

## Workshop: Education 20/20: En"vision"ing the LAST Principles You'll Ever Need (15:10-17:00)

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<http://curtbonk.com/>



## Talk Overview

1. Education 20/20 and the Role of the Instructor
2. First and Last Principles of Instruction
3. 4 E-Learning Ages
4. Megatrends of Learning: Engagement, Access, and Customization (30 ways that learning is changing...)
5. Future Trends and Ideas



## Education 20/20



## Education 3.0...Education 20/20



"In Education 3.0, classrooms would move away from lectures, such as this one, to having class time be spent on discussions and projects, using digital technology."  
 (Per Wikipedia: [https://en.wikipedia.org/wiki/Education\\_3.0](https://en.wikipedia.org/wiki/Education_3.0))

## Education 3.0

### The Genesis and Emergence of Education 3.0 in Higher Education and its Potential for Africa

First Monday, by Derek Keats and J. Philipp Schmidt, March 2007  
<http://firstmonday.org/issue/index.php/firstmonday/article/view/1625/1540>

#### EDUCATION 3.0

Characteristics	Education 1.0	Education 2.0	Education 3.0
Primary role of professor	Source of knowledge	Guide and source of knowledge	Orchestrator of collaborative knowledge creation
Content arrangements	Traditional copyright materials	Copyright and freeware educational resources for students within disciplines, sometimes across institutions	Free/open educational resources created and reused by students across multiple institutions, disciplines, nations, implemented by original materials created for them
Learning activities	Traditional, essays, assignments, tests, some groupwork within classroom	Traditional assignment approaches transferred to more open technologies; increasing collaboration in learning activities, still largely confined to institutional and classroom boundaries	Open, flexible learning activities that focus on creating room for student creativity, social networking outside traditional boundaries of discipline, institution, nation



### 5. Instructor as Curator



### 6. Instructor as Concierge



### 7. Instructor as Camping Trip Guide



### 8. Instructor as Cultivator



### 20 New Roles of the Instructor

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



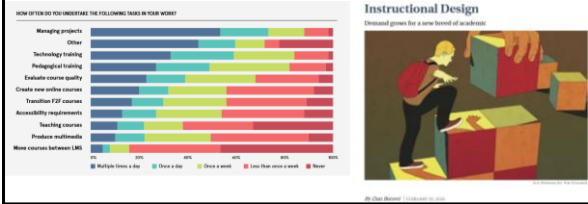
## The Creation of Effective Learning Environments

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



## April, 2016 Instructional Design in Higher Education, Gates Foundation and Intentional Futures

<http://intentionalfutures.com/reports/instructional-design/instructional-design-2016-report-5-2016.pdf>  
[http://intentionalfutures.com/reports/instructional\\_design/](http://intentionalfutures.com/reports/instructional_design/)



## July 29, 2016 Reimagine Your Learning Space: Starbucks Your Classroom!

Oskar Cymerman, Teaching Channel  
<https://www.teachingchannel.org/blog/2016/07/29/starbucks-your-classroom/>



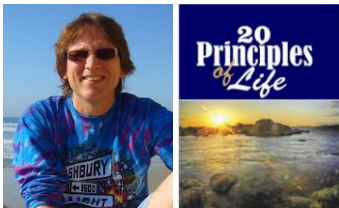
Sterile, industrial-era rows aren't very attractive or motivating. Even more, I've become convinced that traditional educational settings dull the senses...I believe the "Starbucks" environment will promote that freedom and movement. Freedom is the key ingredient to social-emotional well-being and deeper learning. Rows and columns constrict. They hold and stifle. That is the truth. That is the reality in many U.S. classrooms today. But no longer in mine. Never again.

## Poll: Who wants one of these? Starbucks



## Bonk's 20 Last Principles of Teaching/Instruction

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



## Merrill's First Principles of Teaching/Instruction

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





## 1. The Principle of Flexibility

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



## 2. The Principle of Convenience

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



## 3. The Principle of Collegiality

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



## 4. The Principle of Cheerfulness and Optimism

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



## 5. The Principle of High Expectations

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



## 6. The Principle of Choice and Options

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



## 7. The Principle of Empowerment and Autonomy

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



## August 8, 2017 Professor's plan to let students grade themselves gets an F Paul LeBlanc, CNN

<http://www.cnn.com/2017/08/08/health/students-choose-grades-stress-reduction-tnnd/index.html>

Professor's plan to let students grade themselves gets an F



U.S. News

U.S. News

U.S. News

U.S. News

U.S. News

U.S. News

U.S. News

The Ticker

The Ticker

The Ticker

The Ticker

The Ticker

The Ticker

The Ticker

## 8. The Principle of Support and Feedback

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



## 9. The Principle of Spontaneity

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



## 10. The Principle of Organization

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



## 11. The Principle of Sharing

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



## 12. The Principle of Nontraditional Learning

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



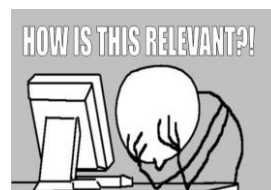
## 13. The Principle of Passion and Inspiration

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



## 14. The Principle of Relevance and Meaningfulness

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



## 15. The Principle of Trial and Error (i.e., it is ok to fail)

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



## 16. The Principle of Expanded Resources

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



## The World is Open: How Web Technology Is Revolutionizing Education


TEN OPENERS: (WE-ALL-LEARN)

1. Web Searching in the World of E-Books
2. E-Learning and Blended Learning
3. Availability of Open Source and Free Software
4. Leveraged Resources and OpenCourseWare
5. Learning Object Repositories and Portals
6. Learner Participation in Open Information Communities
7. Electronic Collaboration
8. Alternate Reality Learning
9. Real-Time Mobility and Portability
10. Networks of Personalized Learning

世界是开放的  
网络技术如何变革教育  
The World Is Open  
How Web Technology Is Revolutionizing Education  
Curtis J. Bonk


## 17. The Principle of Human Connectedness

<http://travelinedman.blogspot.com/2011/09/bonks-last-principles-of-instruction.html>



## 18. The Principle of Cognitive Apprenticeship

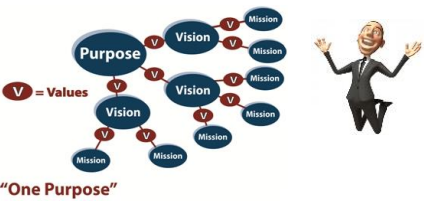
<http://travelinedman.blogspot.com/2011/09/bonks-last-principles-of-instruction.html>

Activities: Observation, Demonstration, Coaching, Scaffolding, Fading, Reflection, Self-Monitoring, Problem Solving, Transfer of Learning

## 19. The Principle of Purpose and Vision

<http://travelinedman.blogspot.com/2011/09/bonks-last-principles-of-instruction.html>



V = Values

"One Purpose"

## 20. ??? (what is missing)

<http://travelinedman.blogspot.com/2011/09/bonks-last-principles-of-instruction.html>




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

<http://travelinedman.blogspot.com/2011/09/bonks-last-principles-of-instruction.html>

- Flexibility
- Convenience
- Collegiality
- Cheerfulness and Optimism
- High Expectations
- Empowerment and Autonomy
- Support and Feedback
- Spontaneity
- Organization
- Sharing
- Purpose and Vision
- Human Connectedness
- Cognitive Apprenticeship
- Choice and Options
- Nontraditional Learning
- Passion and Inspiration
- Relevance and Meaningfulness
- Trial and Error (i.e., it is ok to fail)
- Expanded Resources

#20 ???

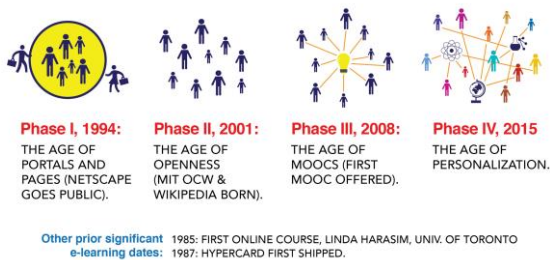




## Clearly... Learning is Changing!



## The Evolution of E-Learning (All 7 year cycles)

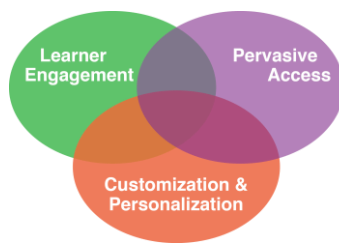


## Thirty Ways Learning is Changing...

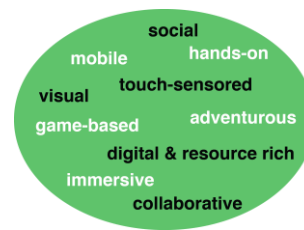
(i.e., it's more informal, video-based, ubiquitous, collaborative, self-directed, global, mobile, open, massive, etc.)



## 30+ Ways Learning is Changing: The Mega Trends



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



**August 17, 2016**  
**Learning is More Hands-On**  
**Research: 3D Printing Market to Double by 2020**  
 Joshua Bolkan, Campus Technology  
<https://campustechnology.com/articles/2016/08/17/report-3d-printing-market-to-double-by-2020.aspx>

**Research: 3D Printing Market to Double by 2020**  
 By Joshua Bolkan | 08/17/16




**February 7, 2017 (Engagement)**  
**Learning is More Social**  
 YouTube takes on Facebook with mobile live  
 Jefferson Graham, USA Today  
<http://www.usatoday.com/story/tech/2017/02/07/youtube-takes-facebook-mobile-live/97566592/>

YouTube takes on Facebook with mobile live



**May 31, 2017**  
**Learning is More Digital and Resource Rich**  
**Enticing Students to Read Again**  
 Ellen McCracken, The Chronicle of Higher Education  
<http://chronicle.com/article/Enticing-Students-to-Read-Again/236487>

**Digital Dubliners—a guide to Joyce's stories written for students by students, will bring a new reading experience to today's classroom.**  
<http://www.digitaldubliners.com/about>




**February 27, 2017 (Engagement)**  
**Learning is More Immersive**  
**Augmented and Virtual Reality Spending to Double in 2017, Sri Ravipati, THE Journal**  
<https://thejournal.com/articles/2017/02/27/augmented-and-virtual-reality-spending-to-double-in-2017.aspx>  
 Worldwide: "Forecasts the AR/VR market to reach \$13.9 billion in 2017 — up 130.5 percent from the \$6.1 billion spent in 2016. Furthermore, AR/VR spending is expected to accelerate over the next several years, achieving a compound annual growth rate (CAGR) of 196 percent over the 2015-2020 forecast period and reaching \$143.3 billion in 2020."



**July 19, 2017**  
**HoloLens Assists in Live Surgery**  
 Tommy Palladino, Next Reality  
<https://hololens.reality.news/news/hololens-assists-live-surgery-9178887/>  
 Video #1: 1:09: <http://curtbonk.com/hololens.html>  
 Video #2: 1:37: <http://curtbonk.com/hololens2.html>  
 07/19/2017

**HoloLens Assists in Live Surgery**  
 Numerous examples exist of doctors and surgeons using HoloLens to plan surgeries. The device has even been used to view reference images during a procedure and stream it to a remote audience. Until recently, it has not been used to augment the surgeon's view of the patient during a live surgery.  
 Original Video: <https://hololens.reality.news/news/hololens-assists-live-surgery-9178887/>



**May 18, 2017**  
**Learning is More Immersive**  
**Google Cardboard**  
 Google Expeditions Adds Augmented Reality for Classrooms  
 Sri Ravipati, THE Journal  
<https://thejournal.com/articles/2017/05/18/google-expeditions-adds-augmented-reality-for-classrooms.aspx>  
<https://www.youtube.com/watch?v=ST5aB9W7Y9>  
 27 seconds <http://curtbonk.com/thejournal27.html>  
 38 seconds <http://curtbonk.com/thejournal38.html>  
 1:10: <http://curtbonk.com/thejournal.html>

Google Expeditions Adds Augmented Reality for Classrooms





**August 3, 2017****Learning is More Immediate...**

See the exquisite fossil that revealed the colors of a giant armored nodosaur

**Ben Gaurino, The Washington Post**

Video (2:33): <http://curtbonk.com/dinosaurs.html>

Video: 0:1 - 2:0: <https://curtbonk.com/dinosaurs3.html>

Video: :47 to 2:26: <http://curtbonk.com/dinosaurs3.html>

**Titanosaurs:**  
the largest animals ever to walk the Earth

<https://www.theguardian.com/science/2016/jan/12/dinosaur-titanosaur-largest-animal-ever-walk-earth-argentina>

[https://www.youtube.com/watch?v=Q0a6tL3\\_A\\_w](https://www.youtube.com/watch?v=Q0a6tL3_A_w)

**May 9, 2017 (Access)****Learning is More Immediate...**

Meet Zuul, the new dinosaur species named after 'Ghostbusters' demon

**Traci Watson, USA Today**

<https://www.usatoday.com/story/news/2017/05/09/new-dinosaur-ghostbusters/101475468/>

15 second: <http://curtbonk.com/ghostbusters15.html>

27 second: <http://curtbonk.com/ghostbusters27.html>

Meet Zuul, the new dinosaur species named after 'Ghostbusters' demon

**March 27, 2018****Learning is More Immediate...**

Ancient Amazon: Discovery of 81 New Archaeological Sites Rewrites History of Americas Before Columbus

**Katherine Hignett, Newsweek**

<http://www.newsweek.com/amazon-rainforest-glyphs-research-columbus-861960>

Video (1:20)

ANCIENT AMAZON: DISCOVERY OF 81 NEW ARCHAEOLOGICAL SITES REWRITES HISTORY OF AMERICAS BEFORE COLUMBUS



81 Amazon Settlements Discovered in Rainforest

**November 19, 2015 (Access)****Learning is More Immediate...**

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

<http://www.usatoday.com/story/tech/2015/11/19/new-daddy-longlegs-named-after-lord-of-the-rings-character-smeagol/78037286/>



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

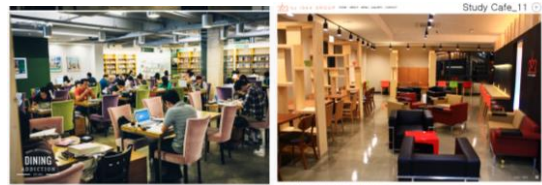
informal  
free  
open  
synchronous  
online  
immediate  
global  
video-based  
ubiquitous  
direct from experts

**August 1, 2016 (Access)****Learning is More Ubiquitous**

363 by Idea Group; Study Café Meeting Place; Idea Space (Seoul, Korea)

[http://363.co.kr/wp/?page\\_id=344](http://363.co.kr/wp/?page_id=344)

[http://363.co.kr/wp/?wp\\_gallerystudycafe\\_11](http://363.co.kr/wp/?wp_gallerystudycafe_11)

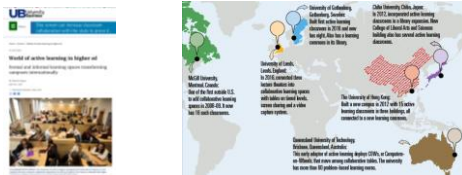




**April 16, 2018****Learning is More Informal**

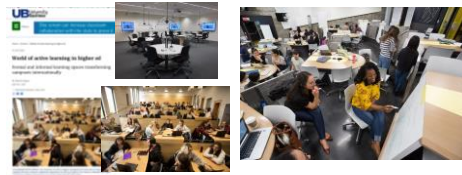
World of active learning in higher ed  
Formal and informal learning spaces transforming  
campuses internationally

Sherrie Negrea, University Business, May 2018  
<https://www.universitybusiness.com/article/world-active-learning-higher-ed>

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Formal and informal learning spaces transforming  
campuses internationally

Sherrie Negrea, University Business, May 2018  
<https://www.universitybusiness.com/article/world-active-learning-higher-ed>

**August 5, 2015 (Access)****Learning is More Informal**

Shubham Jaglan (10 years old) Overwhelmed by  
"Dream" Return Home After Double World  
Championship  
Disha Chopra, NDTV Sports

<http://sports.ndtv.com/golf/2015/08/05/shubham-jaglan-overwhelmed-by-dream-returns-home-after-double-world-championship>  
<https://www.ndtv.com/sports/shubham-jaglan-returns-home-after-double-world-championship-1.22164>

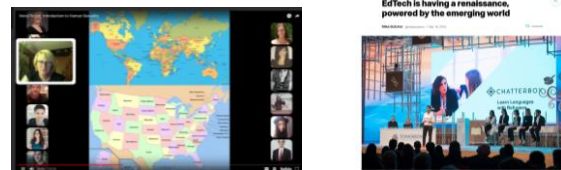
**March 18, 2018 (Access)****Learning is Video-Based**

EdTech is having a renaissance, powered by the emerging world  
Mick Butcher, TechCrunch

<https://techcrunch.com/2018/03/18/edtech-is-having-a-renaissance-powered-by-the-emerging-world/>

**March 20, 2018**

Rachel Gunderson, Human Sexuality Class, VoiceThread  
<http://rachel-gunderson.strikingly.com/>

**February 15, 2017 (Engagement)****Learning is More Synchronous**

Shindig, Future Trends Forum, Bryan Alexander  
<https://bryanalexander.org/the-future-trends-forum/>  
<http://www.shindig.com/>  
<http://events.shindig.com/event/rtf-anniversary>

**February 19, 2018****Learning is More Online (Access)**

Grade Increase:  
Tracking Distance Education in the United  
States

Joshua Kim, Inside Higher Ed  
<https://onlinelearningquarter.com/news/grade-increase.pdf>  
<https://onlinelearningquarter.com/news/grade-increase.pdf>

STUDENTS TAKING DISTANCE COURSES BY LEVEL - 2012-2016







## December 19, 2017 and April 24, 2018 Learning is More Free and Open

### eTexts 101: A Practical Guide

<https://iu.pb.unizin.org/eTexts101/front-matter/introduction/>

<https://iu.pb.unizin.org/eTexts101/>

#### OER Adoptions on the Rise



#### Cost savings for students participating in IU's eTexts Program



Real cost savings for students participating in IU's eTexts Program

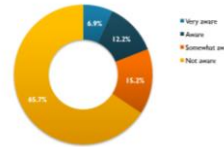
July 2016

## The Awareness Problem: Opening the Textbook: Educational Resources in U.S. Higher Education, 2015-2016

I. Elaine Allen and Jeff Seaman, Babson Survey Research Group

<http://www.onlinelearningtimes.com/reports/openingthetextbook2016.pdf>

#### AWARENESS OF OPEN TEXTBOOKS: 2015-16



#### OER Use to Triple Over Next 5 Years

Open educational resources (OER) are rapidly gaining momentum in higher education, with the potential to triple use over the next five years. About a third of all faculty members surveyed in 2015 reported using OER in their courses. The use of OER for supplemental learning materials is expected to grow significantly in the coming years.

September 19, 2017

## Learning is More Free and Open

### Reasons to Open Source Your Syllabus

Anastasia Salter, The Chronicle of Higher Education

<http://www.chronicle.com/blogs/profhacker/reasons-to-open-source-your-syllabus/64335>

The Open Syllabus Project: <https://opensyllabusproject.org/>



May 4, 2016 (Access)

## Learning is More Free and Open This Mongolian Teenager Aced a MOOC

(140,000 people take the MIT MOOC on Circuits and Electronics, 1 of 300 to get a perfect score)

The Chronicle of Higher Education, Jeffrey R. Young

<http://chronicle.com/article/This-Mongolian-Teenager-Aced-a-MOOC/236362>

#### THE CHRONICLE OF HIGHER EDUCATION



May 19, 2016 (Access)

## Learning is More Free and Open

### From MOOC to bootcamp to MIT

MIT News, Office of Digital Learning  
(Jin Wu—from MITx to MIT Global Entrepreneurship Bootcamp to master's student)

<http://news.mit.edu/2016/mooc-bootcamp-mit-0519>



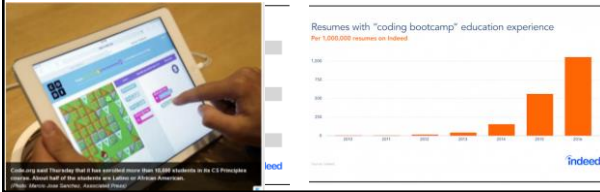
August 9, 2017

## Learning is More Free and Open Modern State Education Alliance

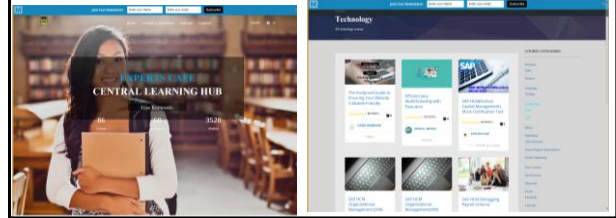
<https://modernstates.org/>



**May 3, 2017**  
**Learning is More Free and Open**  
**4 out of 5 Companies Have Hired a Coding**  
**Bootcamp Graduate**  
**Sri Ravipati, Campus Technology**



**June 20, 2016 (Access)**  
**Learning is More Direct from Experts**  
**(e.g., The Expert Café)**  
<http://expertscafe.com/>



**March 21, 2018**  
**Learning is More Direct from Experts**  
**TeachMeNow**

TeachMeNow is a gig-economy platform for teachers. This marketplace connects teachers, experts, and mentors to students. The technology combines scheduling, payments and live virtual sessions that can connect on any device allows tens of thousands of teachers to create their own online businesses, with some earning over \$100,000 last year. In addition, schools and companies including Microsoft use TeachMeNow software to create their own-branded online learning communities.

<https://teachmenow.com/>



**September 25, 2017**  
**Learning is More Direct from Experts**  
**Professors Have Taken Over the MOOCs:**  
**How open online learning is changing**  
**Joshua Kim, Inside Higher Ed**

<https://www.insidehighered.com/blogs/technology-and-learning/professors-have-taken-over-moocs>



**How Learning is Changing:**  
**Mega Trend #3. Customization**



**February 22, 2017 (Access)**  
**Learning is Self-Directed**

Digital citizenship lessons from a 9-year-old with 18,000 Twitter followers, Alan November, eSchool News

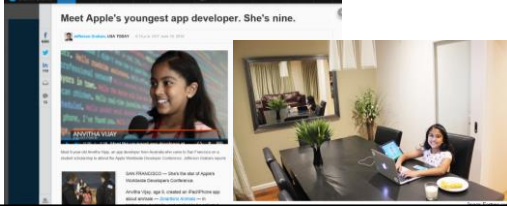
<http://www.eschoolnews.com/2017/02/22/digital-citizenship-tweets/>  
<http://www.eschoolnews.com/2017/02/22/digital-citizenship-tweets/>  
<https://twitter.com/thefablab2017>  
<https://www.youtube.com/watch?v=BKwUE7eHuc>



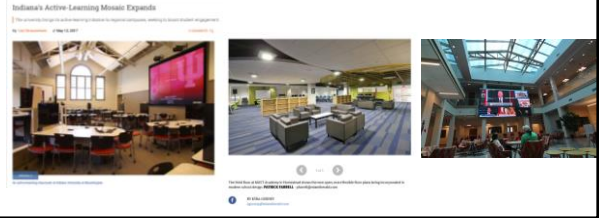
**June 13, 2016 (Access)****Learning is Self-Directed**

**Nine-Year-Old Anvitha Vijay is the Youngest Developer at WWDC (age 9)**  
(Apple Worldwide Developers Conference), Gadgets

<https://www.usatoday.com/story/money/2016/06/13/stocks-new-highs/899905001/>

**May 12, 2017 (Customization)****Learning is More Modifiable**

**The Future of Collaboration Spaces Encompasses Video Interactive, Mobile, Julie Johnston, IU, Campus Technology**

**July 17, 2017**

**Buildings That Foster Collaboration, Lawrence Biemiller, The Chronicle of Higher Education**

<https://www.usatoday.com/story/money/2017/07/20/stocks-new-highs/899905001/>

**Buildings That Foster Collaboration**



Social spaces, like this one in an interdisciplinary science building at Arizona State U., don't qualify for federal reimbursement of research-overhead costs. So now "we don't build any single-purpose space," says the university architect.

**March 2, 2018**

**The Architecture of Ideal Learning Environments**

**Emelina Minero, Edutopia**

<https://www.edutopia.org/article/architecture-ideal-learning-environments>

**January 9, 2017****Learning is More On Demand**

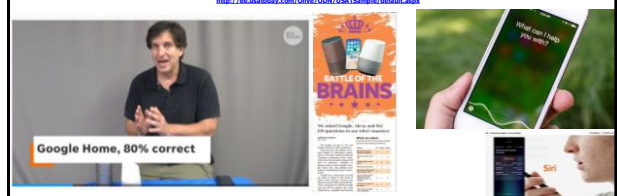
**Jill Watson, Round Three**  
**Georgia Tech course prepares for third semester with virtual teaching assistants**  
Jason Maderer, Georgia Tech News Center

<http://www.news.gatech.edu/2017/01/09/jill-watson-round-three>

**May 9, 2018****Learning is More on Demand****Battle of the Brains:**

**We asked Google, Alexa and Siri 150 questions to see who's smartest**  
**Jefferson Graham, USA Today**

<https://www.usatoday.com/story/tech/2018/05/09/who-is-smarter-alexa-google-siri/538224001/>





**May 9, 2017 (Customization)**

**Amazon Echo Show brings chatty Alexa to a two-way, video touchscreen**

Edward C. Baig and Elizabeth Weise, USA Today

<https://www.usatoday.com/story/tech/2017/05/09/amazon-echo-show-two-way-video-touchscreen/101448894/>

24 seconds: <http://curtbonk.com/jetsons24.html>

44 seconds: <http://curtbonk.com/jetsons44.html>

Amazon Echo Show brings chatty Alexa to a two-way, video touchscreen



**February 19, 2018**

**Erica, the humanoid robot, is chatty but still has a lot to learn**

Jefferson Graham, USA Today

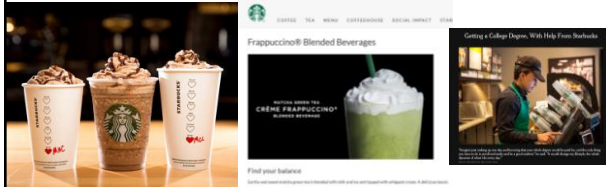
<https://www.usatoday.com/story/tech/talktech/2018/02/19/erica-humanoid-robot-chatty-but-still-has-a-lot-to-learn/101228800/>

Video: <http://curtbonk.com/erica.html>

Audio: <http://curtbonk.com/erica-audio.html>



**Poll: Who gets blended drinks at Starbucks?**



**January 20, 2016 (Customization)**

**Learning is More Blended**

**Universities tap growth of craft beer, offer classes, Chicago Tribune**

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



Chicago Tribune

Universities tap growth of craft beer, offer classes



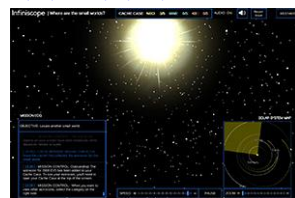
**March 23, 2017 (Customization)**

**Learning is More Personal**

**Arizona State U Launches Open, Adaptive Lessons on Space Exploration**

Rhea Kelly, Campus Technology

<https://campustechnology.com/articles/2017/03/23/arizona-state-u-launches-open-adaptive-lessons-on-space-exploration.aspx>



**May 20, 2016 (Customization)**

**Learning is More Massive**

**agMOOCs (India)**

<http://www.agmoocs.in/>





**April 20, 2015 (Customization)**

**Learning is More Massive**

**250 MOOCs and Counting: One Man's**

**Educational Journey, Chronicle of Higher Education**

<http://chronicle.com/article/250-MOOCsCounting-One/229397?cid=at>  
If the MOOC movement has faded, nobody told Jima Ngei. Mr. Ngei, who lives in Port Harcourt, Nigeria, has completed and passed 250.



**Jima Ngei: "I had this unrelenting fear that this miracle of free access might evaporate soon."**

**August 12, 2016 (Customization)**

**A Life of Happiness and Fulfillment**

**Indian School of Business, Rajagopal Raghathan**

<https://www.class-central.com/mooc/2860/courses-a-life-of-happiness-and-fulfillment>



**A Life of Happiness and Fulfillment**

Indian School of Business, Rajagopal Raghathan

This course, based on the award-winning book offered both at the Indian School of Business and at the McCombs School of Business at the University of Texas at Austin, developing that the happiness and life. Dr. Raghathan's course content from a variety of fields, including psychology, neuroscience, and behavioral decision theory to offer a unique and practical design for leading a life of happiness and fulfillment.



**A Life of Happiness and Fulfillment**

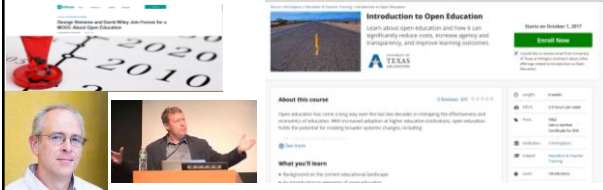
Indian School of Business, Rajagopal Raghathan

**October 1, 2017**

**Learning is More Massive**

**Introduction to Open Education edX**

<https://www.edx.org/course/introduction-open-education-utaedux-link-ox>



**June 15, 2017**

**Learning is More Massive**

**Massive List of MOOC Providers Around The World**

**K-MOOC / Korea**

**(Where to Find MOOCs: The Definitive Guide to MOOC Providers)**

**Class Central, Dhawal Shah**

<https://www.class-central.com/course/kmooc-providers-2017>



**January 11 and August 23, 2017**

**Learning is More Massive**

**Topnotch online English teacher earns nearly \$3 million a year**

**Wu Yan, China Daily**

[http://www.chinadaily.com.cn/china/2017-01/11/content\\_27920747.htm](http://www.chinadaily.com.cn/china/2017-01/11/content_27920747.htm)



**March 3, 2017 (Customization)**

**Learning is More on Modular**

**edX Expands MicroMasters Programs With Data Science ("nanodegrees")**

**Digital Leadership and More, Sri Ravipati, Campus Technology**

<https://campustechonline.com/2017/03/03/edx-expands-micromasters-programs-with-data-science-digital-leadership-and-more/>

**edX Expands MicroMasters Programs With Data Science, Digital Leadership and More**

By Sri Ravipati | 03/03/17



**January 9, 2018**  
**Learning is More on Modular**  
**MIT launches MITx MicroMasters in**  
**Principles of Manufacturing**  
**MIT Open Learning**

<http://news.mit.edu/2018/mit-launches-new-mitx-micromasters-program-principles-manufacturing-0109>



MIT launches MITx MicroMasters in Principles of Manufacturing  
 New program offers alternative learning pathway to mastering fundamental skills needed for global manufacturing operations and competitiveness.

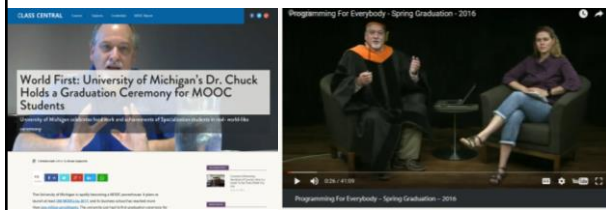
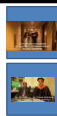
**July 1, 2015 (Customization)**  
**Chapter 14: Creating a Temporary Spontaneous**  
**Mini-Ecosystem through a MOOC**  
**Paul Kim and Charlie Chung, Stanford University**  
**Figure 2. Twitter thread announcing the MOOC**



**June 14, 2016 (Customization)**

**Chapter 15: Learning About MOOCs by Talking to Students**  
**Charles Severance, Univ. of Michigan**  
**Anuar Lequerica, Class Central**

<https://www.class-central.com/report/dr-chuck-graduation-ceremony-python-specialization/>

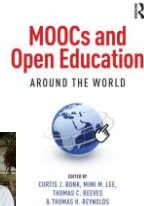


**MOOCs are Like Library**  
**Books...**



**MOOCs and Open Education**  
**Around the World**

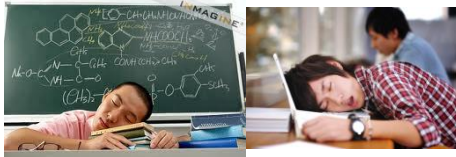
<http://routledge-ny.com/books/details/9781138807419/>



**30+ Ways Learning is Changing:**  
**Recapping the Three Mega Trends:**  
**Engagement, Access, and Customization**



## Needed: New Models of Motivation and Engagement



## Framework #1: TEC-VARIETY for Online Motivation and Retention

1. **Tone/Climate:** Psych Safety, Comfort, Belonging
2. **Encouragement, Feedback:** Responsive, Supports
3. **Curiosity:** Fun, Fantasy, Control
- ...
4. **Variety:** Novelty, Intrigue, Unknowns
5. **Autonomy:** Choice: Flexibility, Opportunities
6. **Relevance:** Meaningful, Authentic, Interesting
7. **Interactive:** Collaborative, Team-Based, Community
8. **Engagement:** Effort, Involvement, Excitement
9. **Tension:** Challenge, Dissonance, Controversy
10. **Yields Products:** Goal Driven, Products, Success, Ownership

## Introducing the free "TEC-VARIETY" Framework...

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



## 在线学习动机与激励: TEC-VARIETY 模型

——激励和留住在线学习者的 100 个活动

作者: Curtis J Bonk & Elaine Khoo IU

## Motivation Research Highlights (Jere Brophy, Michigan State University)

1. **Supportive**, appropriate **challenge**, **meaningful**, moderation/optimal.
2. Teach **goal** setting and self-reinforcement.
3. Offer **rewards** for good/improved performance.
4. **Novelty**, **variety**, **choice**, adaptable to interests.
5. Game-like, **fun**, fantasy, curiosity, suspense, active.
6. Higher levels, divergence, dissonance, **peer interaction**.
7. Allow to create finished **products**.
8. Provide immediate **feedback**, advance organizers.
9. Show intensity, **enthusiasm**, interest, minimize anxiety.
10. Make content **personal**, concrete, familiar.



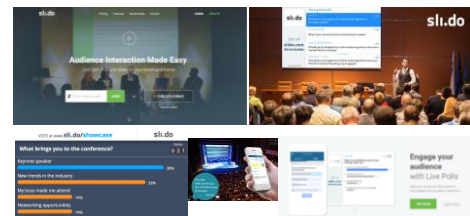
## Examples of TEC-VARIETY



## April 3, 2017 1. Tone/Climate:

### A. Sli.do

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



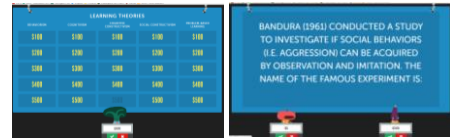


**April 3, 2017****4. Variety, Novelty, Fun, Fantasy:****A. Kahoot!**<https://getkahoot.com/>**July 31, 2017**

I'm in 'Kahoots' with Technology in the Classroom  
 Cassandra OSullivan Sachar, Faculty Focus

**October 5, 2016****4. Variety, Novelty, Fun, Fantasy:****B. Online Test/Quiz Review Games**

(e.g., Jeopardy Rocks)

<https://www.jeopardy.rockz.com/r511merv/>**4. Variety, Novelty, Fun, Fantasy:****C. Random Lists**

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

**RANDOM.ORG**

Coin Flipper

You flipped 2 coins of type 100-K:



Timestamp: 2011-08-13 04:42:47C

[Flip Again](#) [Coin Back](#)

Dice Roller

You rolled 2 dice:



Timestamp: 2011-08-13 04:42:47C

[Roll Again](#) [Go Back](#) [Reset](#) [Coin Back](#)**RANDOM.ORG**

List Randomizer

There were 10 items in your list. How many are to randomize under?

[Random Sequence Generator](#)

What is your seed?

1. 100  
2. 100  
3. 100  
4. 100  
5. 100  
6. 100  
7. 100  
8. 100  
9. 100  
10. 100

Timestamp: 2011-08-13 04:42:47C

[Randomize](#) [Go Back](#) [Reset](#) [Coin Back](#)**December 8, 2015****5. Autonomy, Choice:****A. Design Multimedia Glossaries**

P540 Final Assignment: Nate Wynne, Supersized Personal Course Glossary

<http://natewynne1982.wik.com/p540courseglossary>

Oguz Ozdemir, December 2012

<http://r685glossary.shutterfly.com/>

Umida Khikmatillaeva, Dec. 2011, P540

<http://learningplanet.shutterfly.com/>**July 26, 2017****5. Autonomy, Choice:****B. Sign up for a MOOC**

Beer Matters: Free Online Class With Meetups

(September 6, 2017-October 21, 2017),

Karl Brown, Assistant Professor of History

<http://www.pasathack.com/20150921/beer-matters><http://www.pasathack.com/20150921/beer-matters>Video: <http://cartoon.com/beer.html> (1:11)**Jan. 20, Oct. 13, & Nov. 2016 (Zoom)****6. Relevance, Meaningfulness:****A. Weekly Guest Expert Chats**

R511 Chat with Mike Molenda, IU





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



## March 20, 2018 6. Relevance, Meaningfulness: C. Editing Wikipedia Pages Women's-Studies Students Across the Nation Are Editing Wikipedia

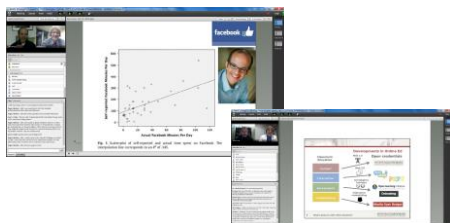
Emma Kerr, The Chronicle of Higher Education  
<https://www.chronicle.com/article/Women-s-Studies-Students/342866>



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



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



## 7. Interactive, Collaborative: B. Negotiate Meanings Online (e.g., PiratePad: <http://meetingwords.com/>) <https://blogs.elfon.edu/technology/6-collaborative-writing-applications-for-groups-projects-or-present/> MeetingWords, Google Docs, NowComment, MixedInk



## 7. Interactive, Collaborative: C. Backchannel Chat (TodayMeet)

<https://todaysmeet.com/>  
R678\_Emerging\_Learning\_Technologies  
[https://todaysmeet.com/R678\\_Emerging\\_Learning\\_Technologies](https://todaysmeet.com/R678_Emerging_Learning_Technologies)



## July 17, 2017 8. Engagement, Involvement: A. Learning Chemistry in Virtual Reality, Sarah Hardman, New Learning Times

<https://newlearningtimes.com/article/4319/learning-chemistry-in-virtual-reality>  
1:38 video: <https://vimeo.com/141806541>  
Alt: <http://curtbook.com/chemistry-vr.html>  
01-41: <http://curtbook.com/chemistry-vr-2.html>  
41-1:16: <http://curtbook.com/chemistry-vr-3.html>  
1:16-1:36: <http://curtbook.com/chemistry-vr-4.html>







February 14, 2018

**Read 1a. Reading Online News****Tracing the tangled tracks of humankind's evolutionary journey**

Hannah Devlin, The Guardian

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

February 11, 2018

**Read 1b. Online Referenceware****The Magical Power of Dictionaries**

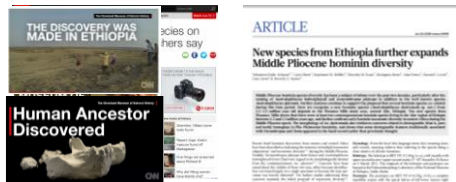
Alberto Manguel, The Chronicle of Higher Education

<https://www.chronicle.com/article/The-Magical-Power-of/242513>

May 28, 2015

**Read 1c. Immediate Science and Open Access Science**

Ancient jawbones put new species on the human family tree, researchers say, Laura Smith-Spark, CNN

<http://www.cnn.com/2015/05/28/afrika/ethiopia-fossil-hominin-ancestor/index.html>  
<http://www.cnn.com/2015/05/28/afrika/ethiopia-fossil-hominin-ancestor/index.html>  
<http://www.nature.com/nature/journal/v521/n7553/full/nature14448.html>
**2. Reflective and Observational Learners**

- Reflective and observational learners prefer to reflect, observe, view, and watch learning; they make careful judgments and view things from different perspectives



April 13, 2016

**Reflect 2a. Interpreting Interactive Graphs and Infographics**

How much rainforest in that chocolate bar?

Global Forest Watch, Nancy Harris, Octavia Payne and Sarah Mann

<http://www.globalforestwatch.org/2015/08/how-much-rainforest-is-in-that-chocolate-bar/>

Land-Use Change Emissions in Miles Driven

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

WORLD RESOURCES INSTITUTE

**Reflect 2b. Big Issue Reflections**

(Big Questions Online (BQO)), Feb 3, 2015

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

**October 6, 2016**

### Reflect 2c. What-if Reflections

What if Aaron Burr had missed Alexander Hamilton?, Thomas Fleming, CNN

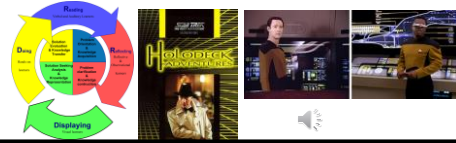
<http://www.cnn.com/2016/10/06/politics/alexander-hamilton-aaron-burr-died-missed/index.html>

What if Aaron Burr had missed Alexander Hamilton?



### 3. Visual Learners

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



### Display 3a. Virtualize Words Used

(e.g., Wordle, Taggedo, Tagul, WordSift, Word It Out)



**March 2, 2016**

### Display 3b. Weekly 1 minute Video Updates

(e.g., Pinkcasts from Daniel Pink)

<http://www.danpink.com/pinkcast/>

Pinkcast 2.

Advice from Adam Grant: Look for "disagreeable givers"



**January 8, 2017**

### Display 3c. Summary and Comparison Maps

#GeoawesomeMapOfTheDay

<https://twitter.com/geoawesome>

<https://www.instagram.com/p/2Bwv9JDAa3/>

<https://twitter.com/hashtag/GeoawesomeMapOfTheDay?src=hash>



### 4. Tactile/Kinesthetic Learners

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

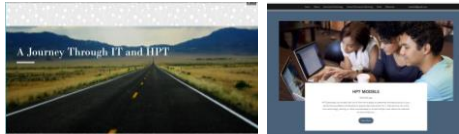




**December 12, 2017**  
**Do 4a. Online Website and Video**  
**Recaps**

**R511 Student Final Projects**

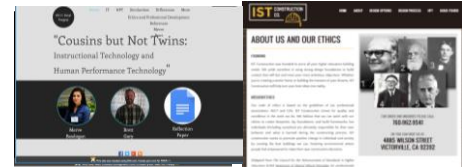
Matthew Willey: <https://sway.com/QGdiCv7p64DFBe8A?ref=Link>  
 Rachael Zeiher Kean: <https://razeiher.wixsite.com/edtechcoms>



**Do 4b. Student Website Development**

**R511 Final Projects, April 2016**

IT and HPT Comparison (Website), Doug Hsu  
<http://dougandindra.wix.com/r511finalproject>  
 IST Construction, Co.  
 Rob Elliot, Patrick Walsh, Erin Milanesi, R511, December 2016  
<http://reeliot.net/istconstruction/index.php>  
 "Cousins but Not Twins: Instructional Technology and Human Performance Technology,"  
 Merve Basdogan and Brett Gary, R511, December 2016  
<http://educbasdogan.wixsite.com/511final>



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

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



**Poll: Which Model or Framework do you Prefer?**

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



**What motivates?**

1. Tone/Climate: Psychological Safety, Comfort, Sense of Belonging
2. Encouragement: Feedback, Responsiveness, Praise, Supports
3. Curiosity: Surprise, Intrigue, Unknowns
4. Variety: Novelty, Fun, Fantasy
5. Autonomy: Choice, Control, Flexibility, Opportunities
6. Relevance: Meaningful, Authentic, Interesting
7. Interactivity: Collaborative, Team-Based, Community
8. Engagement: Effort, Involvement, Investment
9. Tension: Challenge, Dissonance, Controversy
10. Yielding Products: Goal Driven, Purposeful Vision, Ownership

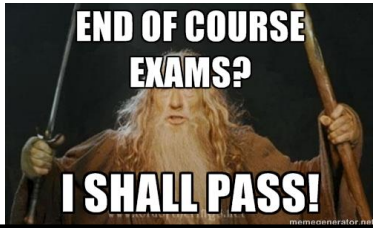


**Poll: Who now wants one of these?**  
**Starbucks**



**WHAT'S NEXT**

**Final Poll:**  
**Who is now interested in Education 20/20...?**



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

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



**Things are heating up...**



**Education 20/20 is coming within reach!**



**Remember for Education 20/20 to make an impact:**  
**"I cannot do this alone."**

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



**Any Questions or Comments?**

Slides at: [TrainingShare.com](http://TrainingShare.com)  
 Papers: [PublicationShare.com](http://PublicationShare.com)  
 Free book: <http://tec-variety.com/>  
 Email: [cjbonk@indiana.edu](mailto:cjbonk@indiana.edu)

