

Blend but Don't Break: Introducing the TEC-VARIETY AND R2D2 Models for Motivation and Engagement

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(Circa Confucius 551–479 BCE)



2

Education 20/20...



3

Education 20/20... Learning is Changing!



4



5

20 New Roles of the Instructor



6

Merrill's First Principles of Teaching/Instruction

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



7

Bonk's Last Principles of Teaching/Instruction (Education 20/20 or Education 4.0?)

<http://travelinman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html>
<http://www.applicat3hai.com/articles/education-4-0/>



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1. The Principle of Flexibility

<http://travelinman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html>
 (e.g., multiple due dates, grace period, flexible agenda, etc.)



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6. The Principle of Choice and Options

<http://travelinman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html>
 (e.g., sign up for weeks to present, have 10 midterm or final options and pick any 4, choose if want to work as a group/team or individually submit, etc.)



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

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

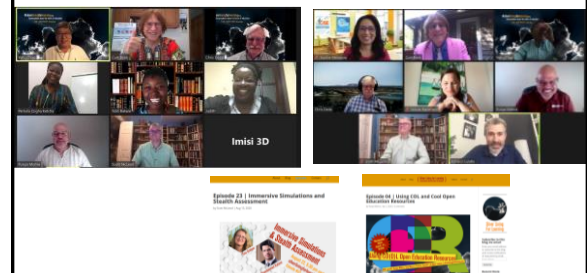


11

July 25, 2020

Silver Lining for Learning

<https://silverliningforlearning.org/>
<https://www.youtube.com/channel/UC9XEsh89qrlpmVvPQt-aA/live>



12

April 17, 2019

How to be a Better Online Teacher

Flower Darby, The Chronicle of Higher Education
<https://www.chronicle.com/article/how-to-be-a-better-online-teacher/>



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August 24, 2020 Transitioning to Blended Curt Bonk

1. Get to know your students!
2. Don't apologize too often.
3. Don't treat online as inferior.
4. Welcome everyone in with enthusiasm.
5. Different format but same students.
6. Provide scaffolds, tutorials, and other supports.
7. Create short authentic videos.
8. Foster volunteerism.
9. Communicate clearly and a lot.



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August 24, 2020 Transitioning to Blended (Various Authors)

1. Model positive attitude.
2. Provide students with checklists.
3. Set routines (stick to a schedule).
4. Offer flexibility.
5. Give learning environment advice.
6. Survey about technology at home.
7. Explain purpose and debrief and reflect.
8. Encourage real world learning.



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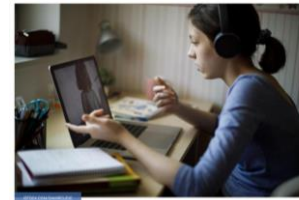
October 6, 2020 Faculty Confidence in Online Learning Grows Doug Lederman, Inside Higher Ed

<https://www.insidehighered.com/digital-learning/article/2020/10/06/covid-era-experience-strengthens-faculty-belief-value-online>

Faculty Confidence in Online Learning Grows

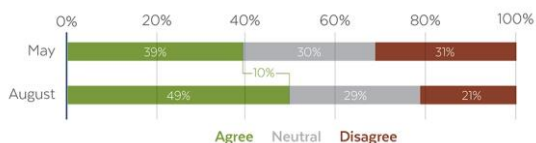
Survey finds significant increases in professors' confidence in virtual learning and their sense of support from their colleges – but continuing concerns about equity for underrepresented students

By Doug Lederman / OCTOBER 6, 2020



16

"ONLINE LEARNING IS AN EFFECTIVE METHOD FOR TEACHING"

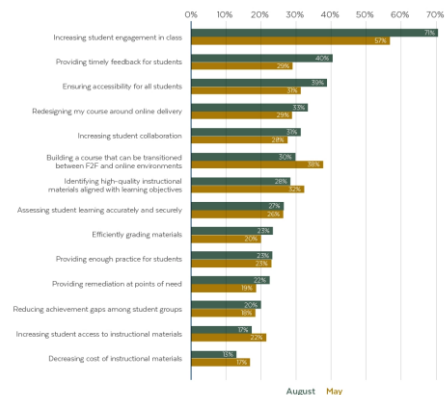


"MY INSTITUTION HAS PROVIDED SUFFICIENT TRAINING AND PROFESSIONAL DEVELOPMENT FOR TEACHING ONLINE"

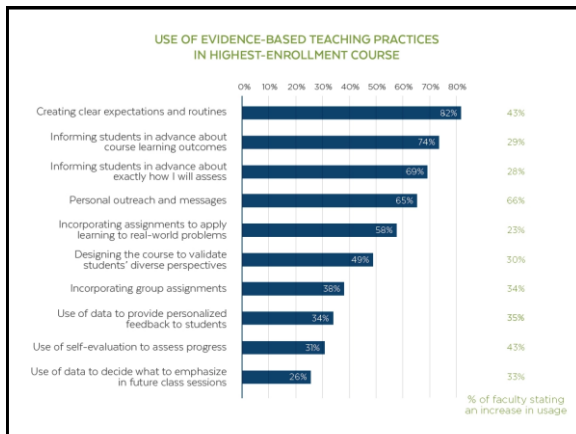


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TOP FACULTY PRIORITIES IN PLANNING FOR THE FALL TERM



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

- Yes many times and I am dramatically changing my philosophy statement.
- Yes many times and I am taking action (meeting people, reading more, attending webinars like this, etc.).
- Yes, I thought about it a couple of times and I am tweaking it.
- Not sure. I'm kinda brain dead right now.
- 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?

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



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



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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 1:
Introducing the TEC-VARIETY Model
<http://tec-variety.com/>
<http://tec-variety.com/TEC-VARIETY-Chinese.pdf>

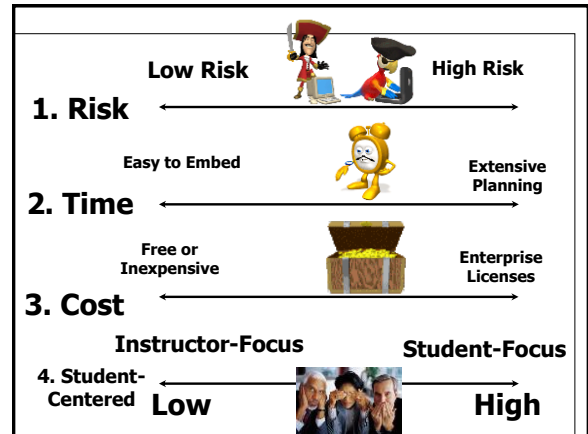
在线学习动机与激励:
 TEC-VARIETY 模型

Tone/Climate
Encouragement, Feedback
Curiosity

Variety
Autonomy
Relevance
Interactive
Engagement
Tension
Yields Products



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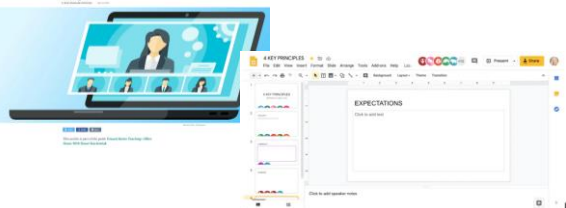
26

Examples of TEC-VARIETY



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September 24, 2020
1. Tone/Climate: A. Breakout Rooms
How Do You Make Zoom Breakout Rooms Less Boring?, Expectations, Share a link, Introductions
Bonni Stachowiak (Columnist), Ed Surge
<https://www.edsurge.com/news/2020-09-24-how-do-you-make-zoom-breakout-rooms-less-boring>



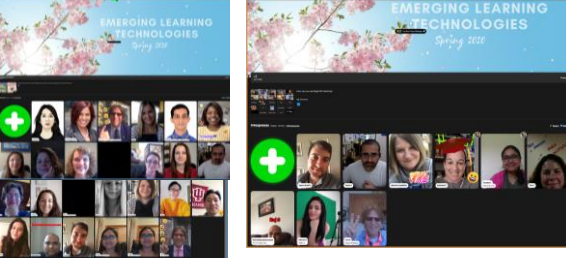
28

September 21, 2020
Non-Boring Zoom Breakout Groups
Plymouth State University
Video 16:50:
https://www.youtube.com/watch?v=r1mhGmBBek&feature=emb_logo
<https://colab.plymouthcreate.net/resource/non-boring-zoom-breakout-groups/>



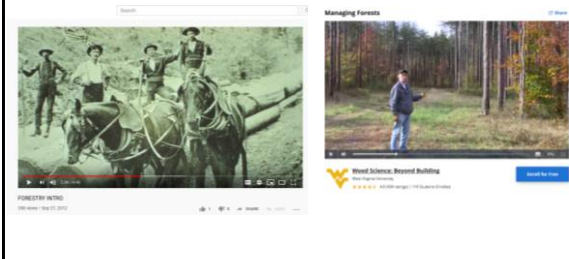
29

April 11, 2020
1. Tone/Climate:
B. Threaded Video Discussions and Questions
(e.g., Flipgrid)
<https://techcrunch.com/2018/06/18/microsoft-acquires-social-learning-platform-flipgrid/>



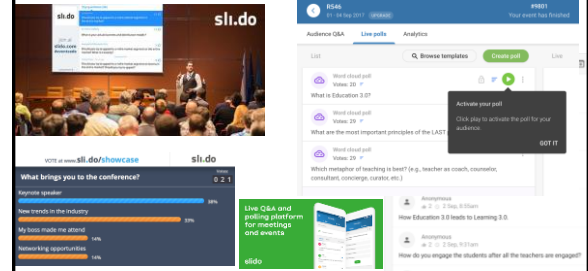
30

1. Tone/Climate:
C. Instructor Course Introductions
 Lynne Innes (Scotland): <https://vimeo.com/356645285>



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April 3, 2017
1. Tone/Climate:
D. Sli.do (students get a code; e.g., 9801)
<https://www.sli.do/>



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2. Encouragement, Feedback:
A. Poll Everywhere, BlogPoll, MicroPoll
Connect students across campuses
(School of Medicine, Flinders University)
<https://www.pollerywhere.com/case-studies/distributed-learning>



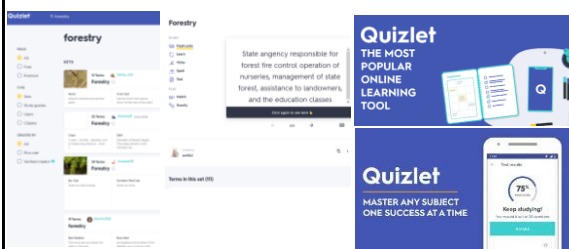
33

2. Encouragement, Feedback:
B. Voice/Audio Feedback
Vocaroo: <http://vocaroo.com/>



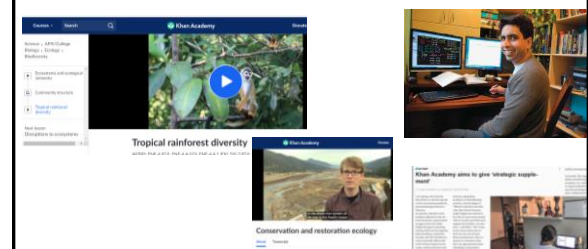
34

2. Encouragement, Feedback:
C. Online Practice Tests and Interactive Flash Cards (e.g., Pharmacy, OT, etc.)
<http://quizlet.com/>



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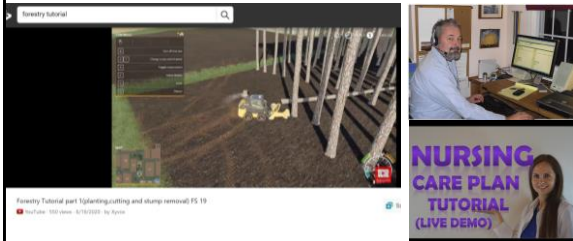
July 31, 2020
2. Encouragement, Feedback:
D. Khan Academy aims to give 'strategic supplement'
 Brett Molina, USA Today
<https://www.usatoday.com/story/tech/2020/07/30/khan-academy-ceo-sai-khan-zipping-fall-virtual-learning/5525480002/>



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2. Encouragement, Feedback: e. Video Tutorials, Demonstrations, and How-To's (videos, tutorials, etc.)

(Jing, GoView, Screenr, Overstream, Screencast-o-matic; http://tec-variety.com/TEC-Variety_links-examples-resources.pdf)



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June 18, 2020 3. Curiosity, Intrigue, Unknowns: A. Multimedia News

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

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



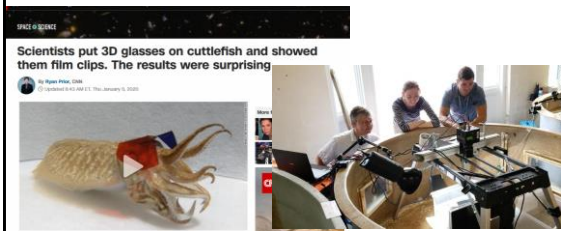
Veveonah Mosibin, a foundation student at Universiti Malaysia Sabah (UMS) had to take her online exams atop a tree to get a strong enough internet connection. (Credit: [Veveonah M/YouTube](#))

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January 9, 2020

3. Curiosity, Intrigue, Unknowns: B. Scientists put 3D glasses on cuttlefish and showed them film clips. The results were surprising (Cuttlefish eyes have well-developed depth perception) Ryan Prior, CNN

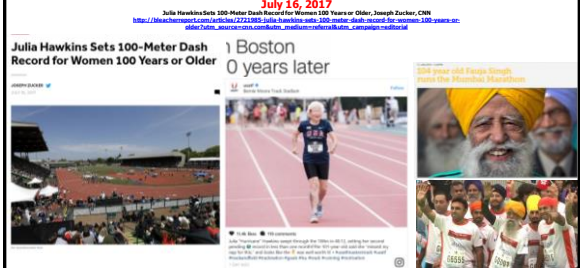
<https://www.cnn.com/2020/01/09/us/3d-glasses-cuttlefish-scn-tmd/index.html>



39

April 17, 2017 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-switzer-tmd/index.html>



40

3. Curiosity, Intrigue, Unknowns: d. 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)

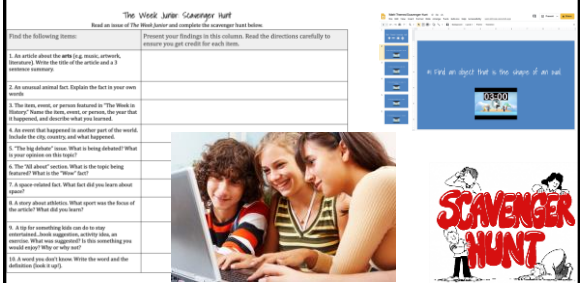
http://www.cnn.com/2014/11/06/living/oldest-photograph-human-daguerre/index.html?hpt=hp_14_kong



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July 2, 2020 3. Curiosity, Intrigue, Unknowns: e. Web Resource Scavenger Hunts

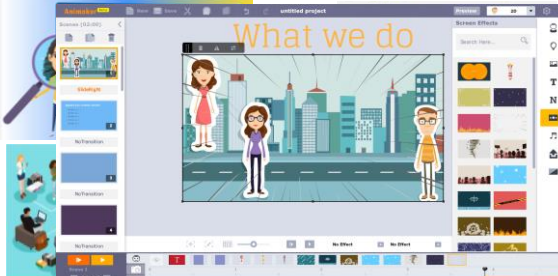
<https://catlintonucker.com/2020/07/8-ideas-designed-to-engage-students-online/>



42

June 27, 2020

4. Variety, Novelty, Fun, Fantasy:
A. Create Animated Presentations
<https://www.animator.com/anim/2b5501c2au035417u0e0d1v0e03CC450102au03541>
 Animator is a cloud-based do-it-yourself video maker. Free version provides a lot of characters, props, transitions, and background images.



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4. Variety, Novelty, Fun, Fantasy:
B. Online Test/Quiz Review Games
 (e.g., Jeopardy Rocks)
<https://www.jeopardy.rock/r511merve/>



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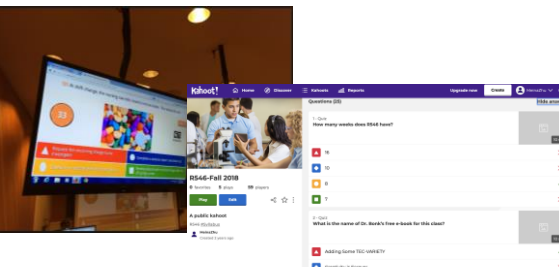
4. Variety, Novelty, Fun, Fantasy:
C. Random Lists
 (Random.org—clocks, coins, playing cards, dice, integers, passwords, jazz scales, lists, sequences, etc.)



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Fall 2018 R546

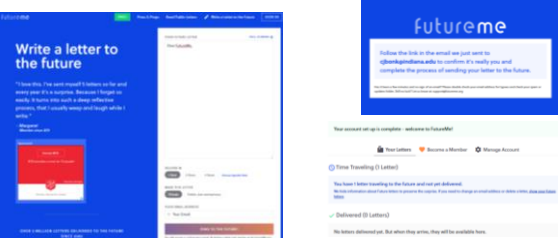
4. Variety, Novelty, Fun, Fantasy:
D. Kahoot!
<https://getkahoot.com/>



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October 10, 2018

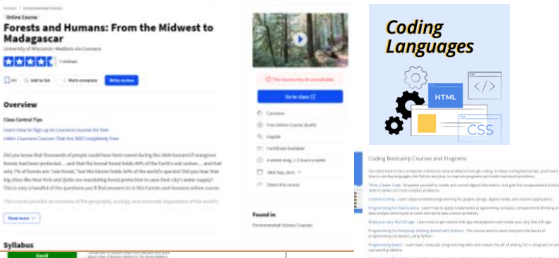
4. Variety, Novelty, Fun, Fantasy:
E. FutureMe.org
 Write a letter to the future
<https://www.futureme.org/>



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July 18, 2020

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



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5. Autonomy, Choice:

B. Tracking the Life of an Expert (e.g., biography.com)

<https://www.biography.com/scholar/john-muir>



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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.shutterfly.com/>

Umida Khikmatillaeva, Dec. 2011, P540

<http://learningplanet.shutterfly.com/>

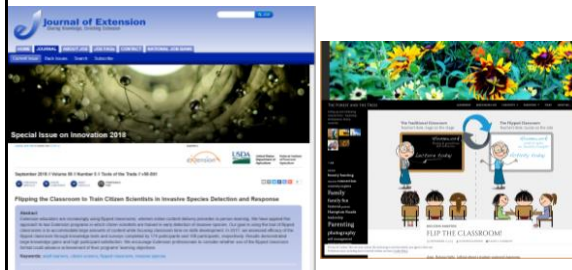


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5. Autonomy, Choice:

D. Flipping the Classroom (video lectures online)

<https://www.youtube.com/watch?v=rJzwTQ00K>



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Poll #3: 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.



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April 6 and April 28, 2020

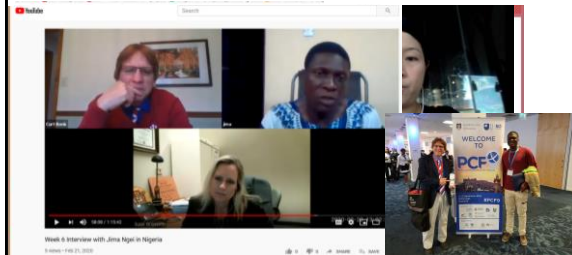
6. Relevance, Meaningfulness:

A. Weekly Guest Expert Chats

SMILE, Paul Kim Stanford, <https://youtu.be/bfJpSt4hVLU>

February 22, 2020, Jima Ngei in Nigeria (1 hour 15 minutes)

Video: <https://youtu.be/sM6VMsfQJXc>



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6. Relevance, Meaningfulness:

B. Case-Based Learning: Instructor Cases (e.g., Mark Braun, IU)



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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/Chronicle-Students/24066>

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

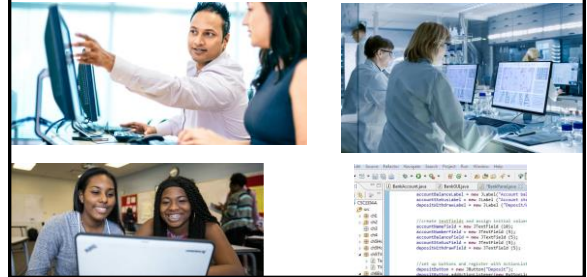


Samantha Erickson, left, of the Wiki Education Foundation; Tina Brock, a dean of the **School of Pharmacy at UC San Francisco**; and professor Amin Azzam discuss implementing the integration of Wikipedia pages on medical topics with students' work

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6. Relevance, Meaningfulness:

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



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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/L6fUOMXnKxU?t=132>



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7. Interactive, Collaborative:

B. Negotiate Meanings Online

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

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

Also: Google Docs, NowComment, etc.

e.g., <https://nowcomment.com/documents/131228>

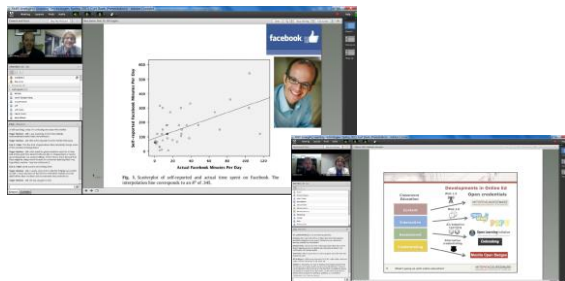


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7. Interactive, Collaborative:

C. Guest Speaker Quotes

(Rey Junco, February 25, 2013)



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Fall 2019, R511

7. Interactive, Collaborative:

D. Team Article Debates

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

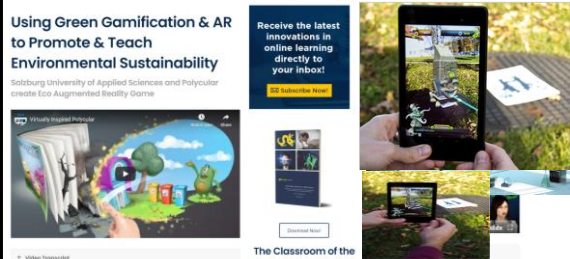


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7. Interactive, Collaborative: E. Virtual Mobile (at Virtually Inspired)

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/>



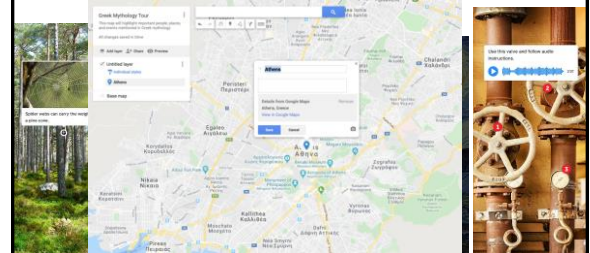
61

8. Engagement, Involvement: A. Interactive Maps (Thinglink: interactive map creator; Google Map Adventures)

<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.

Students can chart the path of a story on a map, they can connect historical info they are learning to the geographic location where events took place, and students can design creative mathematical challenges.



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8. Engagement, Involvement: B. Healthcare Scenarios and Simulations



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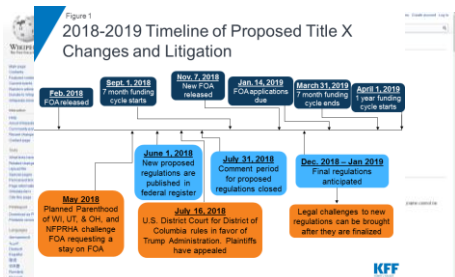
8. Engagement, Involvement: C. Interactive Labs and Simulations

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



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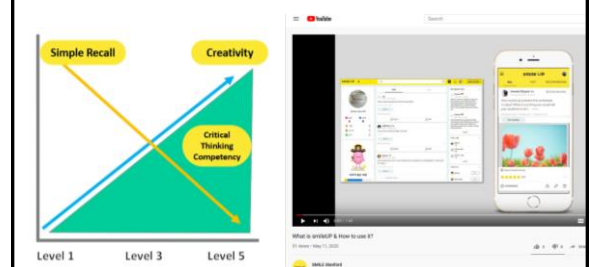
8. Engagement, Involvement: D. Interactive Timelines (Sutori, xtimeline, Preceden, TimeLineCurator, etc.)



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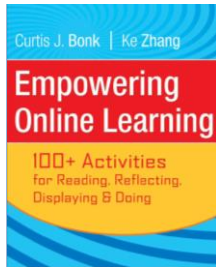
9. Tension, Challenge, Controversy, etc.: A. What is smileUP & How to use it? SMILE, Stanford

<https://www.youtube.com/watch?v=pblU8sSALWo>



66

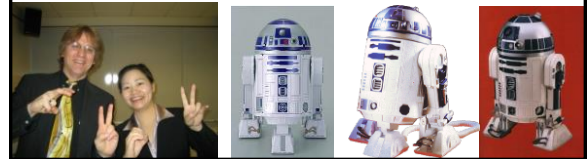
Part II: The R2D2 Model: Read, Reflect, Display, Do...



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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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1. Auditory or Verbal Learners

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



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January 20, 2016 Read 1a. Listen to Podcasts

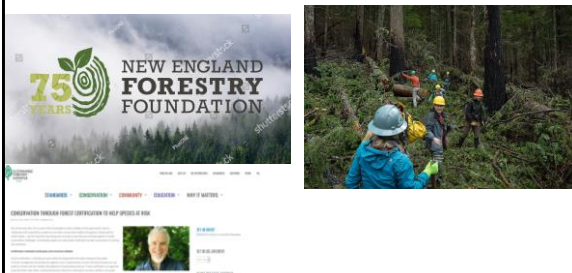
(e.g., preventive medicine podcast, NPR:

<https://www.npr.org/tags/206695374/preventive-medicine>)



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March 21, 2020 Read 1b. Read Blogs



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Read 1c. Twitter Fed Class Discussions

<https://twitter.com/FAOForestry>



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Read 1d. Reading from Open Access Journals (e.g., DOAJ—Directory of Open Access Journals)

<https://doaj.org/>



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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



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Reflect 2a. Big Issue Reflections

Forestry & Society Forests of the U.S.—Questions

- What are some major species of eastern forests? Describe them.
- What are some major species of western forests? Describe them. What are some major species of southwestern forests? Describe them. Compare the productivity of temperate forests with tropical and boreal forests.
- Describe the ownership pattern of forestland in the U.S. What were the major laws that determined US forest land policy? What did they do for US forest policy?

Probable Questions

- Discuss types of forests in Bangladesh. What are their issues of concerns?
- What are the main objectives of the National Forestry Policy 1994? Discuss
- For conservation of the forests and wildlife, the Government of Bangladesh has declared some areas as "Protected Areas". What are they?
- What are the challenges of conservation of forests? Discuss

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Reflect 2b. Interpreting Interactive Graphs and Infographics



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July 5, 2018 Reflect 2c. 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>



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



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3. Visual Learners

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



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Display 3a.

Short Educational Videos:
Anchored Instruction / Macrocontext
CNN, BBC, TED, TED-Ed



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April 29, 2020

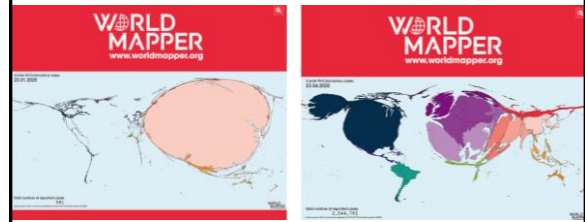
Display 3b. Animated Videos
Animated COVID-19 prevention video goes viral
Mandy Erickson, SCOPE Stanford Medicine
<https://scopeblog.stanford.edu/2020/04/29/animated-covid-19-prevention-video-goes-viral/>
<https://www.youtube.com/watch?v=UcFDofueQRg>



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June 7, 2020

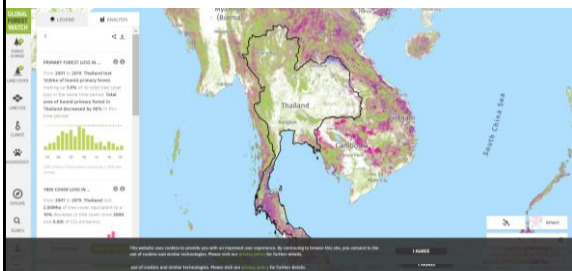
Display 3c. Animations of Data
World Mapper, COVID-19
<https://worldmapper.org/map-animation-covid19/>
<https://www.youtube.com/watch?v=6uu1MGyGjvI>



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October 13, 2020

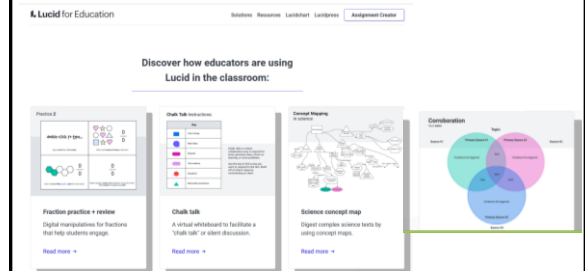
Display 3c. Maps of World Forests
<https://www.thoughtco.com/maps-of-the-worlds-forests-1343036>
<https://www.globalforestwatch.org/map/>



89

June 21, 2020

Display 3d. Lucid for Education
<https://lucidforeducation.com/mini-lessons>



90

Poll 5: 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 6: 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.



98

Poll #7: 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.



99

Poll #8: 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.



100

Poll 9: 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!



101

Poll 10: 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!



102

The World is Open for you now...!



103

We are entering a jumping off point...



104

Things are heating up!



105

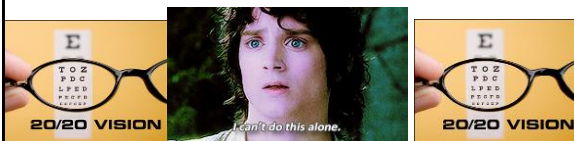
Education 20/20 and a Learning Revolution is coming within reach!



106

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

"I cannot do this alone."
"I cannot do this alone."
"I cannot do this alone."



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Any Questions or Comments?

Slides at: TrainingShare.com

Papers: PublicationShare.com

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



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