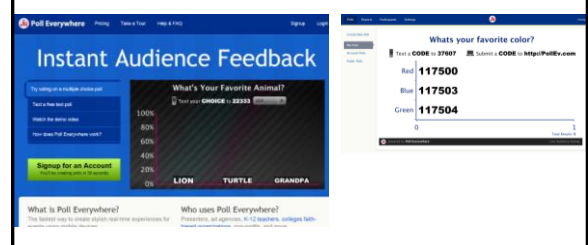(e.g., Jing, Screenr, GoView, Screencast-o-matic, etc.)
http://inside.iub.edu/features/videos/2014-05-29-inub-vid-cib.shtml

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

January 8, 2017
3. Curiosity, Surprise, Intrigue, Unknowns:
A. Summary and Comparison Maps
#GeoawesomeMapOfTheDay
https://twitter.com/geoawesomeness
https://www.instagram.com/p/BNwgvJfDAq3/
https://twitter.com/hashtag/GeoawesomeMapOfTheDay?src=hash
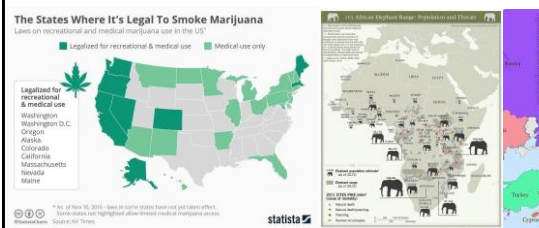
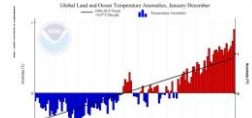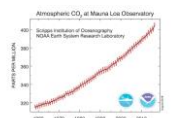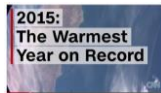**3. C**uriosity, Intrigue, Unknowns:
B. Multimedia News
(e.g., This may be the oldest surviving Photo of a human, November 7, 2014, CNN, Brandon Griggs; But this image, taken in Paris, France, in 1838)
http://www.cnn.com/2014/11/06/living/oldest-photograph-human-daguerre/index.html?hpt=hp_t4.kong

August 24, 2016
3. Curiosity, Intrigue, Unknowns:
C. Multimedia News
Changing opinions on climate change, from a
CNN meteorologist, Chad Meyers, CNN
http://www.cnn.com/2016/08/24/opinions/chad-myers-climate-change-weather/index.html

January 17, 2016
3. Curiosity, Surprise, Intrigue, Unknowns:
D. World Records in the News
http://www.cnn.com/2014/12/17/health/healthy-aging/index.html?hpt=hp_t2
http://espn.go.com/sports/endurance/story/_/id/8979487/fauja-singh-101-caps-career-10k-hong-kong
https://en.wikipedia.org/wiki/Fauja_Singh
http://www.sbs.com.au/yourlanguage/hindi/en/article/2016/01/17/104-year-old-fauja-singh-runs-mumbai-marathon


September 16, 2016
3. Curiosity, Intrigue, Unknowns:
E. Live Science
Best of the E/V Nautilus 2016 Expedition | Nautilus Live
(video: 32:28)
http://www.nautiluslive.org/
https://www.youtube.com/watch?v=H-412PKHnnU
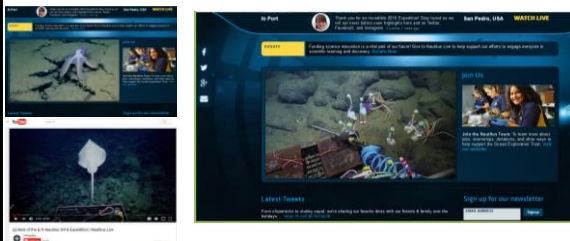
April 1, 2016
3. Curiosity, Intrigue, Unknowns:
F. Groundbreaking Science
(e.g., 2,500-year-old slab reveals lost language, CNN)
(A team of scientists have uncovered a 2,500-year-old slab that may reveal details about the ancient Etruscan civilization; found in Temple foundation north of Florence, Italy.)
http://www.cnn.com/videos/world/2016/04/01/italy-etruscan-slab-find-orig-vstan.cnn
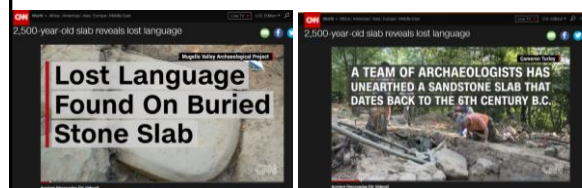
August 2, 2016
3. Curiosity, Intrigue, Unknowns:
G. Immediate Science
Mystery whale has scientists shocked,
New Whale Species Discovered, CNN
http://www.cnn.com/videos/2016/08/02/new-whale-species-discovered-orig-vstan-ewoh.cnn
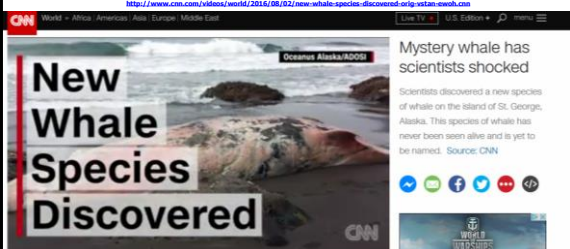
January 5, 2017
3. Curiosity, Intrigue, Unknowns:
H. Immediate Science
Move over T. rex, new dinosaur unveiled, Amanda Jackson, CNN
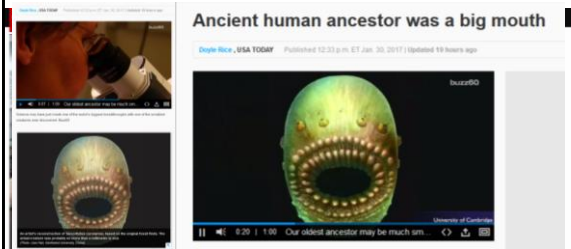http://www.cnn.com/2016/01/14/living/titanosaur-new-dinosaur-on-display-new-york-irpt/
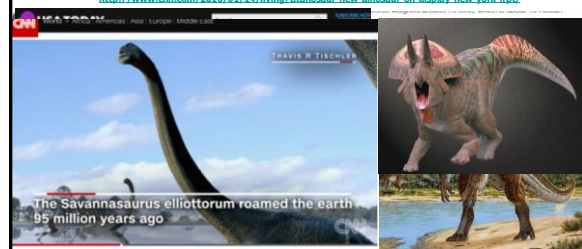
February 16, 2017
3. Curiosity, Intrigue, Unknowns:
I. Immediate Science
Woolly Mammoth Could Be 'De-Extinct' In 2 Years, Scientist Says
Hillary Hansan, CNN (video: 3:22)
http://www.huffingtonpost.com/entry/woolly-mammoth-elephant_us_58a62fa7e4b037d17d264477?gn4kyqd2ystpousor&
http://www.huffingtonpost.com/entry/woolly-mammoth-elephant_us_58a62fa7e4b037d17d264477

Ancient human ancestor was a big mouth

February 19, 2017
3. Curiosity, Intrigue, Unknowns:
J. 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
https://www.washingtonpost.com/news/speaking-of-science/wp/2017/02/19/we-thought-new-zealand-was-an-island-scientists-say-its-the-tip-of-a-hidden-continent/?utm_term=.6de148b32af4&wpisrc=nl_most-draw7&wpmm=1
http://www.denverpost.com/2017/02/19/new-zealand-zealandia/

We thought New Zealand was an island nation. Scientists say it's the tip of a 'hidden continent.'

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

Astronomers discover 7 Earth-sized planets orbiting nearby star

Poll #4:
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. Crowdsourced Science
F. Something in the News
G. Summary and Comparison Maps
H. Immediate Science

INTERNET
HIGH-FIVE
PLACE HAND
HERE

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)
https://www.jeopardy.rocks/r511merve/
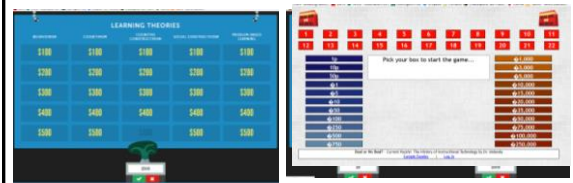
4. Variety, Novelty, Fun, Fantasy:
C. Voice/Audio Feedback
Vocaroo: http://vocaroo.com/
http://vocaroo.com/delete/s0x8moQAYAiu/a37bbc9408bb8c95
(Recorded by Curt Bonk for the Open University of China)

4. Variety, Novelty, Fun, Fantasy:
D. Video Editing and Commenting Tools
(e.g., TubeChop)

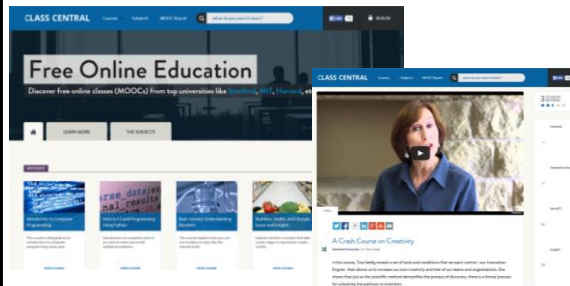**How Does It Work?**

1. Find the video you want to chop.
2. Select & cut interesting part of the video.
3. Share it with friends.

Watch Examples

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

February 2, 2017
5. Autonomy, Choice:
B. Explore/Browse a MOOC
Super-Earths And Life
Learn about alien life, how we search for it, and what
this teaches us about our place in the universe.
https://www.edx.org/course/super-earths-life-harvardx-spu30x-1

February 17, 2017
5. Autonomy, Choice:
C. Explore Online Databases
(e.g., OER World Map
https://oerworldmap.org/)

December 8, 2015
5. Autonomy, Choice:
D. Design Multimedia Glossaries
P540 Final Assignment: Nate Wynne, Supersized Personal Course Glossary
http://natewynne1982.wix.com/p540courseglossary
Ozgur Ozdemir, December 2012
http://r685glossary.shutterfly.com /
Umida Khikmatillaeva, Dec. 2011, P540
http://learningplanet.shutterfly.com/

5. Autonomy, Choice:
E. Tracking the Life of a Computer Scientist
(e.g., bio.com)
http://www.biography.com/people/steve-jobs-9354805
http://www.biography.com/people/ada-lovelace-20825323
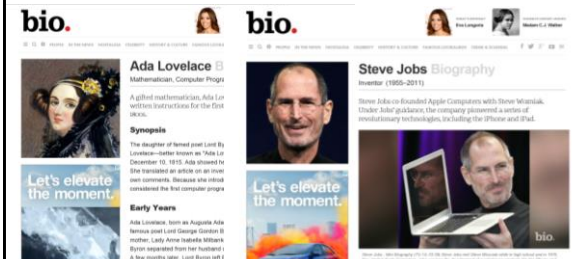
March 13, 2015
5. Autonomy, Choice:
F. 20% Time in Education
Kendal Rasnake & Troy Cockrum, IU
https://www.dropbox.com/s/tcsr5oae2lcgwuk/20_Time_in_Education-Cockrum_and_Rasnake.mov?n=57312573

Poll #5:
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. Weekly Synchronous Guest Chats
(e.g., Emily Hixon, January 20, 2015)
https://connect.iu.edu/p259wpiabg9/

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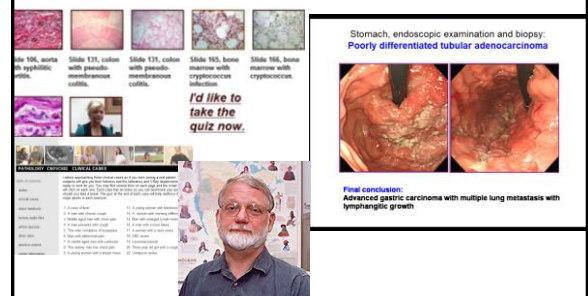**6. Relevance, Meaningfulness:**
B. Weekly Guest Expert Chats
R511 Chat with Mike Molenda, IU

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

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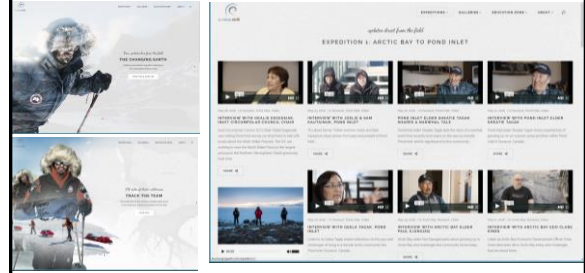http://www.latimes.com/local/lanow/la-me-wikipedia-science-classes-adv-snap-story.html

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 Wikipeida pages on medical topics with students' work. (David Butow / For The Times)

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

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

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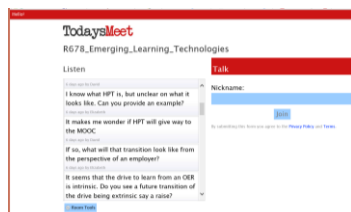http://padlet.com/zaid_alsagoff/engage

7. Interactive, Collaborative:
C. Backchannel Chat (TodaysMeet)
https://todaysmeet.com/
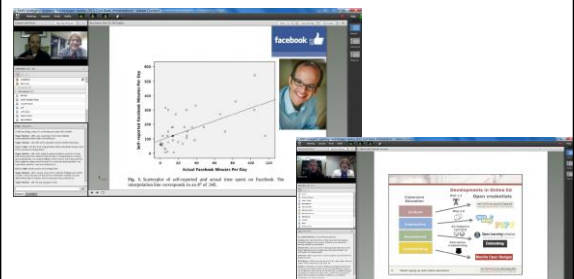**R678_Emerging_Learning_Technologies**
https://todaysmeet.com/R678_Emerging_Learning_Technologies

7. Interactive, Collaborative:
D. Guest Speaker Quotes
(Rey Junco, February 25, 2013)

Poll #6:
Which of these ideas might you use?

A. **Student designed multimedia glossaries**
B. **Edit Wikipedia pages**
C. **20 percent time learning**
D. **Guest chats with former students**
E. **Negotiate meanings online (e.g., PiratePad)**
F. **Enroll in a MOOC**
G. **Discussion in Zoom**
H. **Guest speaker quotes**

---

8. Engagement, Involvement:
A. 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/longform/news/nation/2014/10/21/diversity-race-ethnicity-change-100-years/16211133/

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.

1960   2010   2060

Diversity Index   0-25   26-40   41-55   56-93

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

---

8. Engagement, Involvement:
B. Interactive Timelines
(Dipity, xtimeline, Simile, etc.)
http://www.usatoday.com/news/destinations/story/2011-08-25/Martin-Luther-King-Jr-Memorial-in-Washington-A-closer-look/50136470/1?csp=34news
http://usatoday30.usatoday.com/tech/news/story/2011-09-22/steve-jobs-dies/50672498/1
http://www.cnet.com/news/steve-jobs-a-timeline/

1970s

---

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

Sample of student-generated explanation of spring energy

---

8. Engagement, Involvement:
D. Videos with Test Questions (e.g., TEDEd)
(Lessons about every single element on the periodic table)
http://ed.ted.com/periodic-videos?utm_source=TED-Ed+Subscribers&utm_campaign=92b1054add-2013_09_219_19_2013&utm_medium=email&utm_term=0_1aaccced48-92b1054add-46761201

December 13, 2016
9. Tension, Challenge, Controversy, etc.:
A. Controversial Issue Debates
Librarians for Instructional Technology, Latrice Booker, R511, Fall 2016
http://bookerlr2000.wixsite.com/librariansforit/cognitivism
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

You might be onto something...

(constructivist)   !?   (behavioralist)

October 16, 2015
9. Tension, Challenge, Controversy, etc.:
B. Case Learning from the News
(e.g., Newseum Ed)
https://newseumed.org/

---

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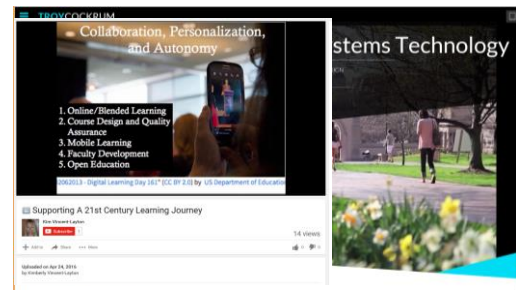**A. Facebook Course Page (R546)**
https://www.facebook.com/JennyBELTT/

---

10. Yields Products, Goals:
B. Database Collection Tools
Design Article Database in Pinterest,
Meina Zhu and Jennifer Weebeck
https://www.pinterest.com/zhumeina0000/r-678-emerging-learning-technology/
https://www.pinterest.com/jennifertwebeck/emerging-learning-technologies/

---
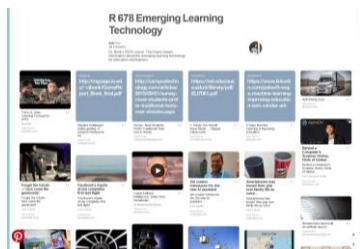
10. Yields Products, Goals:
C. Student Created Recap Videos
Piercarlo Abate: http://www.youtube.com/watch?v=_-TURzHO0aU
Qi Li, Gangnam: http://www.youtube.com/watch?v=7Q429lqxZaU&feature=youtu.be
Miguel Lara (Web 2.0 FREEDOM): http://www.youtube.com/watch?v=8cmCFWi9IW8
Kendal Rasnake (Is IT Right For You?): https://www.youtube.com/watch?v=MJ3GUDICIGw
Kimberly Vincent-Layton: https://www.youtube.com/watch?v=4Ic39_rYLI&feature=youtu.be

---

10. Yields Products, Goals:
D. Student Created Documentaries
R678 Final Projects, April 2016
The Making of an Adventurer (video), Troy Cockrum
https://www.youtube.com/watch?v=ew6e7Chd9I8
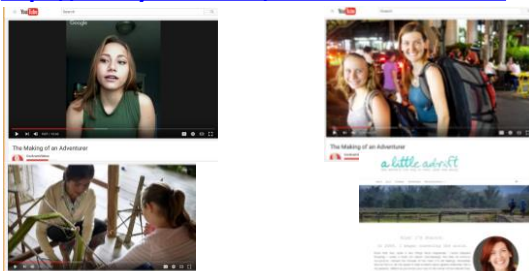
March 12, 2016
10. Yields Products, Goals:
E. Student Generated Timelines,
Taxonomies, and Concept Maps
R678 John Falchi, Timeglider, An Abbreviated History of Distance Education
http://timeglider.com/t/50843d8903a48008?min_zoom=1&max_zoom=100

December 13, 2016
10. Yields Products, Goals:
F. Student Infographics, Charts, and Maps
(e.g., Piktochart)
Brittany Campbell, Brooke Welti, Kevin McCracken, R511, Fall 2016
https://magic.piktochart.com/output/18501778-r511?presentation=true

Poll #7:
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 designed course recap videos
E. Student created websites
F. Student infographics
G. Interactive timeline tools
H. 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

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

Masterclass Part 2:
Where are You R2D2?: Addressing Diverse Online Learner Needs with the Read, Reflect, Display, and Do Model
Curt Bonk, Professor, Indiana University
cjbonk@indiana.edu
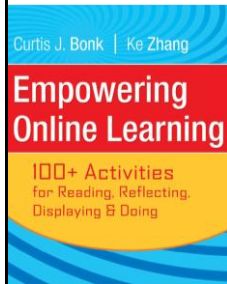**http://mypage.iu.edu/~cjbonk**
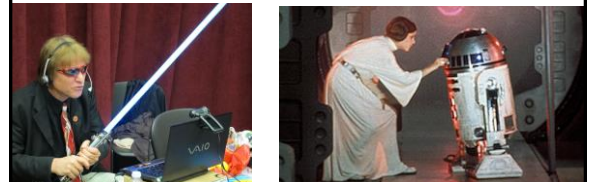
Addressing Learning Styles with R2D2

Question: How can technology address diverse learner needs?

**Model #2: The R2D2 Model: Read, Reflect, Display, Do...**

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.

Southern Illinois University, Carbondale, Illinois
Heidi Jung and Cheryl L Bosarge
Instructional Designer
Center for Teaching Excellence
Heidi Lynn Jung hjung@siu.edu
Cheryl L Bosarge cbosarge@siu.edu
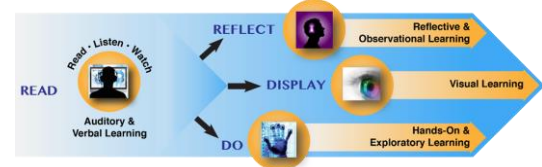
The R2D2 Method

1. **Read (Auditory and Verbal Learners)**
2. **Reflect (Reflective Learners)**
3. **Display (Visual Learners)**
4. **Do (Tactile, Kinesthetic, Exploratory Learners)**
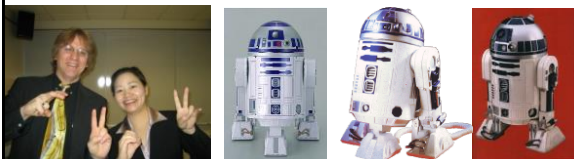
1. Auditory or Verbal Learners

- **Auditory and verbal learners prefer words, spoken or written explanations.**

January 20, 2016
Read 1a. Podcasts
IU Bloomington podcast series to launch Jan. 24, Steve Hinnefeld, IU Newsroom
http://inside.indiana.edu/headlines/2016-01-20-new-campus-podcast.shtml?utm_source=2016-01-20&utm_medium=enewsletter&utm_content=Something-in-the-air&utm_campaign=2016-inside-iub-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

Read 1b. Collect Oral Histories
e.g., Joan Kang Shin, George Mason University, has her students write "This I believe" Statements.
(EFL teachers around the world interview elders in their community for a rich database of oral histories and documentaries for social change)
Oral History Society: http://www.ohs.org.uk/
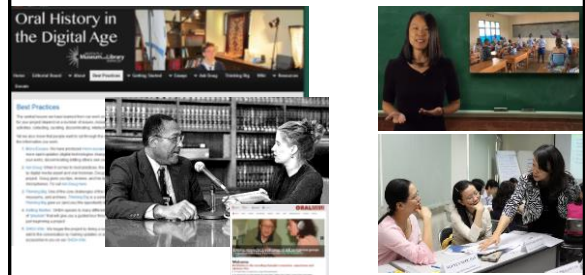
Read 1c.
Exploring Various Resources to Track the Life of a Prominent People
(e.g., Vannevar Bush in Atlantic Monthly, Wikipedia, Time, etc.)
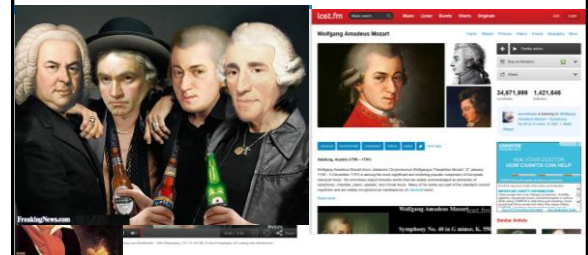http://en.wikipedia.org/wiki/Vannevar_Bush

JULY 1945

As We May Think

VANNEVAR BUSH | JUL 1 1945, 12:00 PM ET

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

May 28, 2015
Read 1e. Open Access Scientific Reports/Studies
New species from Ethiopia further expands
Middle Pliocene hominin diversity, Nature
http://www.cnn.com/2015/05/28/africa/ethiopia-fossil-hominin-ancestor/index.html
http://www.nature.com/nature/journal/v521/n7553/full/nature14448.html

May 28, 2015
Read 1e. Immediate Science
Ancient jawbones put new species on the human family tree,
researchers say, Laura Smith-Spark, CNN
http://www.cnn.com/2015/05/28/africa/ethiopia-fossil-hominin-ancestor/index.html

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. Big Issue Reflections
(Big Questions Online (BQO)), Feb 3, 2015
(e.g., Is curiosity essential for human flourishing?)
https://www.bigquestionsonline.com/content/do-we-have-souls
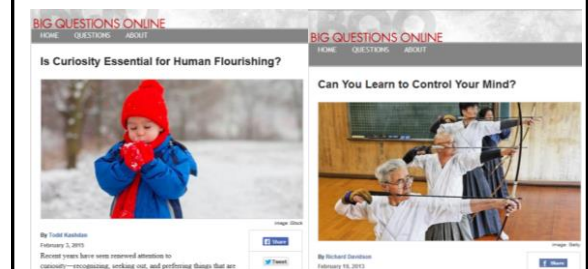
October 6, 2016
Reflect 2b. What-if Reflections
What if Aaron Burr had missed Alexander Hamilton?, Thomas Fleming, CNN
http://www.cnn.com/2016/10/06/politics/alexander-hamilton-aaron-burr-duel-missed/index.html

September 21, 2016
Reflect 2c. Discussion Starter News Stories
(e.g., Aboriginal Australians are Earth's oldest civilization: DNA study, Emiko Jozuka, CNN)
http://edition.cnn.com/2016/09/22/asia/indigenous-australians-earths-oldest-civilization/index.html

Elder Thomas Wales, of the Thanakwith Pine River People, is one of the co-authors of the study.

January 12, 2017
Reflect 2d. Sharing Future Forecasts and Projections
Meet the giants of tomorrow: The tallest buildings rising in 2017, Ian Spula, CNN
http://www.cnn.com/2017/01/11/architecture/tallest-buildings-top-out-2017/

April 13, 2016
Reflect 2e. Interpreting Interactive Graphs
Tech billionaire announces $250 million in cancer immunotherapy funding, Jayne O'Donnell, USA Today
http://www.usatoday.com/story/news/2016/04/13/billionaire-announces-250-million-cancer-immunotherapy-funding/82821198/
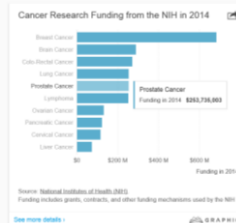
Dr. Jedd D. Wolchok , Chief, Melanoma and Immunotherapeutics Service at Memorial Sloan Kettering Cancer Center in Photo by John OBoyle, Freelance ORG XMIT: JO 134700 seanparker 4/7/2016 [Via MerlinFTP Drop}

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

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

3. Visual Learners

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

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

Display 3c. Map Animations
Yes, Mr. President, We Remade Our Atlas to Reflect Shrinking Ice
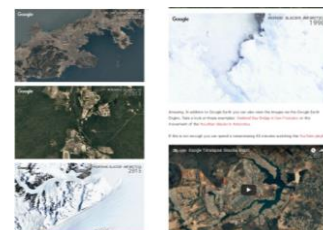**Christine Dell'Amore, National Geographic, August 3, 3015**

December 23, 2016
Display 3d. Global Data Visualizations
The Arctic is showing stunning winter warmth, and these scientists think they know why, Charles Mooney, Washington Post

Visualization of a very wavy northern hemisphere jet stream. Credit: NASA
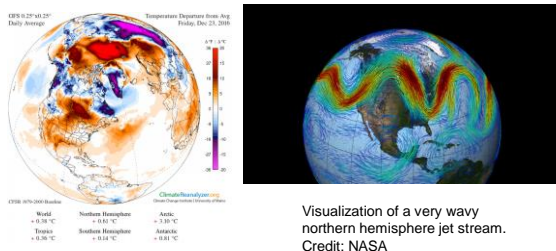
December 2, 2016
Display 3e. Global Data Visualizations
With Google Earth Timelapse you can now view 32 years of Landsat satellite images, Aleks Buczkowski
http://geoawesomeness.com/google-earth-timelapse-can-now-view-32-years-landsat-satellite-images/

November 19, 2016
Display 3f. Cartograms, Maps, and Other Visualizations
Metrocosm: Cartograms Archive
The Housing Value of Every County in the U.S.
http://metrocosm.com/category/cartograms/

December 2, 2016
Display 3g. Global Data Visualizations
With Google Earth Timelapse you can now view 32 years of Landsat satellite images, Aleks Buczkowski
http://geoawesomeness.com/google-earth-timelapse-can-now-view-32-years-landsat-satellite-images/

March 24, 2015
Display 3h. Maps of Languages
Langscape, Language at Maryland
https://languagescience.umd.edu/beyond-umd/langscape
http://theweek.com/articles/545768/cool-interactive-map-lets-explore-worlds-languages
http://langscape.umd.edu/map.php

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

December 17, 2015
Display 3j. Graphical Recordings
Elliott Masie's Learning 2015, Nov 1-4, 2015
http://learningtalks.com/learning-2015-videos/sabrina-kay-the-learner/
http://www.imagethink.net/

February 21, 2017
Display 3k. "My classroom is like a,"
Khendum Gyabak
http://wheeldecide.com/index.php?c1=Jungle&c2=Hospital&c3=Warzone&c4=Temple&c5=Garden&t=My+classroom+is+like+a&time=5
http://wheeldecide.com/

February 23, 2017
Display 3L. Global Comparison Graphs
(Longevity in rich countries, The Economist; A new study suggests South Koreans will have the world's highest life expectancy by 2030, The Economist)
http://www.economist.com/blogs/graphicdetail/2017/02/daily-chart-16?cid1=cust/ddnew/n/n/n/20170223n/owned/n/n/nwl/n/n/n/email
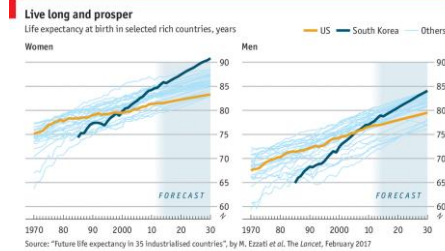
March 2, 2016
Display 3m. Weekly 1 minute Video Updates
(e.g., Pinkcasts from Daniel Pink)
http://www.danpink.com/pinkcast/

October 31, 2014
Display 3n. Live Science
Penguin Science (Penguin Cam) Jean Pennycook
http://www.penguinscience.com/
http://www.thistle.org/pcam2/images.shtml


December 15, 2016
Display 3o. Interactive Media Timelines
The Digital Era: How 50 years of the information age transformed college forever, *Ben Myers & Erica Lusk, The Chronicle of Higher Education*
http://www.chronicle.com/interactives/50-years-of-technology

Display 3p.
Short Educational Videos:
CNN, BBC, TED, TED-Ed, ForaTV
BBC One-Minute World News (August 31, 2015)
http://www.bbc.com/news/business-34105708
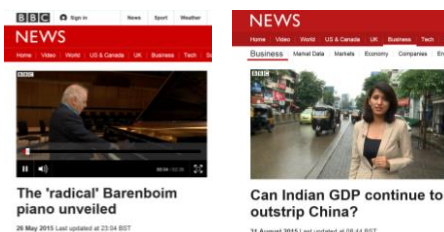
Display 3q. Short Video Anchors
(e.g., TubeChop of V-PORTAL: Video Primers in an Online Repository of e-Teaching and Learning)
Curt Bonk: http://www.tubechop.com/watch/378752
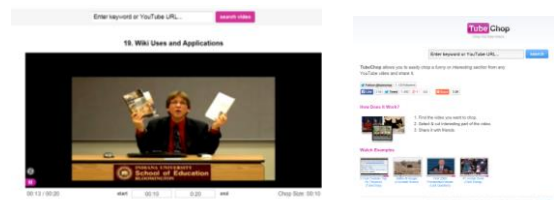
March 10, 2016
Display 3r. Videostreamed Conferences
Watch SXSWedu Live, Connie Yowell
http://sxswedu.com/live?utm_campaign=Edu+2016&utm_source=hs_email&utm_medium=email&utm_content=27144469&_hsenc=p2ANqtz--ag6U7VJGlpYaciareNq6mryKvA63kCR5O3U8JVQtfAYp7yiTnncHnxw7_PmMpcjio19V7z1-01hvyCrDPVEAR-x6HwQ&_hsmi=27144469

November 12, 2016
Display 3s. Online Documentaries and Films
Drokpa (Yan Chun Su is a self-taught documentary filmmaker currently based in Colorado.)
http://www.drokpafilm.com/

October 6, 2016
Display 3t. Explanatory Videos
Why Governments Should Invest in Innovation, Bill Gates, YouTube (1:19)
https://www.youtube.com/watch?v=TjNVNWQa4ak

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)
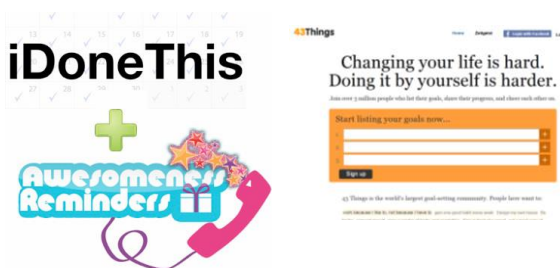
October 26, 2016
Do 4b. Student Created Marketing and Explanatory Videos
R511, Kai Westerfield, Jennifer Blankenship, And Colbi Lehman, Online Degree Programs, (11:54) Go Animate
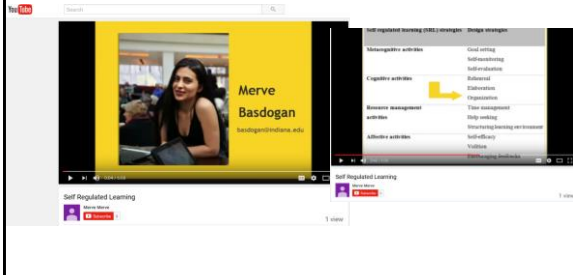
October 26, 2016
Do 4c. Student Exploration Video
R511, Merge Basdogan, Self-Regulated Learning (6:08)
https://www.youtube.com/watch?v=G1FpopGmk1c&feature=youtu.be#t=3.346833

October 26, 2016
Do 4d. Student Research Recap Video
R511, Rob Elliot, Erin Milanese, and Patrick Walsh
Traditional Textbook (8:11)
https://drive.google.com/file/d/0B2SAtCR9Ddd5NE9DaS16RlpiMW8/view

Do 4e. Student Website Development
R511 Final Projects, April 2016
IT and HPT Comparison (Website), Doug Hsu
http://dougandindira.wix.com/r511finalproject
"IST Construction, Co."
Rob Elliot, Patrick Walsh, Erin Milanese, R511, December 2016
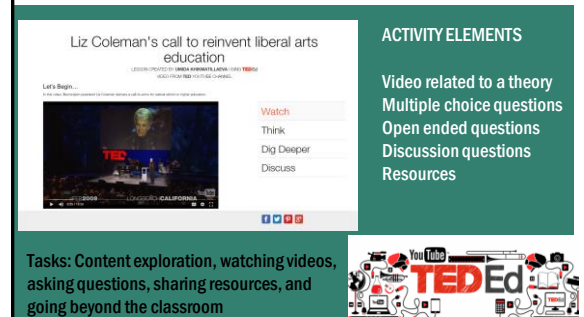http://relliott.net/istconstruction/index.php
"Cousins but Not Twins: Instructional Technology and Human Performance Technology,"
Merve Basdogan and Brett Gary, R511, December 2016
http://educbasdogan.wixsite.com/511final
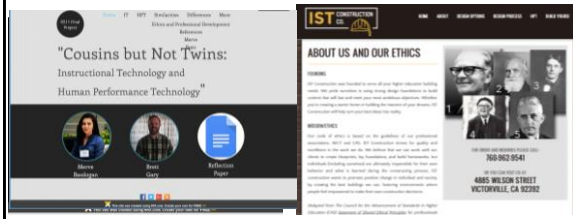
Do 4f. Using TEDEd Lessons to engage students collaboratively: Teach Theory in Fun way
Frank Di Silvestro & Umida Khikmatillaeva, Adult Ed, IST, IU
January 2017

Poll #8: Which do you prefer...
(A) TEC-VARIETY or (B) R2D2?

Poll #9: 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.

Poll #10: Three Words from this Session…?
e.g., "I am happy!" and…
My minions are happy!

Any Questions or Comments?
Slides at: TrainingShare.com
Papers: PublicationShare.com
Free book: http://tec-variety.com/
Dr. Curt Bonk – CJBonk@Indiana.edu