

Engaging Online and Blended learning: Introducing the TEC-VARIETY Model

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在线学习动机与策略:
TEC-VARIETY 模型



(Circa Confucius 551–479 BCE)



The Creation of Effective Learning Environments

<http://study.com/academy/lesson/learning-environment-in-the-classroom-definition-importance.html>



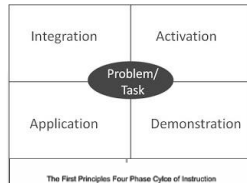
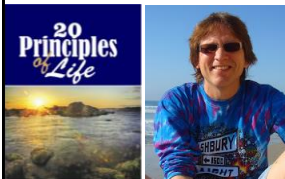
20 New Roles of the Instructor

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



Bonk's Last Principles of Teaching/Instruction

<http://travelinman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html>
<http://www.applca@thai.com/articles/education-4-5/>



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

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



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).



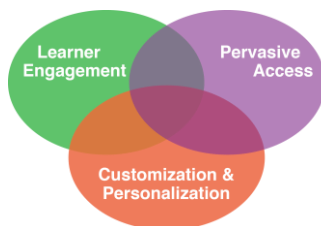
Phase III, 2008:
THE AGE OF
MOOCs (FIRST
MOOC OFFERED).



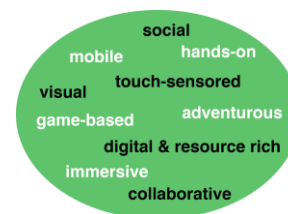
Phase IV, 2015
THE AGE OF
PERSONALIZATION.

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

30+ Ways Learning is Changing: The Mega Trends



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



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



How Learning is Changing: Mega Trend #3. Customization



Masterclass Part 1: Blended Learning A to Z: Myths, Models, and Moments of Magic

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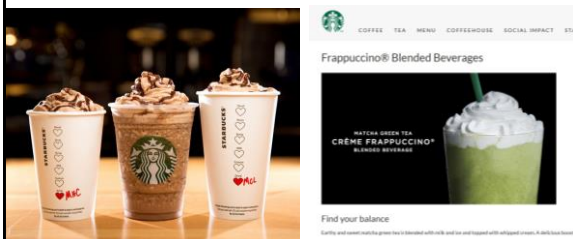


Learning is More Blended...

1. Recent data on online learning.
2. 1 Definition of blended learning
3. 10 Myths of blended learning
4. 7 Models of blended learning
5. 14 Examples of blended learning



Poll: Who gets blended drinks at Starbucks?



Learning is More Online June 15, 2014

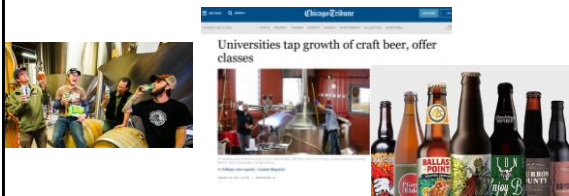
Starbucks offers workers 2 years of free college, CNN Money, Gregory Wallace
 (from Arizona State online programs)

http://money.cnn.com/2014/06/15/news/economy/starbucks-schultz-education/index.html?hpt=hp_12
<http://www.nytimes.com/2014/06/16/us/starbucks-to-provide-free-college-education-to-thousands-of-workers.html>



January 20, 2016 Learning is More Blended Universities tap growth of craft beer, offer classes, Chicago Tribune

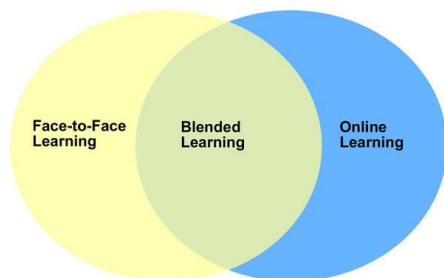
<http://www.chicagotribune.com/business/ct-college-craft-beer-offer-classes-20160120-story.html>



Who Needs Blended and Online Learning?



Answer: Blended Learning



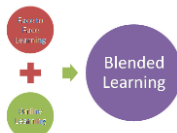
Myth #1: If you read the enough research you will be able to know the impact of blended learning.

1. Improved Pedagogy
 - More interactive instead of transmissive
 - Authentic, real world, etc.
2. Increased Access/Flexibility
3. Increased Cost Effectiveness



Myths #2: Blended learning is easy to define. Myth #3: Blended learning is hard to define. Blending Online and F2F Instruction

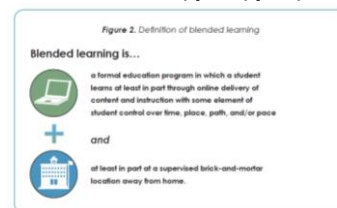
"Blended learning refers to events that combine aspects of online and face-to-face instruction" (Rooney, 2003, p. 26; Ward & LaBranche, 2003, p. 22)



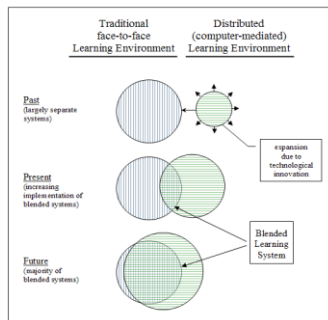
Classifying K-12 Blended Learning Heather Staker and Michael B. Horn, May 2012

<http://www.projectred.org/uploads/The-Rise-of-K-12-Blended-Learning.pdf>

"Blended learning is any time a student learns at least in part at a supervised brick-and-mortar location away from home *and at least in part* through online delivery with some element of student control over time, place, path, and/or pace."



Historical Emergence of Blended (Graham, 2006)



Myth #4: People will know what I am saying when I say "blended learning."

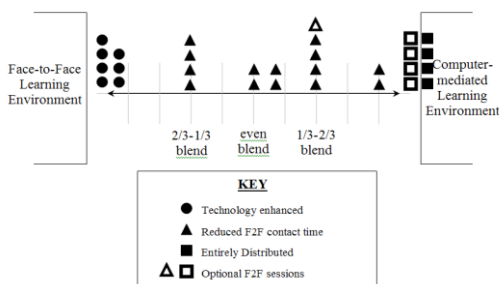
Myth #5: Blended is the same as "hybrid."

The Sloan Consortium

Proportion of content delivered online	Type of Course	Typical Description
0%	Traditional	Course with no online technology used - content is delivered in writing or orally.
1 to 29%	Web facilitated	Course which uses web-based technology to facilitate what is essentially a face-to-face course. Might use Blackboard or WebCT to post the syllabus and assignments, for example.
30 to 79%	Blended/Hybrid	Course that is a blend of the online and face-to-face course. Substantial proportion of the content is delivered online, typically uses online discussions, typically has some face-to-face meetings.
80+%	Online	A course where the vast bulk of the content is delivered online. Typically has no face-to-face meetings.



Myth #6: Knowing "how much" to blend is vital. Range of Blends in Pew Cases



Source: Graham, C. R., & Allen, S. (2005). Blended learning: An emerging trend in education. In C. Howard & J. V. Boettcher & L. Justice & K. D. Schenk & P. L. Rogers & G. A. Berg (Eds.), *Encyclopedia of Distance Learning* (pp. 172-179). Hershey, PA: Idea Group Inc.

Myth #7: Blended learning works everywhere. Where is Blended Beneficial?

- Intro Classes (Spanish, psych, algebra, biology)
- AP Classes
- Classes with low success rates
- Classes with students working part-time
- Required classes
- Students are rural or spread over a distance
- Classes with certification or standardization
- Classes with new requirements or standards
- Writing intensive classes, theory classes, etc.
- Lab classes?

Examples of Blended Learning

- Put assessments/reviews online
- Online discussions
- Online labs
- Put reference materials on Web
- Deliver pre-work online
- Provide office hours online
- Use mentoring/coaching tool
- Access experts live online



January 30, 2016

Welcome to the Blended Learning Toolkit, University of Wisconsin

<https://blendedtoolkit.wisc.edu/blended-learning-modules-offer-dvm-students-more-complete-education/>

January 31, 2016

Hybrid Courses

University of Wisconsin Milwaukee

<http://www3.uwm.edu/fac/hybrid/>



Myth #8: People learn more in face-to-face settings than blended or fully online ones.

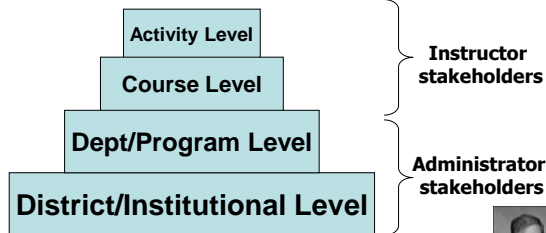
Fully Online and Blended Learning Advantages

1. Increased Learning (better papers, higher scores)
2. More effective pedagogy and interaction
3. Course access at one's convenience and flexible completion (e.g., multiple ways to meet course objectives)
4. Reduction in physical class or space needs, commuting, parking, etc.
5. Increased opportunities for human interaction, communication, & contact among students
6. Introverts participate more

Myth #9: Instructors can have a logical discussion with administrators about blended learning.

Models of Blending

Blending occurs at the following four levels:



Myth #10: There is a best model of blended.

AMA Special Report, Effectively Implementing a Blended Learning Approach (Steven Shaw & Nicholas Ignieri, 2006)



Source: American Management Association, AMA at Work

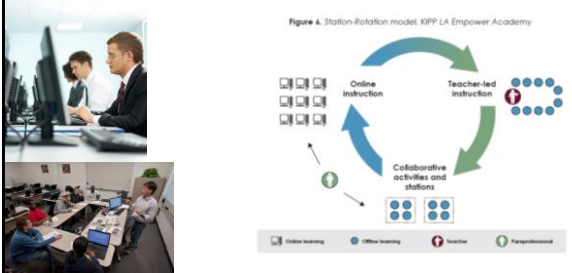
Seven Example Blended Learning Models



Blended Model #1. Face-to-Face Primary (online is for remediation of supplement)



Blended Model #2. Rotation (students alternate FTF and Online instruction)



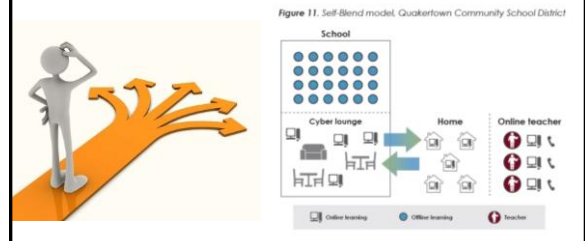
Blended Model #3. Flex (curriculum primarily online with instructors available FTF)



Blended Model #4. Online Lab (lab or field experience component of course is online)



Blended Model #5. Self-Blend (students decide on which courses they take online or which portion of the course is online)



Blended Model #6. Bookend (first and last part of the course is online and middle portion is FTF; AMA Special Report, Blended Learning Opportunities, Alison Rossett (2006))

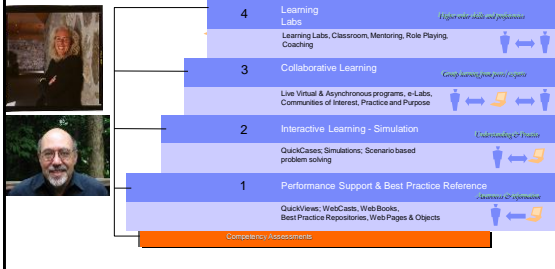


Blended Model #7. Anchor (start with FTF or what students are familiar with and then move to online; or the opposite and start online and move to F2F)

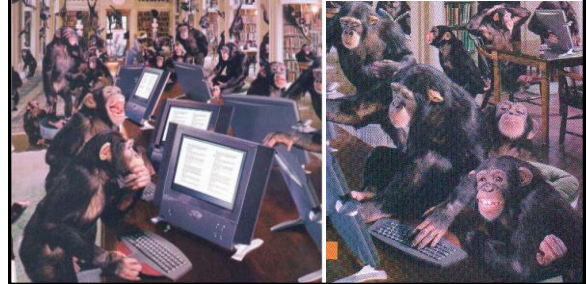


Blended Learning Model #8: Gradual Human (F2F) Approach

The IBM Four Tier Learning Model. Blending Learning for Business Impact
– IBM's case for learning success. *Nancy Lewis, VP, & Peter Orton, IBM*



15 Blended Learning Examples



August 19, 2015 Blended Solution #1.

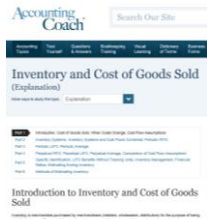
Use the Media to Supplement Content
(e.g., Accounting Coach; includes tests, Q&A, visuals, forms, definitions, etc.)

<http://money.com/2015/08/19/retirement/savings/20/index.html>

Millennials & Their Money



3 tips to getting retirement right in your 20s



Blended Solution #2. Analyzing Online Raw Data (e.g., Financials from Twitter)

<https://finance.yahoo.com/q/is?s=TWTR+Income+Statement&annual>
<http://www.marketwatch.com/investing/stock/twtr/financials>
<http://www.nasdaq.com/symbol/twtr/financials?query=income-statement>



Blended Solution #3. Online News and Videos March 22, 2015

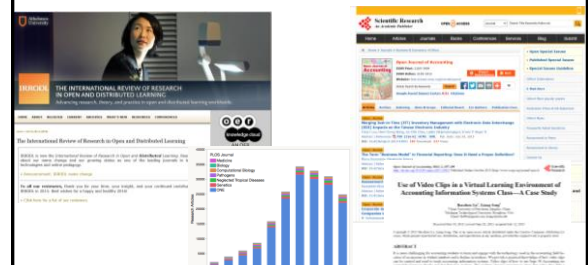
Madagascar marvel:
Divers find fossils of extinct giant lemurs
Daisy Carrington, for CNN, March 22, 2015

<http://www.cnn.com/2015/03/19/africa/underwater-fossil-lemur-graveyard-madagascar/index.html>



Blended Solution #4. Reading from Open Access Journals (e.g., PLOS, IRRODL, etc.)

<http://www.plos.org/>; <http://www.plosbiology.org/>; <http://www.plosgenetics.org/>



Blended Solution #5. Sample Student Work e.g., Interactive Archive/Gallery of Student Exemplary Work (University of Notre Dame, Freshman Writing September 24, 2014; <https://freshwriting.nd.edu/>)



Blended Solution #6. Online Role Play or Debate (e.g., documentary production)



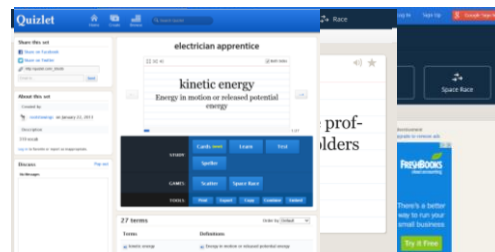
Blended Solution #7. Online Database Activities (e.g., WolframAlpha) <http://www.wolframalpha.com/>



A Quick Introduction
to Wolfram/Alpha
by Stephen Wolfram



Blended Solution #8. Online Practice Tests and Interactive Flash Cards <http://quizlet.com/>



Blended Solution #9. Flipping the Classroom January 7, 2015

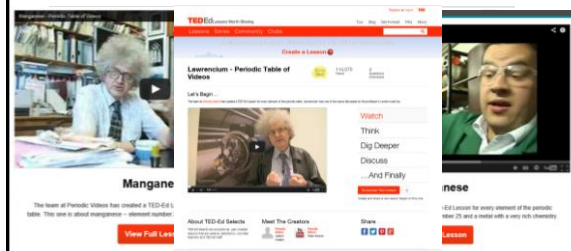
When a Flipped-Classroom Pioneer Hands Off His Video Lectures, This
Is What Happens, Jeffrey R. Young, The Chronicle of Higher Education
<http://chronicle.com/article/When-a-Flipped-Classroom/151031/>



A student watches a video of Norman Nemrow's accounting class. Mr. Nemrow started the video lectures nearly 15 years ago at Brigham Young U. He is now retired, but students still watch him on the screen.

Blended Solution #10. Videos with Test Questions (e.g., TEDEd) (Lessons about every single element on the periodic table)

<http://ed.ted.com/periodic-table-video-lessons>



Blended Solution #11. Video Tutorials, Demonstrations, and How-To's

Investopedia (videos, tutorials, etc.)
(Jing, GoView, Screenr, Overstream, Screencast-o-Matic;)
<http://www.investopedia.com/video/play/deferred-revenue/>

Deferred Revenue



January 12 and 18, 2018 (Zoom) Blended Solution #12. Collaborative Team Meetings (Puerto Rico)



July 11, 2018 Blended Solution #13. Streaming Live Events Keynote talks at EdMedia 2018: World Conference on Educational Media and Technology

<http://www.learntechlib.org/talks/CEdMEDIA/2018/>
Zoom link: <https://us.zoom.us/j/263198784>



Blended Solution #14. Language Lessons Online

BBC Learning English

<http://www.bbc.co.uk/learningenglish>



Again, this talk covered...

1. Recent data on online learning.
2. 1 Definition of blended learning
3. 10 Myths of blended learning
4. 8 Models of blended learning
5. 14 Examples of blended learning



Experience. The difference.

Any Questions or Comments?

Slides at: TrainingShare.com

Papers: PublicationShare.com

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

Dr. Curt Bonk – CJBonk@Indiana.edu



Masterclass Part 2: Best Practices for Online and Blended learning: Introducing the TEC-VARIETY Model

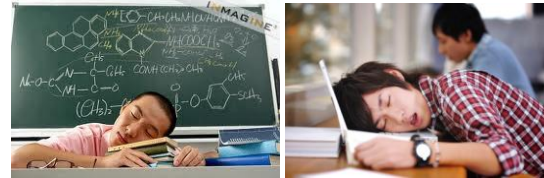
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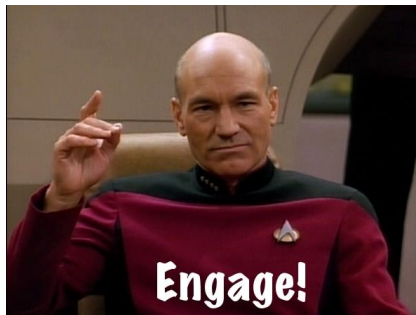
在线学习动机与激励:
TEC-VARIETY 模型



Needed: New Models of Motivation and Engagement



Poll: What did Jean-Luc Picard say?



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



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.



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

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



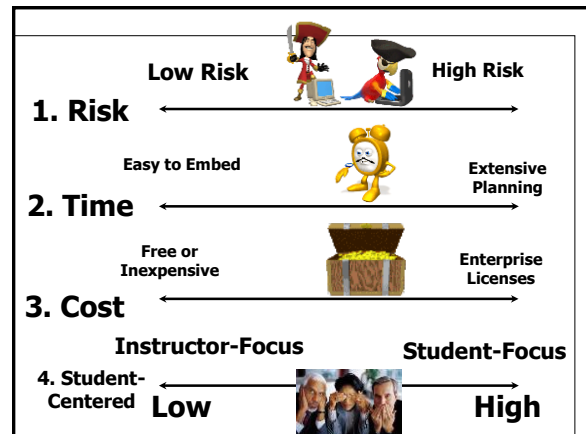
What motivates?

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

在线学习动机与激励:
TEC-VARIETY 模型

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.



Examples of TEC-VARIETY

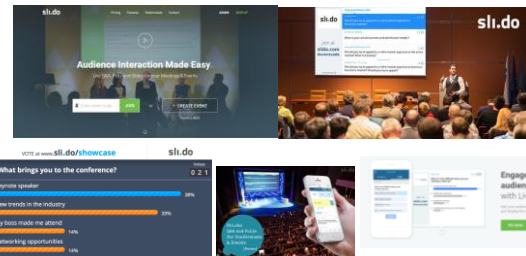


April 3, 2017

1. Tone/Climate:

A. Sli.do

<https://www.sli.do/>



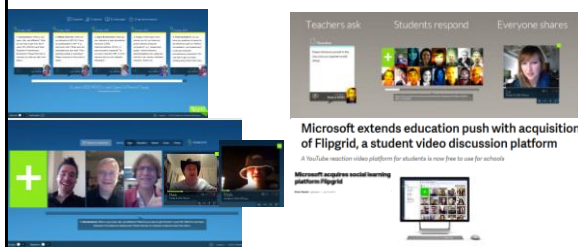
June 18, 2018

1. Tone/Climate:

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

Microsoft acquires social learning platform Flipgrid,
Brian Heater, TechCrunch

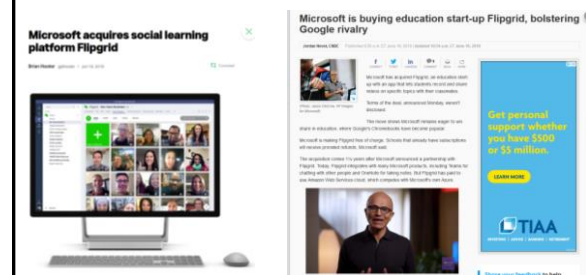
<https://techcrunch.com/2018/06/18/microsoft-acquires-social-learning-platform-flipgrid/>



June 18, 2018

Microsoft acquires social learning platform Flipgrid Brian Heater, TechCrunch

<https://techcrunch.com/2018/06/18/microsoft-acquires-social-learning-platform-flipgrid/>



1. Tone/Climate: C. Instructor Course Introductions

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

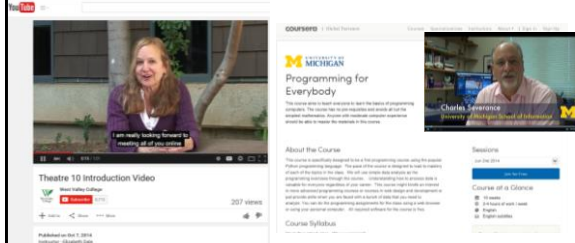
<https://www.youtube.com/watch?v=Wzbzc3QiiIA>

Chuck Severance, U Michigan/Coursera) in Barcelona

<http://www.youtube.com/watch?v=JzNHvmsV8T1>

Chuck Severance, University of Michigan

<https://www.coursera.org/course/pythonlearn>

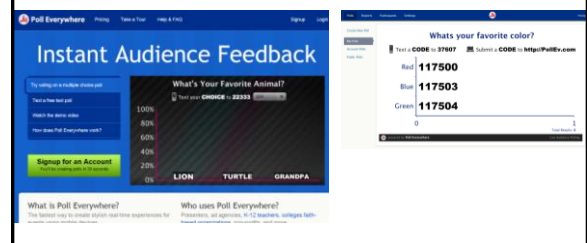


2. Encouragement, Feedback:

A. Blog and Website Polling

(e.g., Poll Everywhere, BlogPolls, BlogPoll, MicroPoll)

<http://www.pollerywhere.com/>



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

Vocaroo: <http://vocaroo.com/>

<http://vocaroo.com/delete/s0x8moQAYAiU/a37bbc9408bb8c95>

(Recorded by Curt Bonk for the Open University of China)



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

A Map Showing How Much Time It Takes to Learn Foreign Languages: From Easiest to Hardest, Open Culture

<http://www.openculture.com/2017/11/a-map-showing-how-much-time-it-takes-to-learn-foreign-languages-from-easiest-to-hardest.html>



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/2014/11/06/living/oldest-photograph-human-daguerre/index.html?hpt=hp_44_kong



3. Curiosity, Intrigue, Unknowns: C. 1st woman to officially run Boston Marathon does it again, 50 years later

Emanuella Grinberg, CNN, USA Today

<http://www.cnn.com/2017/04/17/us/boston-marathon-kathrine-joyner-tne/index.html>

July 16, 2017

Julia Hawkins Sets 100-Meter Dash Record for Women 100 Years or Older

<http://thehoneycomb.com/2017/07/16/100-year-old-woman-sets-100-meter-dash-record-for-women-100-years-or-older/>

<http://thehoneycomb.com/2017/07/16/100-year-old-woman-sets-100-meter-dash-record-for-women-100-years-or-older/>

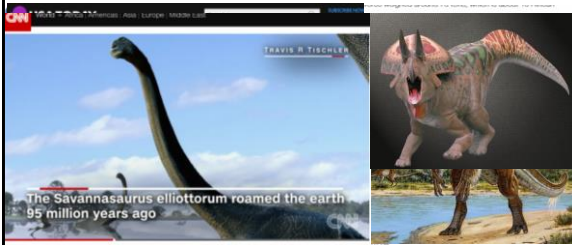


January 5, 2017

3. Curiosity, Intrigue, Unknowns:

D. Immediate Science

Move over T. rex, new dinosaur unveiled, Amanda Jackson, CNN
<http://www.cnn.com/2016/01/14/living/titanosau-new-dinosaur-on-display-new-york-irpt/>



January 31, 2018

3. Curiosity, Intrigue, Unknowns:

E. Science in the News

'Holy Grail' of dinosaur fossils discovered in Egyptian desert
 Doyle Rice, USA Today
<https://www.usatoday.com/story/tech/science/2018/01/31/holy-grail-dinosaur-fossil-discovered-egyptian-desert/1073413802/>



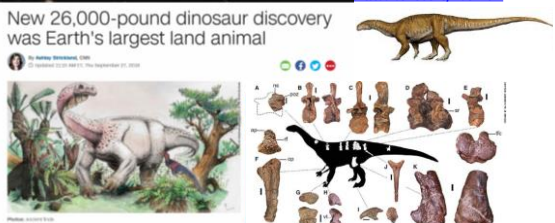
A new species of dinosaur has been discovered in Sahara Desert. It's an extremely rare discovery because dino fossils are not known to be in that part of the world. USA TODAY

September 27, 2018

3. Curiosity, Intrigue, Unknowns:

F. Dinosaur Discoveries

New 26,000-pound dinosaur discovery was Earth's largest land animal
 Ashley Strickland, CNN
<https://www.cnn.com/2018/09/27/world/new-giant-dinosaur-hugobosaurus-relative/index.html>



February 16, 2017

3. Curiosity, Intrigue, Unknowns:

G. 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



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)

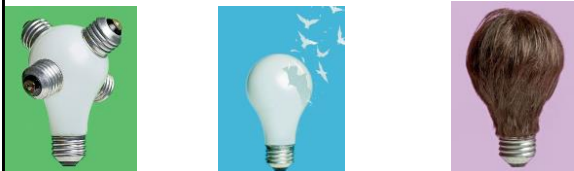
<https://www.jeopardy.rocks/rs11merve/>



Poll #2:

Any light bulbs going off in your head so far...?

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

**Poll #3:**

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**



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)



March 20, 2018

6. Relevance, Meaningfulness:

C. Editing Wikipedia Pages

Women's-Studies Students Across the Nation Are Editing Wikipedia

Emma Kerr, The Chronicle of Higher Education

<https://www.chronicle.com/article/Women-s-Studies-Students/242886>

College students take to Wikipedia to rewrite the wrongs of Internet science



Samantha Erickson, left, of the Wiki Education Foundation; Tina Brock, a dean of the School of Pharmacy at UC San Francisco; and professor Amin Azam discuss implementing the integration of Wikipedia pages on medical topics with students' work

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-pages/>
MeetingWords, Google Docs, NowComment, MixedInk



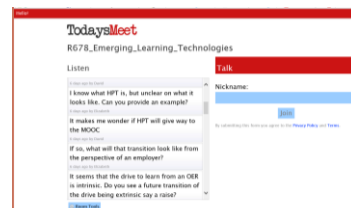
7. Interactive, Collaborative: B. Virtual Sharing Walls

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



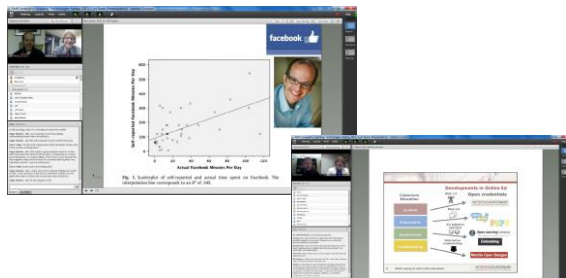
7. Interactive, Collaborative: C. Backchannel Chat (Today'sMeet)

<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)



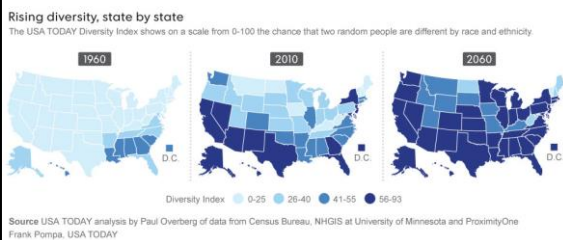
8. Engagement, Involvement: A. Learning Chemistry in Virtual Reality, Sarah Hardman, New Learning Times

1:38 video: <https://vialogues.com/vialogues/play/38337/>
All: <http://cutbook.com/chemistry-vr.html>
01-44: <http://cutbook.com/chemistry-vr-2.html>
41-116: <http://cutbook.com/chemistry-vr-3.html>
1:16-1:36: <http://cutbook.com/chemistry-vr-4.html>



8. Engagement, Involvement: B. Interactive Maps Timelines

October 22, 2014, Second immigration wave lifts diversity to record high, Edward Greg Toppo and Paul Overberg, USA Today
<http://www.usatoday.com/story/news/immigration/2014/10/22/immigration-race-ethnicity-change-100-years/1421113/>



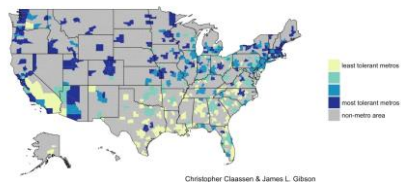
8. Engagement, Involvement: C. Interactive Labs and Simulations

<http://phet.colorado.edu/en/simulation/energy-skate-park>



February 14, 2018
8. Engagement, Involvement:
D. Maps (This map shows where more Americans are willing to support free speech, The Monkey Cage, The Washington Post)

Political Tolerance by US Metropolitan Area
 Estimated using 2007-11 Freedom and Tolerance Survey Data

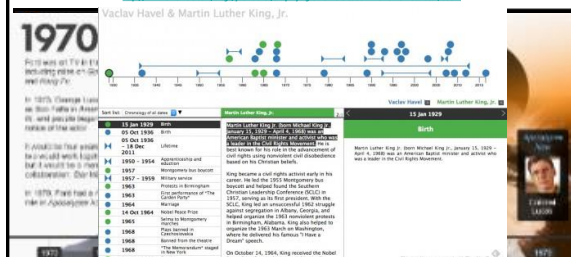


Christopher Classen & James L. Gibson



March 30, 2017
8. Engagement, Involvement:
E. Interactive Timelines

(Dipity, xtimeline, Simile, TimeLineCurator, etc.)
<http://usatoday30.usatoday.com/tech/news/story/2011-09-22/steve-jobs-dies/50672498/1>
 Amy Cavender, The Chronicle of Higher Education
<http://www.chronicle.com/blogs/profbacker/dipity-timeline-creation-with-timedecurator/53832>



July 28, 2017
9. Tension, Challenge, Controversy, etc.:
A. Scenario-Based Learning and Challenges
Modern medicine breathes new life into virtual training

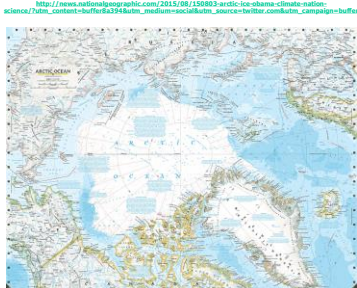
<https://www.youtube.com/watch?v=2017/07/28/modern-medicine-breathes-new-life-into-virtual-training/28072801/>
 Videos
 2:34 (entire video): <http://curtbonk.com/vr-medicine4b.html>
 .01-.21: <http://curtbonk.com/vr-medicine.html>
 .37-.56: <http://curtbonk.com/vr-medicine2.html>
 .57-1.29: <http://curtbonk.com/vr-medicine3.html>
 1.30-2.27: <http://curtbonk.com/vr-medicine4.html>



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



9. Tension, Challenge, Controversy, etc.:
C. Yes, Mr. President, We Remade Our Atlas to Reflect Shrinking Ice
 Christine Dell'Amore, National Geographic, August 3, 2015
<https://www.nationalgeographic.com/science/2015/08/03/yes-mr-president-we-remade-our-atlas-to-reflect-shrinking-ice/>

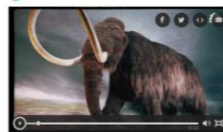


February 16, 2017
9. Tension, Challenge, Controversy, etc.:
D. Immediate Science
Woolly Mammoth Could Be 'De-Extinct' In 2 Years, Scientist Says
 Hillary Hanson, CNN (video: 3:22)
http://www.huffingtonpost.com/entry/woolly-mammoth-scientist-us_58a62fa7e4b0376174264477?hpid=hp_hp-top-table-main-mammoth-scientist-us_58a62fa7e4b0376174264477

Woolly Mammoth Could Be 'De-Extinct' In 2 Years, Scientist Says

This plan is to create a woolly mammoth-elephant hybrid.

By Hillary Hanson



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

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



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 3: Best Practices for Online and Blended learning: Introducing the R2D2 Model

Curt Bonk, Professor, Indiana University
cjbbonk@indiana.edu
<http://mypage.iu.edu/~cjbbonk>



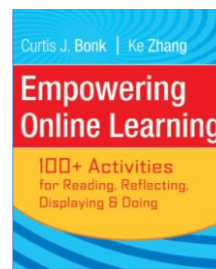
Addressing Learning Styles with R2D2



Question: How can technology address diverse learner needs?

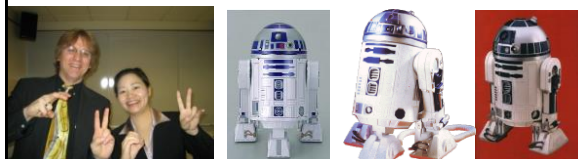


Model #2: The R2D2 Model: Read, Reflect, Display, Do...



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.



February 11, 2018 Read 1a. Online Referenceware The Magical Power of Dictionaries Alberto Manguel, The Chronicle of Higher Education <https://www.chronicle.com/article/The-Magical-Power-of-Dictionaries/242513>



January 20, 2016 Read 1b. Podcasts

IU Bloomington podcast series to launch Jan. 24, Steve Hinnefeld, IU Newsroom

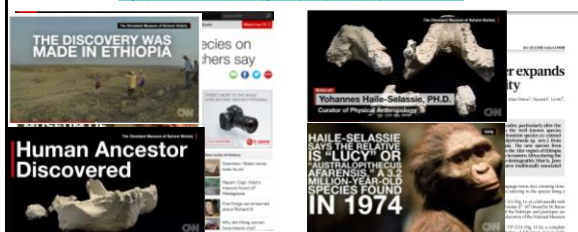
http://inside.iuindiana.edu/newsline/2016-01-20-iu-bloomington-podcast-series-launches-2016-01-20&utm_medium=newsletter&utm_content=Something-in-the-air&utm_campaign=2016-inside-sub-distribution



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

May 28, 2015 Read 1c. Immediate Science and Open Access 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>
<http://www.cnn.com/2015/05/28/africa/ethiopia-fossil-hominin-ancestor/index.html>
<http://www.nature.com/nature/journal/v524/n7553/full/nature14448.html>



January 28, 2015 Read 1d. Twitter Fed Class Discussions

Live-Tweeting Assignments: To Use or Not to Use?
The Chronicle of Higher Education, Adeline Koh

<http://chronicle.com/blogs/profhacker/live-tweeting-assignments-to-use-or-not-to-use/58949>



Read 1e. Grammar Checkers (e.g., Grammarly, Ginger, GrammarCheck, PaperRater, and SpellCheckPlus)

<http://www.grammarly.com/>



February 14, 2018 Read 1f. Reading Online News Tracing the tangled tracks of humankind's evolutionary journey

Hannah Devlin, The Guardian

<https://www.theguardian.com/news/2018/feb/12/tracing-the-tangled-tracks-of-humankinds-evolutionary-journey>



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



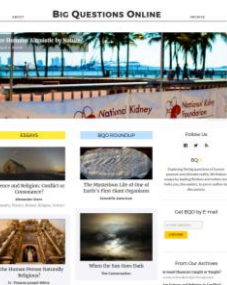
February 28, 2018 Reflect 2a. Reflect on and Debate News Did Homo erectus speak?

Daniel Everett, Bentley University, Aeon

<https://aeon.co/essays/tools-and-voyages-suggest-that-homo-erectus-invented-language>



Reflect 2b. Big Issue Reflections (Big Questions Online (BQO)), Feb 3, 2015 (e.g., [Can a Living Creature Be as Big as a Galaxy?](https://www.bigquestionsonline.com/))



October 6, 2016 Reflect 2c. 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>

What if Aaron Burr had missed Alexander Hamilton?

By Thomas Fleming, Oct. 6, 2016



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)
 The Foreman's reflections on visits to Africa, at First Lutheran Baptist Church in San Carlos, and at the Foreman's home in California.

A Day in Botswana, Rwanda
 When people ask me "What do you do in Africa?" I say, "We do all kinds of different things. We stay at the Center and See Africa (CASA) House. We teach. We work." I don't usually give you a full view of what I do in Africa. So you can see for yourself. Here is a list of things that I did while on July 26, 2010.

At the Center
 I spent the morning at the Center and See Africa House. I met with a group of students and teachers. We talked about the importance of education and the role of the church in the community. We also talked about the importance of the family and the role of the church in the family.

At the Foreman's Home
 I spent the afternoon at the Foreman's home. I met with a group of students and teachers. We talked about the importance of education and the role of the church in the community. We also talked about the importance of the family and the role of the church in the family.

At the Foreman's Home
 I spent the evening at the Foreman's home. I met with a group of students and teachers. We talked about the importance of education and the role of the church in the community. We also talked about the importance of the family and the role of the church in the family.

April 13, 2016 Reflect 2e. Interpreting Interactive Graphs and Infographics

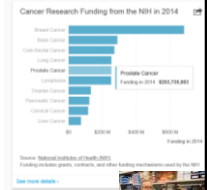
How much rainforest in that chocolate bar?
 Tech billionaire announces \$250 million in cancer immunotherapy funding, Jayne O'Donnell, USA Today
<http://www.usatoday.com/story/news/2016/04/13/billionaire-announces-250-million-cancer-immunotherapy-funding/8281119/>

Land-Use Change Emissions in Miles Driven



<http://bit.ly/rainforest-chocolate>

WORLD RESOURCES INSTITUTE



July 5, 2018 Reflect 2f. Vialogues

EdLab Seminar--Engaging Educators with Digital Collections
 Vialogue, Sara Hartman, New Learning Times
<https://newlearningtimes.com/cms/article/5426/how-academic-publishing-is-changing-in-the>

VIALOGUES

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



October 24, 2018 Reflect 2h. Session Recap Mindmaps Emerging Online Learning Tools Research Session Mindmap

Learnlets, Clark Quinn
https://blog.learnlets.com/2018/10/emerging-online-learning-tools-research-session-mindmap/?fbclid=IwAR11_0o6CkPa2yNt-nda72EaDykziwM_Q8U9WMDUq4LwJlDa0_D9gU

LEARNLETS

Emerging Online Learning Tools Research Session Mindmap

3. Visual Learners

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

January 8, 2017

Display 3c. Summary and Comparison Maps

#GeoawesomeMapOfTheDay

<https://twitter.com/geowesomeones>
<https://www.instagram.com/p/BNwqyJfD4g3/>
<https://twitter.com/hashtag/GeoawesomeMapOfTheDay?src=hash>

The States Where It's Legal To Smoke Marijuana

Laws on recreational and medical marijuana use in the US

- Legalized for recreational & medical use
- Medical use only

Legalized for recreational & medical use:
Alaska
Washington D.C.
Oregon
Alaska
Colorado
California
Massachusetts
Nevada
Maine

*As of Jan 6th, 2016. Laws are subject to change without notice or approval.
Source: state legislatures, Ballotpedia, NORML, Marijuana Policy Project.

Africa Elephant Population - Past and Present

October 1, 2018

Display 3e. Detailed New National Maps Show How Neighborhoods Shape Children for Life

By [Emily Badger](#) and [Quocuong Bui](#). The New York times
<https://www.nytimes.com/2018/10/01/upshot/maps-neighborhoods-shape-child-poverty.html>

Share of black men from poor families who were incarcerated on April 1, 2010

0 10 20 30 40%

NEW YORK CHICAGO LOS ANGELES
MINNEAPOLIS-ST. PAUL NEW ORLEANS MILWAUKEE

Source: U.S. Census Bureau, American Community Survey, 2008-2012

Percent of children living in poverty by census tract, 2010

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Source: U.S. Census Bureau, American Community Survey, 2008-2012

Percent of children living in poverty by census tract, 2010

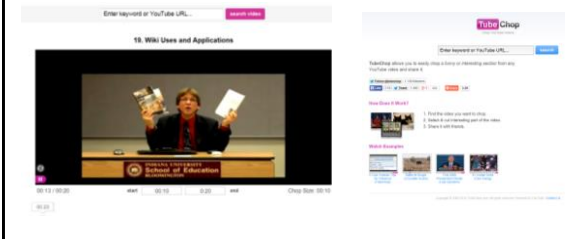
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Source: U.S. Census Bureau, American Community Survey, 2008-2012

24

Display 3g. 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>



Display 3h. Short Educational Videos: Anchored Instruction/Macrocontext

CNN, BBC, TED, TED-Ed, ForATV

BBC One-Minute World News (August 31, 2015)

<http://www.bbc.com/news/business-34105708>

Weekly 1 minute updates: <http://www.danpink.com/pinkcast/>



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. Student Music Recordings of Course Content

1ST Groove Song, Jeffrey Jenkins, R511: <https://soundcloud.com/jeffjenkins25/1st-groove>

The World is Open, Jill Kaufman, R578: <https://www.youtube.com/watch?v=3RGV0Hs3Ymw&feature=youtu.be>

Daniel Halluska, P540: <http://www.youtube.com/watch?v=tOL7lRgsqmw>

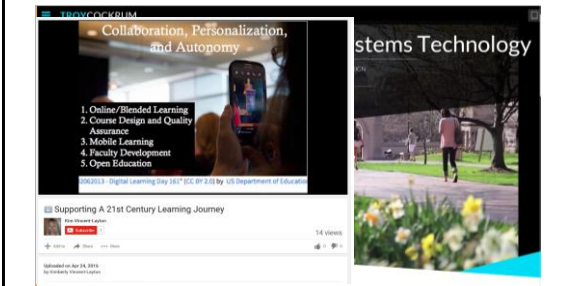
Weipeng (William) Yang: 1ST History (1:40): <https://drive.google.com/file/d/0B7YDNKNT1a4DnDnSVKdPcDm1SkU/view>

1ST Paradise (2:52) (It all started with 1ST) <https://drive.google.com/file/d/0B7YDNKNT1a4DnDnSVKdPcDm1SkU/view>



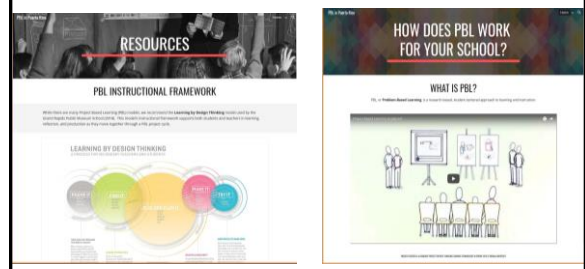
Do 4b. Student Created Recap Videos

Piercarlo Abate: <http://www.youtube.com/watch?v=-TURzH0daU>
Qi Li, Gangname: <http://www.youtube.com/watch?v=7Qd20yZaU84&feature=youtu.be>
Miguel Lara (Web 2.0 FREEDOM): <http://www.youtube.com/watch?v=8cmCFW9iW8>
Kendal Rasnake (Is IT Right For You?): <https://www.youtube.com/watch?v=MJ3GUD1CIGw>
Kendal Rasnake (Is IT Right For You?): <https://www.youtube.com/watch?v=MJ3GUD1CIGw>



March 11, 2018 Do 4c. PBL in Puerto Rico

<https://sites.google.com/jju.edu/pbl-in-puerto-rico/home>



Poll #5:

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 infographics
- F. Interactive timeline tools
- G. Videos with test questions



**Poll 6: Which do you prefer...
(A) TEC-VARIETY or (B) R2D2?**



What motivates?

1. Time/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 Driven, Purposeful Vision, Ownership



**Poll 7: 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 8: Three Words from this
Session...?**

**e.g., "I am happy!" and...
My minions are happy!**



**Poll 9: Excited or does all this
give you a headache?**



**We are entering a jumping
off point...**

(South University of Science and Technology of
China, Wednesday June 10, 2015)



Things are heating up!



The Learning Revolution
is 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/>
Dr. Curt Bonk – CJBonk@Indiana.edu
<http://curtbonk.com/>

