



**HOFSTRA UNIVERSITY**

**Masterclass Day 2:**  
**Ultra-Engaging Online and Blended learning:**  
**Introducing the TEC-VARIETY and R2D2 Models**

**Curtis J. Bonk, IST Professor**  
**Indiana University**  
[cjbonk@indiana.edu](mailto:cjbonk@indiana.edu); <http://curtbonk.com/>







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**HOFSTRA UNIVERSITY**

**March 26, 2020**

**What the World Needs Now is Love**  
 Students at the Boston Conservatory at Berklee created a social distancing rendition of 'What the World Needs Now is Love'  
<https://www.youtube.com/watch?v=qv7iISACHCw>  
 2:33 (video): <http://curtbonk.com/wtwnn.html>

2

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**April 14, 2020**

**900-Strong Singapore Virtual Choir sings Home (Dick Lee)**  
<https://www.youtube.com/watch?v=psK61cafiE&feature=youtu.be>  
 4:33 (video): <http://curtbonk.com/strong.html>



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**Opening Activity:**  
**Type in the Chat Window three words from yesterday...**

**OPENING ACTIVITY**

POSSIBLE CONSIDER OUTCOMES VARIOUS TYPES ANALYZE EXAMINE PROGRAMS MCS ALTERNATIVE SCENARIOS CHALLENGING FACE ISSUES MAY PERSPECTIVES INVOLVING SOLUTIONS





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**Poll #1: Have you reflected on your teaching philosophy or approach during COVID-19?**

- a. Yes many times and I am dramatically changing my philosophy statement.
- b. Yes many times and I am taking action (meeting people, reading more, attending webinars like this, etc.).
- c. Yes, I thought about it a couple of times and I am tweaking it.
- d. Not sure. I'm kinda brain dead right now.
- e. No, my teaching philosophy is basically the same.



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**Poll #2: Have you even been to an e-learning or online learning conference, institute, or summit?**

- a. Yes many times.
- b. Yes, once or twice.
- c. No, but I want to go.
- d. No. And I am not going to go.

**E-Learn**  
World Conference on E-Learning

7

**June 12, 2020**  
**World Economic Forum**  
**COVID-19's staggering impact on global education**  
<https://www.weforum.org/agenda/2020/03/infographic-covid19-coronavirus-impact-global-education-health-schools/>

**COVID-19's staggering impact on global education**

**COVID-19's Staggering Impact On Global Education**  
Number of learners impacted by national school closures worldwide

Figures refer to learners enrolled at pre-primary, primary, lower-secondary, and upper-secondary levels of education, as well as at tertiary education levels. Source: UNESCO

statista

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**May 27, 2020**  
**Back to school? 1 in 5 teachers are unlikely to return to reopened classrooms this fall, poll says**  
**Susan Page, USA Today**  
<https://www.usatoday.com/stories/news/education/2020/05/26/coronavirus-schools-teachers-poll-spoke-parents-fall-online/5254729002/>

**Back to school? 1 in 5 teachers are unlikely to return to reopened classrooms this fall, poll says**

**What parents and teachers say**

- Parents Teachers
- Teachers are working harder 71%
- Teachers are having a harder time doing their job 83%
- I am worried about the children right now 60%
- Distance learning is causing the children to fall behind 66%
- The children will eventually be able to make up any lost ground 46%
- The children will eventually be able to make up any lost ground 76%
- Public teachers are paid fairly 64%
- Schools in my area are likely to reopen in the fall 24%
- Schools in my area are likely to reopen in the fall 40%
- Schools in my area are likely to reopen in the fall 63%
- Schools in my area are likely to reopen in the fall 65%

**A stunning number of teachers and students**

Exclusive Poll: 1 in 5 teachers may not return to reopened classrooms

9

**June 10, 2020**  
**Online Learning Is Not the Future**  
**Peter C. Herman, Inside Higher Ed**  
<https://www.insidehighered.com/digital-learning/views/2020/06/10/online-learning-not-future-higher-education-opinion>

**Online Learning Is Not the Future**

Technology advocates may see online teaching as the best path forward. But one important business vulnerability diagnoses students' need for in-person work.

By Peter C. Herman | June 10, 2020

10

**June 16, 2020**  
**Sorry Not Sorry: Online Teaching Is Here to Stay**  
**Flower Darby, The Chronicle of Higher Education**  
<https://www.chronicle.com/article/Sorry-Not-Sorry-Online/248993>

**Sorry Not Sorry: Online Teaching Is Here to Stay**

Four reasons you should join the online teaching movement and spend some time this summer polishing your digital skills

By Flower Darby | June 16, 2020

11

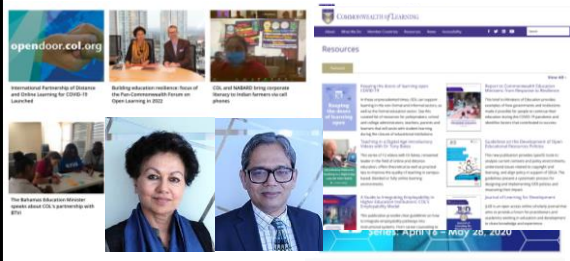
**June 23, 2020**  
**Turns Out You Can Build Community in a Zoom Classroom**  
**Rachel Toor, The Chronicle of Higher Education**  
<https://www.chronicle.com/article/Turns-Out-You-Can-Build/249038>

**Turns Out You Can Build Community in a Zoom Classroom**

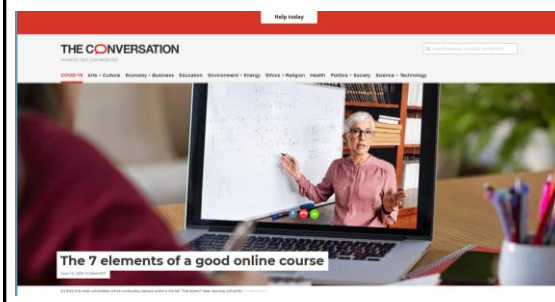
A professor finds that personal essays are surprisingly effective in building relationships in a synchronous virtual classroom

By Rachel Toor | June 23, 2020

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**March 19, 2020****COL announces a series of webinars on online learning**<https://www.col.org/news/news/col-announces-series-webinars-online-learning>

13

**June 12, 2020****The 7 elements of a good online course****George Veletsianos, The Conversation**<https://theconversation.com/the-7-elements-of-a-good-online-course-139736>

14

**July 8, 2020****Yes, Your Zoom Teaching Can Be First-Rate****Stephen Hersh, Inside Higher Ed**<https://www.insidehighered.com/advice/2020/07/08/faculty-member-and-former-ad-executive-offers-six-steps-improving-teaching-online>**Yes, Your Zoom Teaching Can Be First-Rate**

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**July 6, 2020****Making Online Learning Active****Steven Mintz, Inside Higher Ed**<https://www.youtube.com/watch?v=J6PrJdwG0I&feature=youtu.be>**Making Online Learning Active**

Using digital sources and tools in virtual humanities classrooms.

By Steven Mintz

7 July 6, 2020

We are often so fixated on online learning's shortcomings that we slight its strengths. Students can have anytime, anywhere access to class materials. We can make resources and data readily available to students: textual, visual, aural, qualitative. We can give all students – not simply the most talkative and self-confident – the chance to contribute.

- Student response systems: Polling and quizzing provide a simple way to monitor student understanding in near real time.
- Survey tools: Consider conducting a survey using Google Forms or Survey Monkey – and then you can use anonymous survey data in class to explore attitudes, interests and opinions – or even students' family background and experiences.
- Text mining: A simple tool for mining a text, which can offer insights into word choice, metaphors and imagery. See <https://reclaim.kit.edu/>.
- Timelines: Timeline.js and Time Mapper allow students to quickly create a timeline from a spreadsheet.
- Other active learning strategies include:
  - Brainstorming: Asking students to generate ideas collaboratively.
  - Breakout rooms: Dividing students into small discussion groups.
  - Debates: Staging formal discussions of a controversy, with students responsible for formulating opposing arguments; debates over historical controversies.
  - History behind the headlines: Uncovering the backstory behind a current event.
  - Role playing: Having students assume the role or persona of particular actors or characters.

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**June 3, 2020****Contact North | Contact Nord Webinars**<https://teachonline.ca/webinars>

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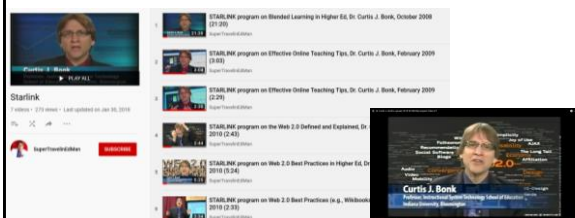
**March 3, 2020****Keep Teaching, Indiana University**<https://keepteaching.iu.edu/strategies/index.html>

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**April 25, 2020**  
**(SuperTravelinEdMan)**

**STARLINK programs on Online and Blended Learning and the Web 2.0**  
**October 2008-January 2010**

<https://www.youtube.com/playlist?list=PLHcReRoW2xOrKfYXjy3y46ZVccDcwEv>



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**March 21, 2020**

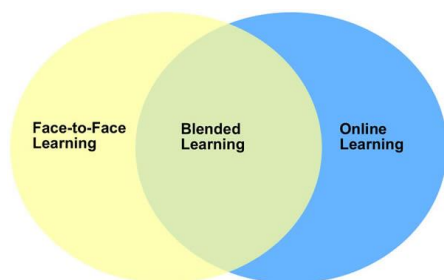
**Silver Lining for Learning**

<https://silverliningforlearning.org/>  
<https://www.youtube.com/channel/UC9XEsh89qrIpmVVPQt-aA/live>



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## Part 1: Blended Learning



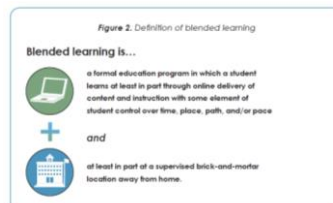
21

## 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."**



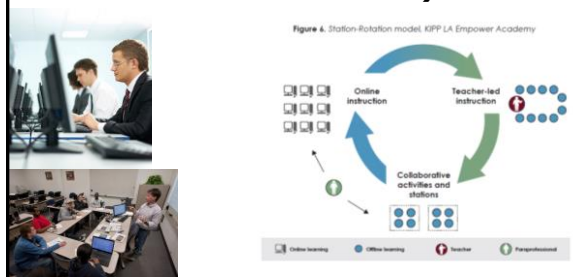
22

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



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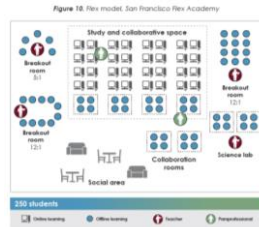
**Blended Model #2. Rotation**  
**(students alternate FTF and Online instruction)**



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



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



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### Blended Model #5. Bookend (first and last part of the course is online and middle portion is FTF)



Source: American Management Association, AMA at Work

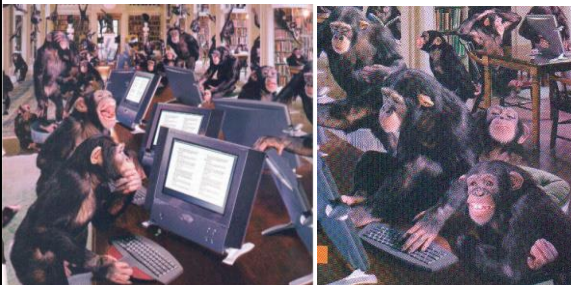
27

### Blended Model #6. 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)



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### A Dozen Blended Learning Examples



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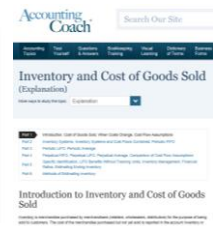
### August 19, 2015 Blended Solution #1. Use the Media to Supplement Content (e.g., Accounting Coach; includes tests, Q&A, visuals, forms, definitions, etc.)

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

#### Millennials & Their Money



3 tips to getting retirement right in your 20s



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6

### Blended Solution #7. Language Lessons Online

BBC Learning English

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

The screenshot shows the BBC Learning English website. The main heading is 'Idioms for breakfast'. Below it, there are several idioms listed with their meanings and example sentences. The idioms include 'extra cash', 'I'm in trouble and I need some extra cash', 'utter the deal', 'You have to be very friendly with the client to close the deal', 'our eggs', 'Don't put all your resources in one place', 'aw?', 'You broke the law? You're in trouble!', and 'small', 'Pay attention to what's happening!'. There is also a section for 'Drama' with a video player showing a scene from a play.

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### Blended Solution #8. Online Database Activities

(e.g., WolframAlpha)

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

The screenshot shows the WolframAlpha website. The main heading is 'WolframAlpha'. Below it, there is a search bar with the text 'Enter what you want to calculate or know about'. There is also a section for 'A Quick Introduction to WolframAlpha' by Stephen Wolfram, which includes a video player showing a man speaking.

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### Blended Solution #9. Online Test/Quiz Review Games

(e.g., Jeopardy Rocks)

<https://www.jeopardy.rocks/r511merge/>

The screenshot shows the Jeopardy Rocks website. The main heading is 'Jeopardy Rocks'. Below it, there is a game board with various questions and answers. One question is 'BANDURA (1961) CONDUCTED A STUDY TO INVESTIGATE IF SOCIAL BEHAVIORS (I.E. AGGRESSION) CAN BE ACQUIRED BY OBSERVATION AND IMITATION. THE NAME OF THE FAMOUS EXPERIMENT IS.'.

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### July 28, 2017 Blended Solution #10. Simulations and Scenario-Based Learning

Modern medicine breathes new life into virtual training

<https://www.usatoday.com/story/tech/2017/07/28/modern-medicine-breathes-new-life-into-virtual-training/106572498/>

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: <https://curtbonk.com/vr-medicine3.html>

1:30-2:27: <http://curtbonk.com/vr-medicine.html>

The screenshot shows a virtual training simulation. It depicts a hospital setting with medical professionals in scrubs. One person is lying on a gurney, and others are attending to them. The simulation is designed to provide a realistic experience of a medical emergency.

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### March 25, 2020 Blended Solution #11. Use Video Lectures of Experts

A housebound world finds solace in Yale's

'Science of Well Being' course

Bill Hathaway, YaleNews

Laurie Santos teaches "Psychology and the Good Life," the precursor to her popular Coursera course, at Woolsey Hall in 2018.

Video: 2:37: <http://curtbonk.com/yalenews.html>

<https://news.yale.edu/2020/03/25/housebound-world-finds-solace-yales-science-well-being-course>  
In just the past month, more than 600,000 people in an increasingly housebound world have signed up for Yale's free online course "The Science of Well Being," originally taught on campus in the spring of 2018 by Yale psychology professor Laurie Santos.

The screenshot shows the Yale News website. The main heading is 'THE MOST POPULAR CLASS AT YALE'. Below it, there is a video player showing a woman, Laurie Santos, speaking to a large audience in a lecture hall. The video is titled 'THE MOST POPULAR CLASS AT YALE'.

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### Blended Solution #12. Interactive Timelines and Other Media

(Dipity, xtimeline, Simile, TimeLineCurator, etc.)

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

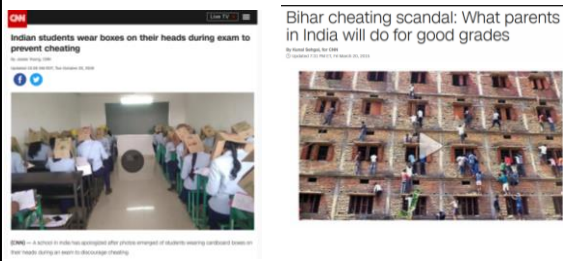
<http://www.chronicle.com/blogs/professors/dipity-interactive-timelines-creation-with-dipitycurator/63822>

The screenshot shows an interactive timeline. It features a horizontal timeline with various events marked by colored dots. The events are related to the lives of Vaclav Havel and Martin Luther King Jr. The timeline is interactive, allowing users to click on the events to learn more about them.

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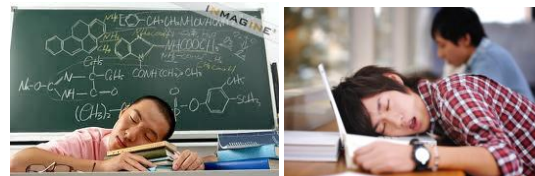


## Needed: New Models of Motivation and Engagement



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## Needed: New Models of Motivation and Engagement



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**Poll: What did Jean-Luc Picard say?**

Engage!

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**Poll #3: Have you ever taught a blended (face-to-face and online) course?**

- a. Yes many.
- b. Yes, just a couple.
- c. No, but I taught one or more technology enhanced ones.
- d. No but I am willing to try.
- e. No and I like it that way.

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**Poll #4: Have you ever taught a fully online course?**

- a. Yes, many.
- b. Yes, just a couple.
- c. No, but I taught one or more blended ones.
- a. No but I am willing to try.
- b. No and I like it that way.

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**Chat Window: Million Dollar Question:**  
What words come to mind when I say that I want to motivate learners?

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## 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.



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## 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.



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## Part 2: Introducing the TEC-VARIETY Model (Motto: It's better than the "TEC-MONOTONY" Model)

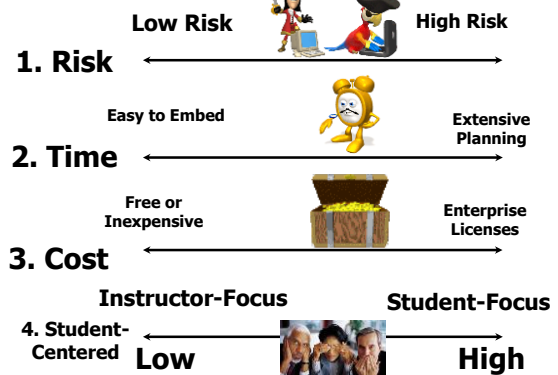
<http://tec-variety.com/>  
<http://tec-variety.com/TEC-VARIETY-Chinese.pdf>

在线学习动机与激励:  
TEC-VARIETY 模型

——詹姆斯·布罗菲教授 1999 年 10 月



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## Examples of TEC-VARIETY



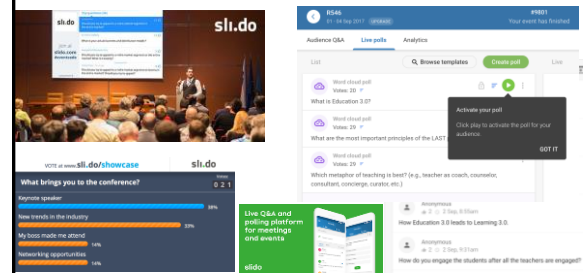
53

April 3, 2017

### 1. Tone/Climax:

A. Sli.do (students get a code; e.g., 9801)

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



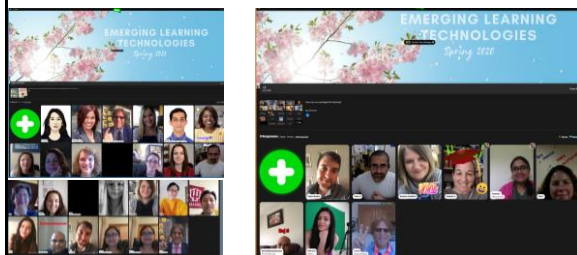
54

**April 11, 2020**

**1. Tone/Climate:**

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

Ed Tech with Adam: <https://www.youtube.com/watch?v=hysv0PwqsFs>  
<https://techcrunch.com/2018/06/18/microsoft-acquires-social-learning-platform-flipgrid/>



55

**1. Tone/Climate:**

**C. Instructor Course Introductions**



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**2. Encouragement, Feedback:**

**A. Poll Everywhere, BlogPoll, MicroPoll**

**Girls + data** is a non-profit 501(c)(3) that hosts data camps, interactive workshops, and seminars where different analytics tools are used to teach kids about the data life-cycle, from database to the dashboard. The program culminates in a project that allows the participants to tell a story with data. To date, girls + data has educated over 450 kids at 17 events across the nation.



**Gamifying education: how girls + data uses Poll Everywhere to excite & educate kids about data**



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**2. Encouragement, Feedback:**

**B. Voice/Audio Feedback**

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

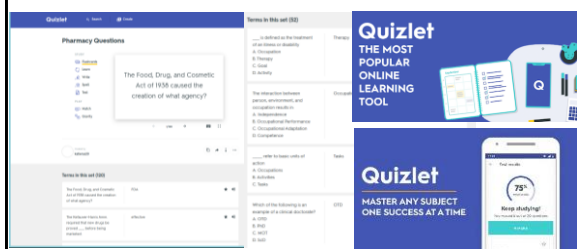


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**2. Encouragement, Feedback:**

**C. Online Practice Tests and Interactive Flash Cards (e.g., Pharmacy, OT, etc.)**

<http://quizlet.com/>



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**2. Encouragement, Feedback:**

**D. Video Tutorials, Demonstrations, and How-To's (videos, tutorials, etc.)**

(Jing, GoView, Screener, Overstream, Screencast-o-Matic, TikTok, etc.)

EdTech with Adam channel:

<https://www.youtube.com/channel/UCyLzXEMGgbuzNX9lrPQumDQ>

**Learning is everything,  
everything is learning.**



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June 18, 2020

## 3. Curiosity, Intrigue, Unknowns:

## A. Multimedia News (e.g., Internet access issues)

New Telco Tower Announced For Sabah Village After Student Taking Online Exams In Tree Goes Viral, Kirat Kaur, TRP News

<https://www.thelocal.com/2020/06/18/new-telco-tower-announced-for-sabah-village-after-student-taking-online-exams-in-tree-goes-viral/>

New Telco Tower Announced For Sabah Village After Student Taking Online Exams In Tree Goes Viral



Veveonah Mosibin, a foundation student at Universiti Malaysia Sabah (UMS) had to take her online exams atop a tree to get a strong enough internet connection. (Credit: Veveonah M/YouTube)

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July 7, 2020

## 3. Curiosity, Intrigue, Unknowns: B. Augmented Reality

## Elephant in the room: How augmented reality takes online classes to exciting highs, Abdul Latheef Naha, The Hindu

<https://www.thehindu.com/news/national/kerala/augmented-reality-takes-online-classes-to-exciting-highs/article301427421.html>

When the whole world was in a lockdown in April, Mr. Shyam Vengalloor was racking his brains on finding a way to make virtual classrooms more exciting for children. Using green screen, GIF (graphics interchange format) images and several apps, Mr. Shyam succeeded in creating an augmented reality for the virtual class by superimposing graphics, audio and sensory enhancements.

Elephant in the room: How augmented reality takes online classes to exciting highs



A social science teacher of AEM AUP School, Moorkanad, introducing the globe through augmented reality technology during an online class.

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April 29, 2020

## 3. Curiosity, Intrigue, Unknowns:

## C. 101-year-old woman born during the 1918 flu pandemic beats coronavirus

N'dea Yancey-Bragg, USA Today

<https://www.usatoday.com/story/news/health/2020/04/29/101-year-old-beats-coronavirus/3132964001/>

<https://www.cnn.com/2020/04/28/us/woman-101-beats-coronavirus/index.html>

Meet the 101-year-old who was born on a ship during the 1918 flu pandemic and just beat coronavirus



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April 17, 2017

## 3. Curiosity, Intrigue, Unknowns:

## D. 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-svitzer-tmd/index.html>

July 16, 2017

Julia Hawkins Sets 100-Meter Dash Record for Women 100 Years or Older, Joseph Zuchow, CNN

<http://thehill.com/policy/healthcare/350460-julia-hawkins-sets-100-meter-dash-record-for-women-100-years-or-older>

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



1 Boston 0 years later



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September 21 and November 12, 2017

## 3. Curiosity, Intrigue, Unknowns:

## E. Scientists just discovered the first brainless animal that sleeps

Sara Kaplan, Washington Post

This ancient shark with a snake head and 300 teeth is why we should just say nope to the ocean

Cleve R. Woodson, Jr., Washington Post

<https://www.washingtonpost.com/archive/local/2017/09/21/scientists-discover-first-brainless-animal-that-sleeps/2017/09/21/>

This ancient shark with a snake head and 300 teeth is why we should just say nope to the ocean



A *Cassiopea* jellyfish rests upside-down on black sand and pulses, rhythmically contracting and relaxing its bell. At night, *Cassiopea* jellies pulse less frequently — a clue that they're sleeping, researchers report. (Photo by JanEaster.com)

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## 3. Curiosity, Intrigue, Unknowns:

## F. Multimedia Historical 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)

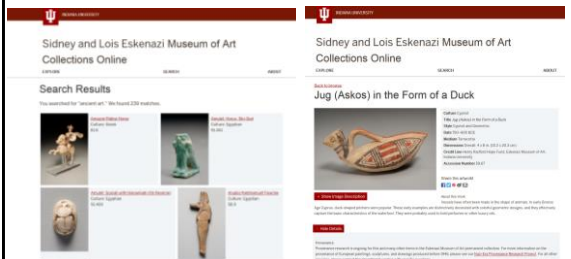
[http://www.cnn.com/2014/11/06/living/oldest-photograph-human-daguerre/index.html?hpt=hp\\_4\\_kong](http://www.cnn.com/2014/11/06/living/oldest-photograph-human-daguerre/index.html?hpt=hp_4_kong)



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**March 2, 2020****3. Curiosity, Intrigue, Unknowns:****G. Newly launched Collections Online increases access to Eskenazi Museum of Art's works**

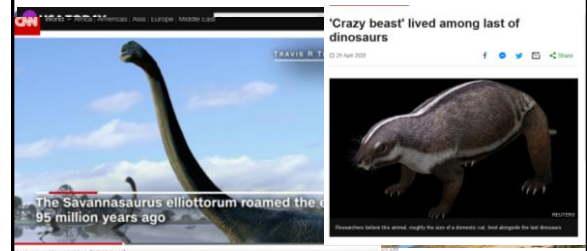
Barbara Brosher, IU Press

<https://news.iu.edu/stories/2020/03/iu/eskenazi-museum-of-art-launches-collections-online.html>

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**April 29, 2020****3. Curiosity, Intrigue, Unknowns: H. New Discoveries**

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

<http://www.cnn.com/2019/01/14/living/titanosaur-new-dinosaur-on-display-new-york-irpt/>  
<https://www.bbc.com/news/science-environment-52465584>


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**November 19, 2015****3. Curiosity, Intrigue, Unknowns:****I. New Discoveries in Science...**

New daddy longlegs named after 'Lord of the Rings' character Smeagol, Mary Bowerman, USA Today

<http://www.usatoday.com/story/tech/science/2015/11/19/new-daddy-longlegs-named-after-lord-of-the-rings-character-smeagol/76037862/>

69

**June 27, 2020****4. Variety, Novelty, Fun, Fantasy:****A. Create Animated Presentations**

Animaker is a cloud-based do-it-yourself video maker. Free version provides a lot of characters, props, transitions, and background images.

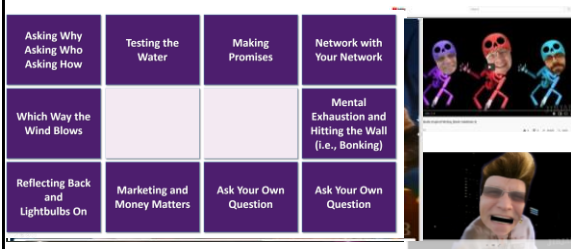
Example in Turkish: <https://youtu.be/LS20ICbozBQ?i=737>



70

**February 27, 2020****4. Variety, Novelty, Fun, Fantasy:****B. Game Show Style Presentations**

Susie Gronseth, University of Houston

[https://www.youtube.com/watch?v=ZFXIVA6z\\_no&feature=youtu.be](https://www.youtube.com/watch?v=ZFXIVA6z_no&feature=youtu.be)

71

**4. Variety, Novelty, Fun, Fantasy:****C. Random Lists**

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



72

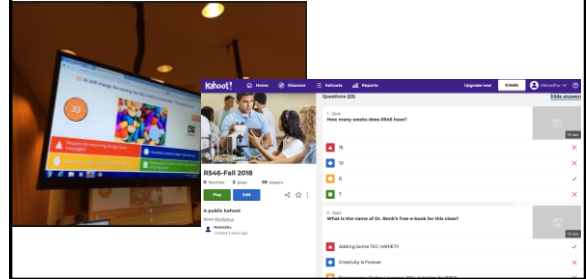


**February 21, 2017**  
**4. Variety, Novelty, Fun, Fantasy:**  
**D. My classroom is like a,"**  
<http://wheeldecide.com/>



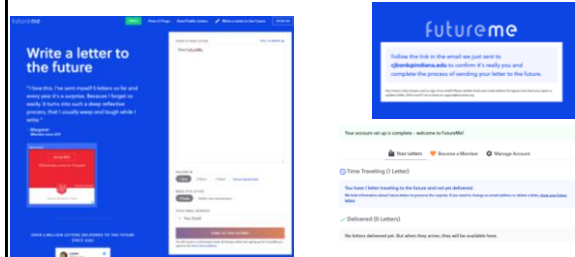
73

**Fall 2018 R546**  
**4. Variety, Novelty, Fun, Fantasy:**  
**E. Kahoot!**  
<https://getkahoot.com/>



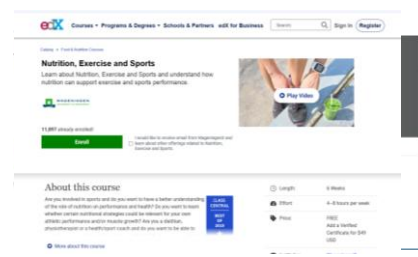
74

**October 10, 2018**  
**4. Variety, Novelty, Fun, Fantasy:**  
**F. FutureMe.org**  
**Write a letter to the future**  
<https://www.futureme.org/>



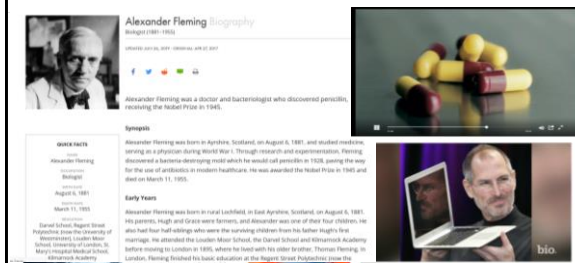
75

**January 14, 2019**  
**5. Autonomy, Choice:**  
**A. Enroll in a MOOC and Reflect**  
**(e.g., see Class Central)**  
[https://www.youtube.com/watch?time\\_continue=72&v=8KjPoYINLA&feature=emb\\_logo](https://www.youtube.com/watch?time_continue=72&v=8KjPoYINLA&feature=emb_logo)  
<https://www.edx.org/course/nutrition-exercise-and-sports>



76

**5. Autonomy, Choice:**  
**B. 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>  
<https://www.biography.com/scientist/alexander-fleming>



77

**5. Autonomy, Choice:**  
**C. Design Multimedia Glossaries**  
**P540 Final Assignment: Nate Wynne, Supersized Personal Course Glossary**  
<http://natewynne1982.wix.com/p540courseglossary>  
 Ozgur Ozdemir, December 2012  
<http://r685glossary.shutterstock.com/>  
 Umida Khikmatillaeva, Dec. 2011, P540  
<http://learningplanet.shutterstock.com/>



78

## 5. Autonomy, Choice: D. Flipping the Classroom (video lectures online)

<https://www.youtube.com/watch?v=-J7awXKQ00E>

Flipped VS Traditional



79

## Poll #5: Any light bulbs going off in you head so far?

- Yes definitely...many of them...pop...pop!pop!
- Yes, several times.
- Yes maybe!
- Not yet (but hopefully soon...)
- Nope. Darn it my brain is not working today.
- There's no hope with this idiot presenting.



80

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

- Threaded video discussions (e.g., Flipgrid)
- Video introductions (instructor or student)
- Demonstrations and tutorials (Jing, Screenr, etc.)
- Voice/Audio feedback (Vocaroo)
- Flipping the Class
- Online Quizzes (Kahoot!)
- Multimedia Glossaries
- Immediate Science



81

August 23, 2016

## 6. Relevance, Meaningfulness:

- A. Interact with Experts**  
e.g., reef videoconferencing  
(Great Barrier Reef, Australia)

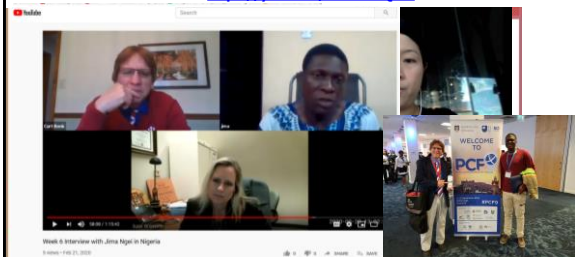
<http://www.reefqa.com.au/education-at-reef-the-ecosystem/reef-videoconferencing>



82

## April 6 and 28, 2020 6. Relevance, Meaningfulness: B. Weekly Guest Expert Chats

SMILE, Paul Kim Stanford, <https://youtu.be/bf7Dps14hVLU>  
February 22, 2020, Jima Ngei in Nigeria (1 hour 15 minutes)  
Video: <https://youtu.be/sM6VMsfQJXc>



83

## 6. Relevance, Meaningfulness: C. Professional Development Videos

Edgar Leon, Puerto Rico, Marisol Hernández Hermina, Animaker  
<https://app.animaker.com/animos/2h5b0Hz2gxURJ35x4/7shareid=view%7C2h5b0Hz2gxURJ35x4>



84

## March 20, 2018

### 6. Relevance, Meaningfulness:

#### D. 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-20180320>

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

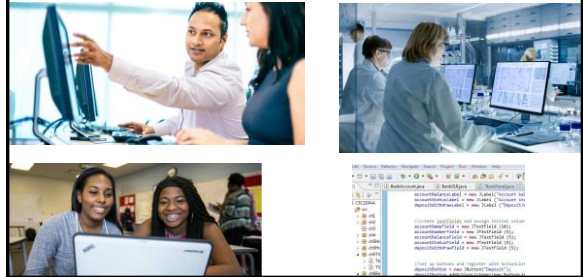


Samantha Erickson, left, of the Wiki Education Foundation; Tina Brock, a dean of the School of Pharmacy at UC San Francisco; and professor Amin Azzam discuss implementing the integration of Wikipedia pages on medical topics with students' work

85

## 6. Relevance, Meaningfulness:

### E. Analyzing Online Raw Data (e.g., computer code, health data, financial statements)



86

## June 27, 2020

### 7. Interactive, Collaborative:

#### A. Team Management and Project Coordination

Trello is a team management tool and list-making application to organize online group tasks easily. Trello is for teams to organize team work.

However, teachers can use it to manage online group projects or homeschooling activities like in this

Example: <https://youtu.be/L6fUOMXnKu?z=132>



87

## 7. Interactive, Collaborative:

### B. Virtual Sharing Walls

e.g., Padlet (A collaboration and discussion board)



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## 7. Interactive, Collaborative:

### C. Negotiate Meanings Online

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

<http://bioss.elon.edu/technology/6-collaborative-writing-applications-for-group-projects-or-papers/>

MeetingWords, Google Docs, NowComment, MixedInk

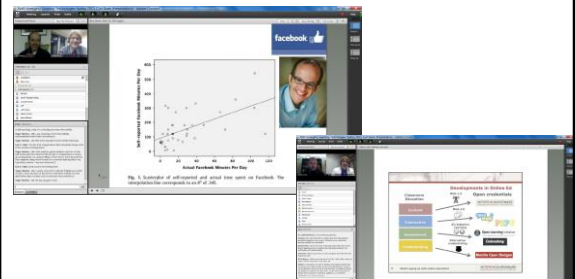


89

## 7. Interactive, Collaborative:

### D. Guest Speaker Quotes

(Rey Junco, February 25, 2013)

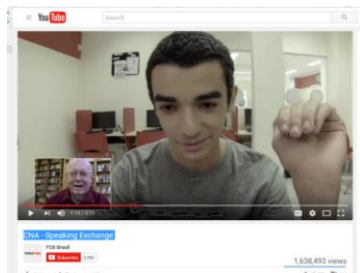


90

## 7. Interactive, Collaborative:

### E. CNA - Speaking Exchange (video chats)

FCB Brazil and the CNA language school network are launching the Speaking Exchange project, which connects CNA students in Brazil with Americans living in retirement homes.



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Fall 2019, R511

## 7. Interactive, Collaborative:

### F. Team Article Debates

Nuclino (like a wiki...may delete by mistake, trial version, limited)



92

## 7. Interactive, Collaborative:

### G. Virtual Mobile (at Virtually Inspired)

virtual laboratory brings the opportunity for remote collaboration enables students to conduct experiments, access, interpret, evaluate, and exchange relevant technical information.

Susan Aldridge, Drexel: <https://virtuallyinspired.org/portfolio/online-virtual-labs/>

#### Online Virtual and Mobile App Science & Engineering Labs

Hands-on experiential learning from Chile, India, and Denmark.



#### Online Virtual and Mobile App Science & Engineering Labs

Hands-on experiential learning from Chile, India, and Denmark.



93

June 3, 2020

## 7. Interactive, Collaborative:

### H. Collab Annotation and Group Reading (Perusall)

How to Do Collaborative Annotation and Group Reading in Perusall for Online or Blended Classrooms

EdTech with Adam: <https://www.youtube.com/watch?v=edb9IECompA>

<https://perusall.com/>



94

July 17, 2017

## 8. Engagement, Involvement:

### A. Learning Chemistry in Virtual Reality, Sarah Hardman, New Learning Times

<https://newlearningtimes.com/cms/article/4519/learning-chemistry-in-virtual-reality>

1:38 video: <https://vialogues.com/vialogues/play/38337/>

Alt: <http://curtbank.com/chemistry-vr.html>

01-41: <http://curtbank.com/chemistry-vr-1.html>

41-81: <http://curtbank.com/chemistry-vr-2.html>

81-116: <http://curtbank.com/chemistry-vr-3.html>

#### Learning Chemistry in Virtual Reality



#### Learning Chemistry in Virtual Reality



95

## 8. Engagement, Involvement:

### B. Interactive Maps Timelines

October 22, 2014, Second immigration wave lifts diversity to record high, Edward Greg Toppo and Paul Overberg, USA Today

<http://www.usatoday.com/story/news/nation/2014/10/22/immigration-diversity-100-years/161113/>

#### Rising diversity, state by state

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



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

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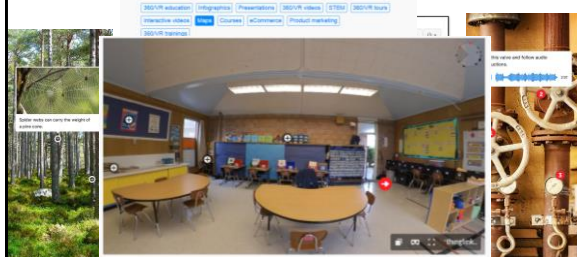


**July 8, 2020**

**8. Engagement, Involvement: C. Interactive Maps**  
(Thinglink: interactive map creator)

<https://www.thinglink.com/>

(Thinglink (Freemium): Direct students to the discussions, assignments, course files, and syllabus. She added hyperlinks to pictures or videos to facilitate navigation. Thinglink makes any still picture interactive. You can put links into a picture and students easily navigate to necessary website. For example, it is used commonly for online history and geography courses. The teachers put links on a map and students can go to relevant unit and related video link.)



97

**July 8, 2020**

**8. Engagement, Involvement:**

**D. Maps (Symbaloo (free): organize and categorize web links into buttons;**  
The purpose is to facilitate navigation for young online students.)

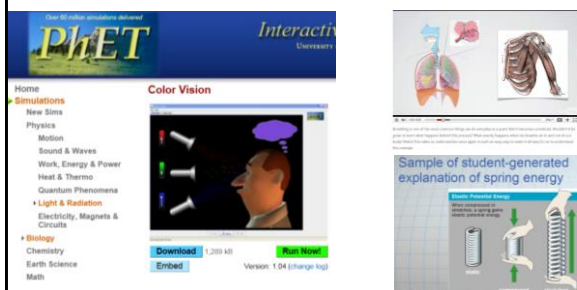
<https://www.symbaloo.com/>



98

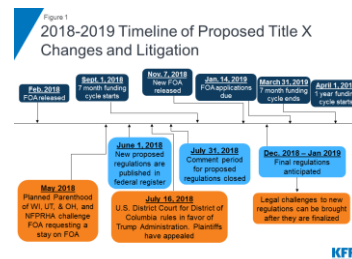
**8. Engagement, Involvement:**  
**E. Interactive Labs and Simulations**

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



99

**8. Engagement, Involvement:**  
**F. Interactive Timelines**  
(Sutori, xtimeline, Preceden, Timeline.js, TimeLineCurator, Time Mapper, etc.)



100

**July 23, 2019**

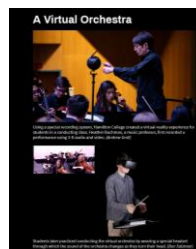
**8. Engagement, Involvement:**  
**G. Explore Historical and Cultural Sites**  
Four World Heritage Sites in VR With MasterWorks  
Sara Hardman, New Learning Times  
Rome Reborn: <https://www.romereborn.org/>



101

**May 28, 2019**

**8. Engagement, Involvement:**  
**H. Virtual Reality Comes to the Classroom**  
Beth McMurtry, The Chronicle of Higher Education  
<https://www.chronicle.com/interactives/20190528-immersiveTech>



Using a special recording system, Hamilton College created a virtual-reality experience for students in a conducting class. Heather Buchman, a music professor, first recorded a performance using 3-D audio and video. (Andrew Groll)

Students later practiced conducting the virtual orchestra by wearing a special headset through which the sound of the orchestra changes as they turn their head. (Ben Saltzman)

102

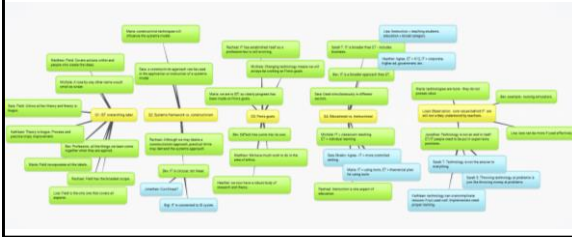


**September 3, 2017**

**Yields Products, Goals:**

**B. Mindmap Recaps of Online Discussions**  
**Mindmap of Week 2 of R511**

<http://www.mindmeister.com/1204432040/online-discussions-week-2-of-r511>



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**10. Yields Products, Goals:**

**C. Goal Setting Tools**

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

**iDoneThis**



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**April 23, 2020**

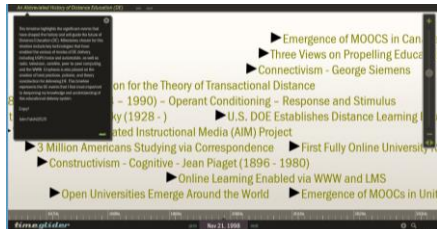
**10. Yields Products, Goals:**

**D. Student Generated Timelines, Taxonomies, and Concept Maps**

**R678 John Falchi, Timeglider, An Abbreviated History of Distance Education**

Timeline of the top technologies from Dr. Bonk's Emerging Learning Technology course from the 1950, 2000, 2010, and 2020 class

Shannon, Rachel, and Christian  
<https://time.graphics/line/356a1211435318430fa1741b50d7552c>



111

**June 27, 2020**

**10. Yields Products, Goals:**

**E. Design Products (students created infographics, brochures, timelines)**

**Canva is an online design program that does not require**  
**The 30-year-old woman who designed a \$1bn business**

By Katie Stanton and Naveed Giffith  
 Business reporter and BBC video journalist  
 10 January 2018



112

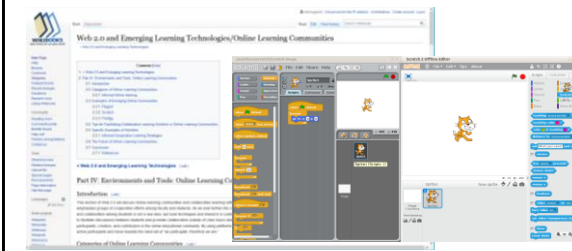
**April 29, 2020**

**10. Yields Products, Goals:**

**F. Wikibook Projects and Chapters**

**R678, Amanda Zwirecki and Ashia Williams**

[https://en.wikibooks.org/w/index.php?title=Web\\_2.0\\_and\\_Emerging\\_Learning\\_Technologies/Online\\_Learning\\_Communities](https://en.wikibooks.org/w/index.php?title=Web_2.0_and_Emerging_Learning_Technologies/Online_Learning_Communities)



113

**10. Yields Products, Goals:**

**G. Student Website Development**



114

### Poll #7: Which of these ideas might you use?

- A. Student designed multimedia glossaries
- B. Edit Wikipedia pages
- C. Guest chats with experts and former students
- D. Collaborate on online documents
- E. Enroll in a MOOC
- F. Controversy and debates
- G. Guest speaker quotes
- H. Student timelines



115

### Make Commitments: Stop and Share in Chat Window: 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:** Challenges, Dissonance, Controversy
10. **Yielding Products:** Goal Driven, Purposeful Vision, Ownership

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### Poll #8: Which motivational principle do you see as the most crucial online?

1. Tone/Climate
2. Encouragement, Feedback
3. Curiosity
4. Variety
5. Autonomy
6. Relevance
7. Interactive
8. Engagement
9. Tension
10. Yields Products

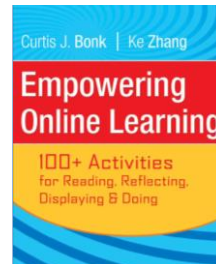


#### What motivates?

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:** Challenges, Dissonance, Controversy
10. **Yielding Products:** Goal Driven, Purposeful Vision, Ownership

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### Part II: The R2D2 Model: Read, Reflect, Display, Do...



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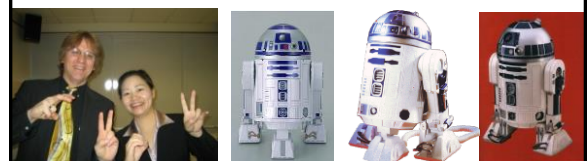
### Question: How can technology address diverse learner needs?



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### The R2D2 Model

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



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## Addressing Learning Styles with R2D2



121

## 1. Auditory or Verbal Learners

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



122

**June 27, 2020**

**Read 1a. Storyline Online is a free literacy platform where kids can listen stories.**

<https://www.youtube.com/user/StorylineOnline>



123

**January 20, 2016**

**Read 1b. Listen to Podcasts**

(e.g., Educational: <https://discoverpods.com/educational-podcasts/>)

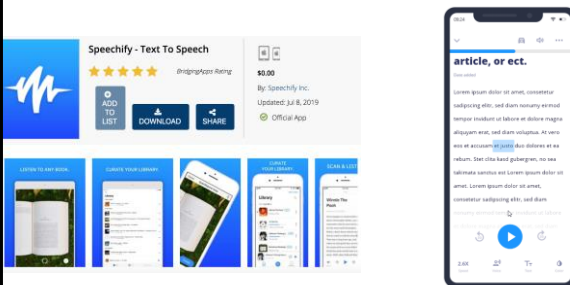


124

**January 20, 2016**

**Read 1c. Text to Audio**

(e.g., Speechify; <https://www.hsalfrank.com/speechify/>)



125

**February 11, 2018**

**Read 1d. Online Referenceware**

**The Magical Power of Dictionaries**

Alberto Manguel, *The Chronicle of Higher Education*

<https://www.chronicle.com/article/The-Magical-Power-of-Dictionaries/253533>



126

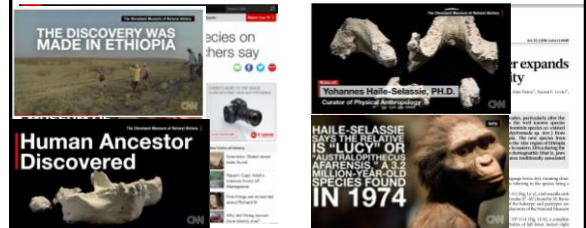
**Read 1e. Grammar Checkers**  
(e.g., Grammarly, Ginger, GrammarCheck, PaperRater, and SpellCheckPlus)  
<http://www.grammarly.com/>



127

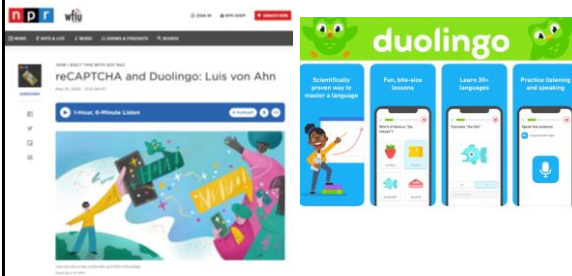
**May 28, 2015**  
**Read 1f. Immediate Science and Open Access Science**

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>  
<https://www.nature.com/nature/journal/v531/n7553/full/nature14448.html>



128

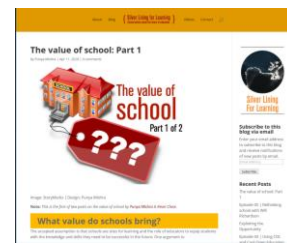
**May 25, 2020**  
**Read 1g. Listen to News Podcasts (news tidbits)**  
**reCAPTCHA and Duolingo: Luis von Ahn**  
**Podcast Interview, Guy Raz, NPR**  
<https://www.npr.org/2020/05/22/860884062/recaptcha-and-duolingo-luis-von-ahn>



129

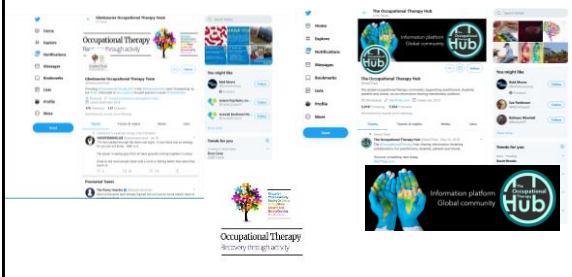
**April 1, 2020**  
**Read 1h. Read Blogs**

Punya Mishra, Silver Lining for Learning  
<https://silverliningforlearning.org/the-value-of-school-part-1/>



130

**Read 1i. Twitter Fed Class Discussions**  
(e.g., OT: <https://twitter.com/glenbourneteam>)



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**Read 1j. Reading and Reviewing articles in Open Access Science Journals**  
(e.g., DOAJ—Directory of Open Access Journals)  
<https://doaj.org/>

Open access journals for kids:  
<https://sciencejournalforkids.org/about-us.html>  
<https://kids.frontiersin.org/>  
<https://sciencejournalforkids.org/about-us.html>



132

## 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



133

## April 13, 2016 Reflect 2a. 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/8282113/>

Land-Use Change Emissions in Miles Driven



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

WORLD RESOURCES INSTITUTE



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## July 5, 2018 Reflect 2b. Vialogues

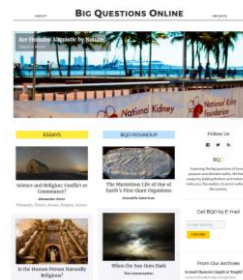
EdLab Seminar--Engaging Educators with Digital Collections  
Vialogue, Sara Hartman, New Learning Times  
<https://newlearningtimes.com/cms/article/5426/how-academic-publishing-is-changing-in-the>



135

## Reflect 2c. Big Issue Reflections (Big Questions Online (BQO))

(e.g., [Can a Living Creature Be as Big as a Galaxy?](https://www.bigquestionsonline.com/))  
<https://www.bigquestionsonline.com/>



136

## October 6, 2016 Reflect 2d. 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 for CNN

© Copyright 2016 CNN. All Rights Reserved.



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



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### Reflect 2f. Online Role Play or Debate (e.g., documentary production)



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



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### 3. Visual Learners

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



141

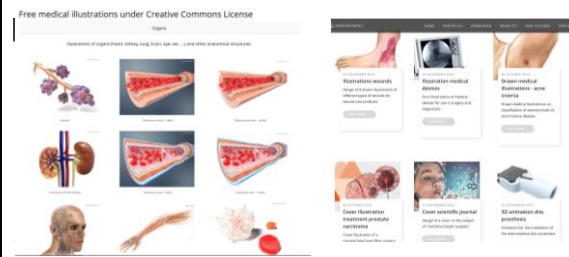
### Display 3a. Embedding Royalty Free Images e.g., Pixabay (royalty free images)



142

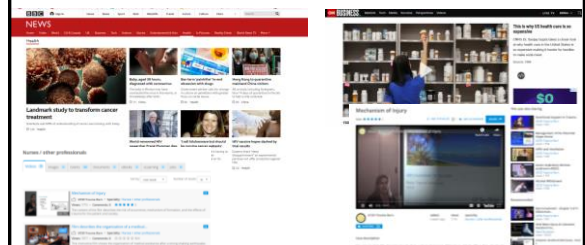
### Display 3b. More Royalty Free Images Medical Graphics in Creative Commons

<http://www.medicalgraphics.de/en/free-pictures.html>



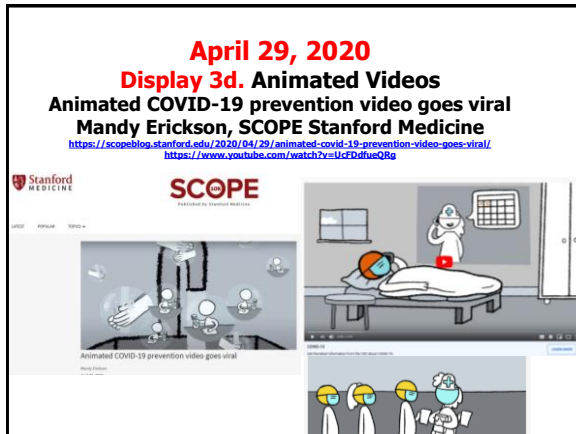
143

### Display 3c. Short Educational Videos: Anchored Instruction/Macrocontext CNN, BBC, TED, TED-Ed, ForATV, MedTube



144

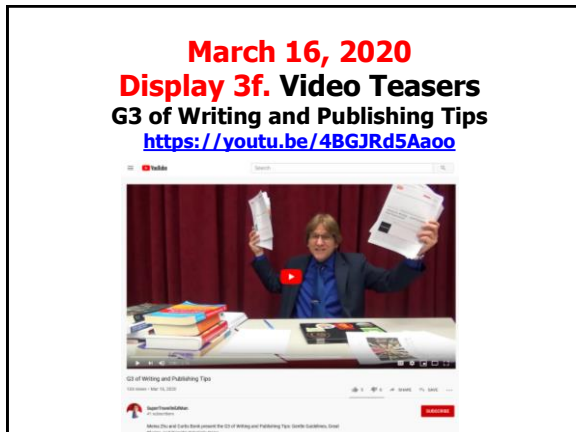




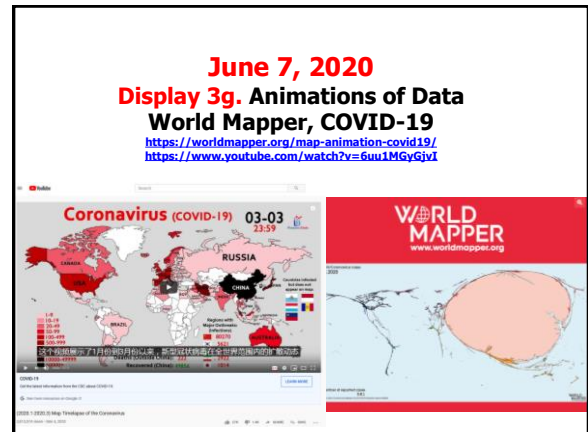
145



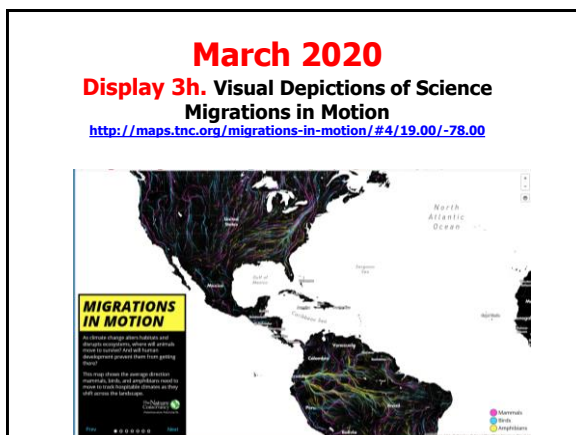
146



147



148



149



150

151

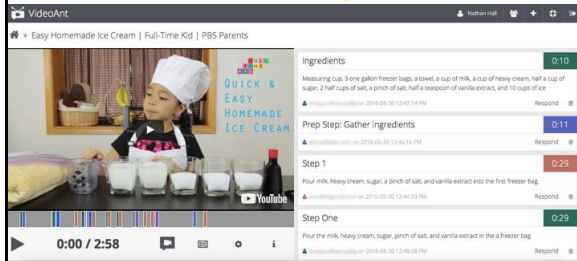
### Display 3j.

## Video Annotation and Commenting Tools

**VideoAnt** (Free): <https://ant.umn.edu/> (Univ. of Minnesota)  
<https://www.youtube.com/watch?v=16Q53w91u3Y>

<https://www.youtube.com/watch?v=1SOE2aQky2I>

**Edpuzzle (Free):** <https://www.youtube.com/watch?v=-L62wAx CzEM>



152

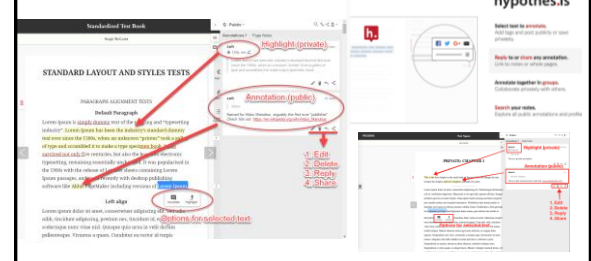
## Display 3k.

## Collaborative Web and PDF Annotation Tools

**Hyothesis.is (Free):** <https://web.hypothes.is/>

Note Anywhere: <https://www.youtube.com/watch?v=g4AJeowd4Ho>  
Add virtual sticky notes to webpage

**Adds virtual sticky notes to webpages**



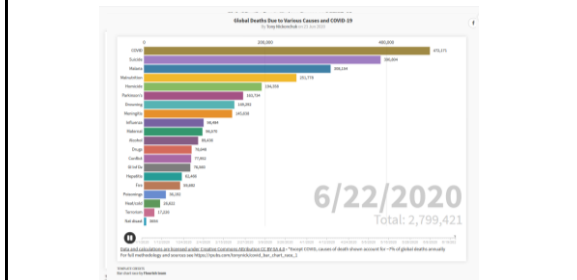
**June 22, 2020**

## Display 3L. Animations of Data

### Global Deaths Due to Various Causes and COVID-19

### By Tony Nickonchuk

[https://public.flourish.studio/visualisation/2562261/7fbclid=IwAR2IAZWY1m14Q64wmNUu4cNF1418KGP45\\_8XN1TMJWMatOpdtBA1qQU\\_B0](https://public.flourish.studio/visualisation/2562261/7fbclid=IwAR2IAZWY1m14Q64wmNUu4cNF1418KGP45_8XN1TMJWMatOpdtBA1qQU_B0)



153

## Display 3m.

## Concept Mapping and Timeline Tools

### Concept Mapping and Thinking Tools (Bubbl.us, Cmap, Gliffy, Spicynodes, or Mindomo)

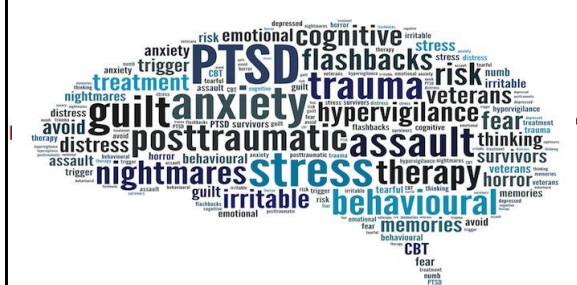
<http://www.spicynodes.org/index.html>



154

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

**(e.g., Tagzedo, Tagul, WordSift, Word It Out)**



155

**April 30, 2020**

**Display 3o. More Word Clouds (e.g., Tagzedo, Tagul, WordSift, Word It Out):  
Week 2 and 5 (13 and 14)**

**Week 2 and 5 (13 and 14)**

<https://www.wordclouds.com/>

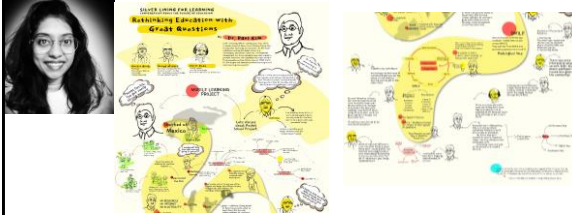


156

May 17, 2020

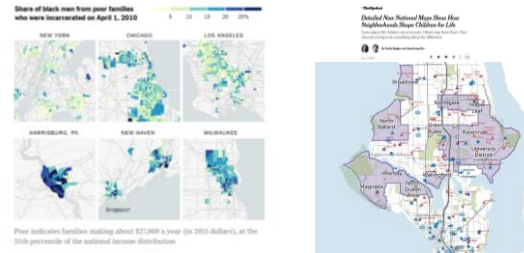
**Display 3p. Sketch Talks and Presentations**

Silver Lining for Learning, Session with Paul Kim  
Meenu M Pillai, Freelance Designer at Multiple Corporations  
Mumbai, Maharashtra, India



157

October 1, 2018

**Display 3q. Map Interpretation**  
**Detailed New National Maps Show How**  
**Neighborhoods Shape Children for Life**  
 By [Emily Badger](#) and [Quoctrung Bui](#). The New York times  
<https://www.nytimes.com/2018/10/01/upshot/maps-neighborhoods-shape-child-poverty.html>


158

**4. Tactile/Kinesthetic Learners**

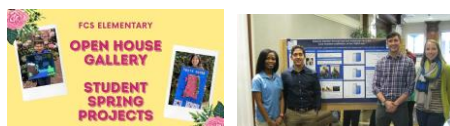
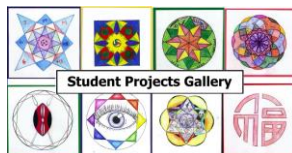
- Tactile/kinesthetic senses can be engaged in the learning process are role play, dramatization, cooperative games, simulations, creative movement and dance, multi-sensory activities, manipulatives and hands-on projects.



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**Do 4a. Case Decision Making**  
(e.g., snake bite)

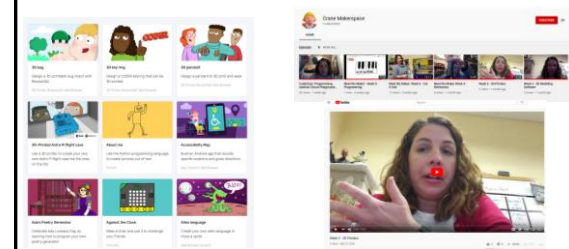
160

**Do 4b. Sample Student Work**  
e.g., Interactive Archive/Gallery of best work

161

**April 23, 2020**  
**Do 4c. Demonstration Videos**  
**Crane Makerspace, Tina Closser**

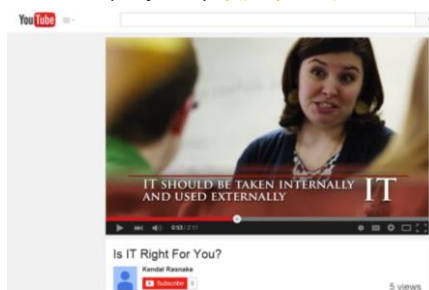
[https://www.youtube.com/channel/UCeWf9d97pZ0MB9TB15w2view\\_as=subscriber](https://www.youtube.com/channel/UCeWf9d97pZ0MB9TB15w2view_as=subscriber)  
<https://sites.google.com/view/cranetech/home>  
<https://projects.raspberrypi.org/en/projects>



162

### Do 4d. Student Created Recap Videos

Piercarlo Abate: <http://www.youtube.com/watch?v=...TURzHf09aU>  
 Qi Li, Gangnam: <http://www.youtube.com/watch?v=7Q429kxZaU8&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=HJ3GUD1CIGw>



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### Poll #9:

**Which of these ideas might you use?**

- A. Interactive map
- B. Facebook course page (or Pinterest)
- C. Issue challenges, role plays, and debates
- D. Student designed course recap videos
- E. Student designed word clouds
- F. Interactive timeline tools
- G. Videos with test questions



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**Poll 10: 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.



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**Poll 11: Which pedagogical model or framework do you prefer?**

- a. TEC-VARIETY
- b. R2D2
- c. Neither
- d. Both
- e. I will try to create some unique combo of the two.



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# WHAT'S NEXT?



167

### Technology Tomorrow

[http://www.hofstraonline.ca/de/online/Source/prepare-for-future-learning\\_3\\_16407205.html](http://www.hofstraonline.ca/de/online/Source/prepare-for-future-learning_3_16407205.html)

How Human is Too Human for Robots?



168

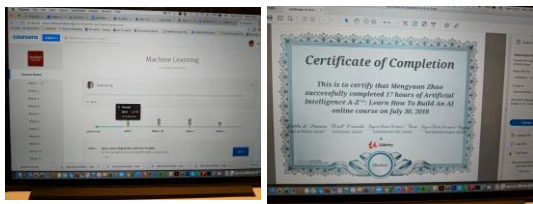


**August 1, 2018**

## 1. Independent Studies Via MOOCs

### MOOC: AI A-Z: Learning How to Build an AI Online Course and Machine Learning

Mengyuan Zhao  
<https://www.udemy.com/artificial-intelligence-az/>  
<https://www.coursera.org/learn/machine-learning>



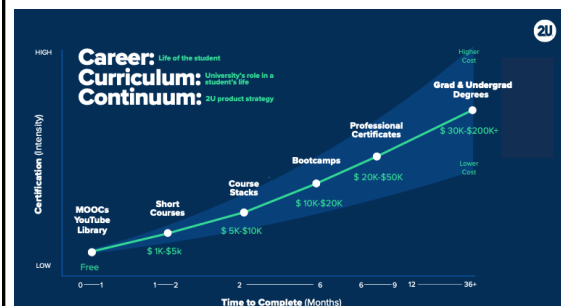
169

**March 13, 2019**

## The Career Curriculum Continuum

### Andrew Hermalyn, Inside Higher Ed

<https://www.insidehighered.com/digital-learning/news/2019/03/13/three-generative-career-learning-continuum-learners-often-skip>



170

**October 12, 2018**

## 2. OER-Based Courses and Programs

### The Chronicle of Higher Education

### Launching OER Degree Pathways:

An Early Snapshot of Achieving the Dream's OER Degree Initiative and Emerging Lessons  
<https://www.achievethe.org/newsroom/press-releases/achievethe-dream-launches-oer-degree-pathways>  
 Griffiths, R., Gardner, S., Lundh, P., Shear, L., Ball, A., Mislav, J., Wang, S., Desrochers, D., Staisloff, R. (2018). *Participant Experiences and Financial Impacts: Findings from Year 2 of Achieving the Dream's OER Degree Initiative*. Menlo Park, CA: SRI International.



**Saving money with open-ed resources.**  
 A large-scale effort to encourage the use of open-education resources has helped students save money and bolstered their learning, according to a report released today, on the findings from the second year of Achieving the Dream's OER Degree Initiative. The study found that:  
 • Students saved between \$66 and \$121 per course.  
 • Over 60 percent of students reported that the overall quality of their learning experience in an OER course was higher in comparison to a typical, non-OER course.  
 • The number of OER courses at participating institutions jumped from 13 in 2016 to 385 in the spring of 2018; the number of students enrolled in OER courses went from 3,404 in 2016 to 37,398 in 2017.

171

**October 3, 2019**

## Google IT Professional Certificates

### Coursera Blog

<https://grow.google/programs/it-support/?cid=wc&source=ams&sourceid=61203>  
[https://www.youtube.com/watch?time\\_continue=107&v=fyhPKZWbfms&feature=emb\\_logo](https://www.youtube.com/watch?time_continue=107&v=fyhPKZWbfms&feature=emb_logo)



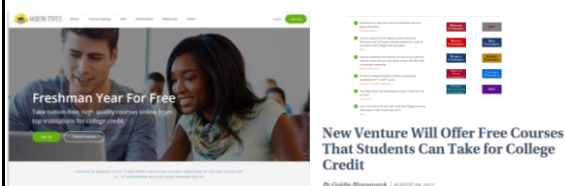
172

**August 9, 2017**

## Learning is More Free and Open

### Modern State Education Alliance

<https://modernstates.org/>



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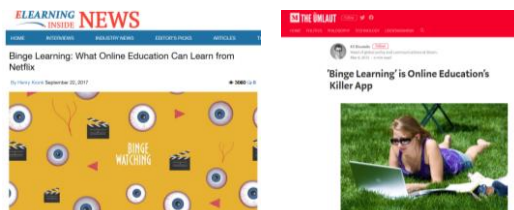
**September 22, 2017**

## 3. Binge Learning Experiences

### What Online Education Can Learn from Netflix

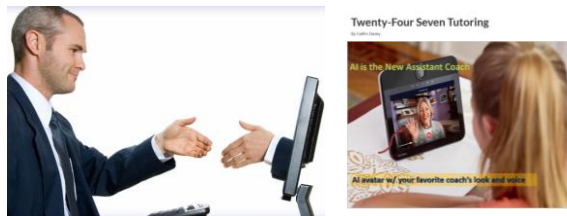
### Henry Kronk, E-learning Inside News

<https://theinstitute.com/binge-learning-is-online-education-s-killer-app-84da18f8ae76>



174

**June 11, 2017 (New Learning Times)**  
**4. Rise of Super E-Mentors and AI Coaches**  
 (Paul Kim, 2018)



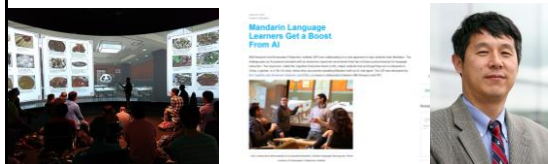
175

**February 27, 2017**  
**5. Web Conferencing Walls**  
 Global Learning Partner or PBL Team Selection Walls  
[http://www.thefuturemoon.com/43ascents/927tea/Library\\_Alexandria.html](http://www.thefuturemoon.com/43ascents/927tea/Library_Alexandria.html)



176

**September 26, 2018**  
**6. Interactive Agents and Tutors**  
 Pushing the Boundaries of Learning With AI  
 Lindsay McKenzie, Inside Higher Ed  
<https://www.insidehighered.com/digital-learning/article/2018/09/26/academics-push-expand-use-ai-higher-ed-teaching-and-learning>  
<https://www.bim.com/bimpr/research/2018/09/26/academics-push-expand-use-ai-higher-ed-teaching-and-learning>  
<https://www.youtube.com/watch?v=8wv-7iU5u1R2A>  
 1:17: <http://curtbonk.com/mandarin.html>



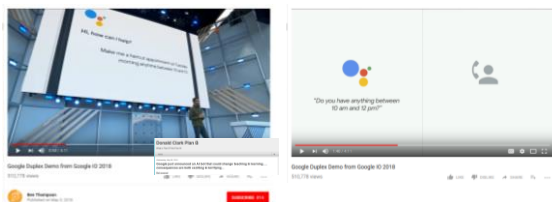
177

**March 24, 2017**  
**Artificial Intelligence Market in the US Education Sector 2017-2021**  
<http://www.researchandmarkets.com/research/5lahzz/artificial>  
**AI Market to Grow 47.5% Over Next Four Years**  
 Richard Chang, Campus Technology  
<https://campustechnology.com/articles/2017/03/23/artificial-intelligence-market-to-grow-47-5-over-next-four-years.aspx>



178

**May 9, 2018**  
**Learning is More On Demand**  
**Google Duplex Demo from Google IO 2018**  
 Video (4:11): <https://www.youtube.com/watch?v=bdmEmZy9g8>  
 Video (2:05): <http://curtbonk.com/google40-245.html>  
 Entire video (4:11): <http://curtbonk.com/google40-245.html>  
 Donald Clark, Plan B  
<http://donaldclarkplanb.blogspot.ca/2018/05/google-just-announced-ai-bot-that-could.html?m=1>



179

**January 30, 2017**  
**7. Professor Einstein PDA's**  
<http://www.usatoday.com/story/tech/2017/01/30/robotic-bavaria-more-servicing-robots/9588780/>



Professor Einstein, an educational Wi-Fi connected robot is on display at the Hanson Robot display during the opening day of Consumer Electronics Show 2017. (Photo: Robert Hanashiro, USA TODAY)  
<http://www.usatoday.com/story/tech/2017/01/30/robotic-bavaria-more-servicing-robots/9588780/>

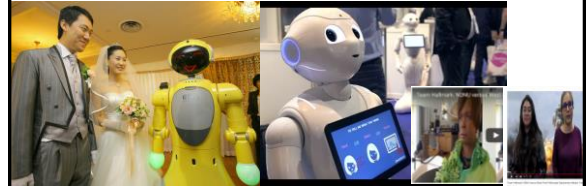
180

**May/June 2020**  
**Text Buddies: L&D Uses Cases for Chatbots**  
 Tiffany Vojnovski  
**Chief Learning Officer Magazine**  
[https://l5euu.com/chief-learning-officer/docs/co0520\\_issue](https://l5euu.com/chief-learning-officer/docs/co0520_issue)



181

**February 27, 2017**  
**8. Robot Collaborators/Partners**  
[http://www.thelearningmoon.com/43ancients/92files/Library\\_Alexandria.html](http://www.thelearningmoon.com/43ancients/92files/Library_Alexandria.html)



182

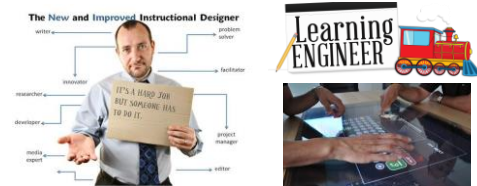
**9. Café Classroom and Café Connectedness**  
**Starbucks Your Classroom!**  
 Oskar Cymerman, Teaching Channel  
<https://www.teachingchannel.org/blog/2016/07/29/starbucks-your-classroom/>



Sterile, industrial-era rows aren't very attractive or motivating. ...I believe the "Starbucks" environment will promote that freedom and movement...Freedom is the key ingredient to social-emotional well-being and deeper learning. Rows and columns constrict. They hold and stifle.

183

**10. Instructional Designer Morphs into Learning Environment Engineer**



184

**February 27, 2017**  
**11. World Knowledge Refreshment Stations**  
[http://www.thelearningmoon.com/43ancients/92files/Library\\_Alexandria.html](http://www.thelearningmoon.com/43ancients/92files/Library_Alexandria.html)



185

**June 3, 2016**  
**12. Explosion of AR and VR**  
**VR Lets Med Students Experience What It's Like To Be 74**  
 Elyse Wanshel, Huffington Post  
<http://ht.ly/bSpe300XEPJ>

Virtual Reality Lets Med Students Experience What It's Like To Be 74

This could be empathy 2.0 for the average med student, who is 24.


© Huffington Post



I don't remember what I'm supposed to do


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**April 3, 2020**  
**Project lets people interview Holocaust survivors even after their deaths**  
 Aging Holocaust survivors now have the chance to record their memories in a way that will allow future generations to literally ask them about their experiences, and see and hear their answers. See the full report, here: <https://cbsn.ws/2ULGevH>  
[https://www.youtube.com/watch?time\\_continue=6&v=aWT4zueWat8&feature=emb\\_logo](https://www.youtube.com/watch?time_continue=6&v=aWT4zueWat8&feature=emb_logo)



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**13. The Age of Personalization**



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**Poll #12: Are you excited to try anything out that you heard today?**


- a. Yes definitely...many of them...
- b. Yes, several of them.
- c. Yes maybe one!
- d. Not yet (but hopefully soon...)
- e. Nope. My brain is simply not working today.
- f. No...I am having Internet connection issues.



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**Poll #13: Does all this stuff that you heard give you a headache?**


- a. Yes, but I am still excited to try things out.
- b. Yes, and I need some medicine and a break.
- c. Not sure.
- d. No, let's go all day.
- e. No, let's go another hour.
- f. No, it was just right.



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**Poll 14: Would you attend a Part 2 follow-up session?**


- a. Definitely, Definitely, Definitely...
- b. Probably, Probably, Probably,
- c. Maybe, Maybe, Maybe
- d. You got to be kidding...NO!



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**Poll 15: As a result of this session, are you going to be a more effective and more confident online instructor?**

- a. Definitely, Definitely, Definitely...
- b. Probably, Probably, Probably,
- c. Maybe, Maybe, Maybe
- d. You got to be kidding...NO!




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**The World is Open for you now...!**



193

**HOFSTRA UNIVERSITY**

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




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**Any Questions or Comments?**

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

**Curtis J. Bonk, IST Professor**  
**Indiana University**  
[cjbonk@indiana.edu](mailto:cjbonk@indiana.edu); <http://curtbonk.com/>



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