

Education 20/20 meets Education 3.0: Visions of Our Changing Learning World!

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Talk Overview

1. Disruption!
2. Education 20/20
3. New Roles of the Instructor
4. First and Last Principles of Instruction
5. Megatrends of Learning: Engagement, Access, and Customization (30 ways that learning is changing...)
6. Future Trends and Ideas



August 23, 2017 'Disrupt This!'

Doug Lederman, Inside Higher Ed

<https://www.insidehighered.com/digital-learning/article/2017/08/23/online-disrupt-discusses-how-technology-higher-education>



March 29, 2017 Every industrial robot takes up to 6 jobs, study finds

Steve Goldstein, MarketWatch

<http://www.marketwatch.com/story/every-6-million-jobs-at-risk-from-robots-study-finds-2017-03-29>

Video: 1:46 <http://curtbonk.com/futureandroids.html>

Video: 49-1:12: <http://curtbonk.com/futureandroids2.html>

Video: 01 to 49: <http://curtbonk.com/futureandroids3.html>

Video.01-25: <http://curtbonk.com/futureandroids4.html>

Every industrial robot takes up to 6 jobs, study finds

Published March 29, 2017 at 10:45 AM

Source: Deloitte, University of Michigan

Every industrial robot takes up to 6 jobs, study finds

Source: Deloitte, University of Michigan

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Source: Deloitte, University of Michigan



April 30, 2017

'Those Jobs Are Gone'

Steve Kolowich, The Chronicle of Higher Education

<http://www.chronicle.com/article/Who-s-Who-s-Down/239964>

'Those Jobs Are Gone'

By Steve Kolowich, Chronicle of Higher Education

A 1970s-era photograph of the actor Paul Robeson in a suit, looking serious.

Robeson was a prominent African American actor, singer, and activist.

He was known for his powerful performances and his commitment to social justice.

Robeson's career was marked by both success and adversity.

He faced significant challenges, including discrimination and political persecution.

Despite these obstacles, Robeson remained a dedicated and influential figure.

His legacy continues to inspire generations of artists and activists.

Robeson's story is a testament to the power of perseverance and the pursuit of justice.

His contributions to the arts and society are immeasurable.

Robeson's life and work continue to be studied and celebrated.

His story is a reminder of the importance of standing up for one's beliefs.

Robeson's legacy is a source of inspiration for many.

His story is a testament to the human spirit and the power of art.

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Robeson's legacy is a source of inspiration for many.

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Robeson's life and work continue to be studied and celebrated.

His story is a reminder of the importance of standing up for one's beliefs.

Robeson's legacy is a source of inspiration for many.



October 30, 2017

Report: 59% of employed data scientists learned skills on their own or via a MOOC Alison DeNisco Rayome

<https://www.techrepublic.com/article/report-59-of-employed-data-scientists-learned-skills-on-their-own-or-via-a-mooc/>

Report: 59% of employed data scientists learned skills on their own or via a MOOC

Most workers are self-motivated and have quality, but they may not have a degree in computer science to get a job, according to a new report from Higgs.

Source: Higgs, University of Michigan

Source: Higgs, University of Michigan

Source: Higgs, University of Michigan

Source: Higgs, University of Michigan

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Source: Higgs, University of Michigan



March 24, 2017**Artificial Intelligence Market in the US Education Sector 2017-2021**<http://www.researchandmarkets.com/research/51shzq/artificial>**AI Market to Grow 47.5% Over Next Four Years**

Richard Chang, Campus Technology

<https://campustechnology.com/articles/2017/03/23/artificial-ai-launches-quest-for-education.aspx>**November 10, 2017****IBM Raises the Bar with a 50-Qubit Quantum Computer****Will Knight, MIT Technology Review**<https://www.technologyreview.com/1/609451/ibm-raises-the-bar-with-a-50-qubit-quantum-computer/>

IBM Raises the Bar with a 50-Qubit Quantum Computer

Researchers have built the most sophisticated quantum computer yet, and using a process based on a new way of processing information.

By Will Knight | November 10, 2017

IBM is not alone

**March 28, 2017****Elon Musk's Neuralink wants to plug into your brain**

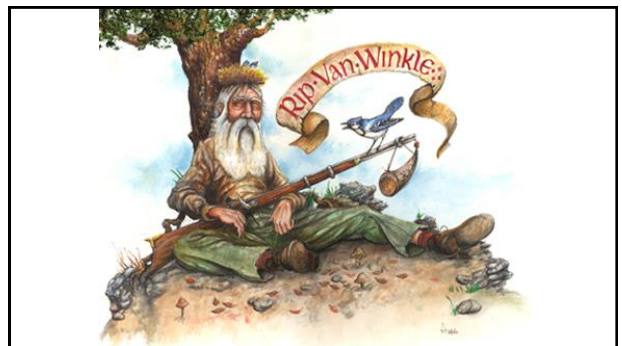
Marco della Cava, USA Today

<https://www.usatoday.com/story/tech/innovation/2017/03/27/elon-musk-neuralink-wants-to-plug-into-your-brain/9971434/>**July 11, 2017****Going 'phigital'? 4 things schools need to know about Generation Z**

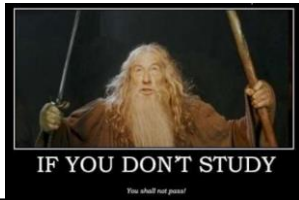
Todd Kominick, TrustEd

<http://trustedk12.com/phigital-digital-learning/>**May 15, 2017****3 must know's about the rising "phigital" student-and why their impact is enormous**

Meris Stansbury, eCampus News

<https://www.ecampusnews.com/campus-administration/education-gen-z-phigital-student/>**(Circa Confucius 551–479 BCE)**

What happens to sleeping students?



Education 20/20



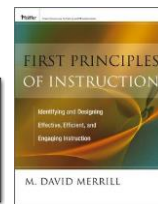
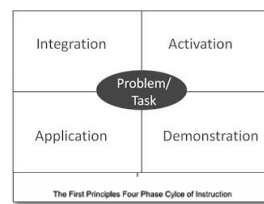
20 New Roles of the Instructor

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



Merrill's First Principles of Teaching/Instruction

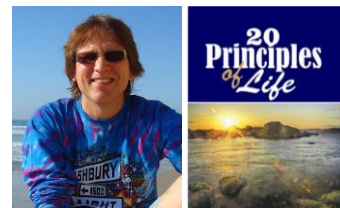
<http://travelindman.blogspot.com/2011/05/books-list-principles-of-instruction.html>



February 29, 2016
Instructional Design:
Demand grows for a new breed of academic
 The Chronicle of Higher Education, Dan Berrett
<http://chronicle.com/article/Instructional-Design/235425>



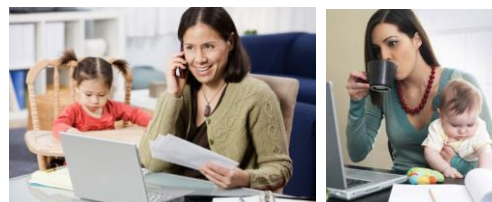
Bonk's Last Principles of Teaching/Instruction
<http://travelinedman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html>



1. The Principle of Flexibility
<http://travelinedman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html>



2. The Principle of Convenience
<http://travelinedman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html>



3. The Principle of Collegiality
<http://travelinedman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html>



Bonk's 20 "Last" Principles of Instruction
(LAST = Learning Activation System Template)
<http://travelinedman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html>

Flexibility	Support and Feedback	Choice and Options
Convenience	Spontaneity	Nontraditional Learning
Collegiality	Organization	Passion and Inspiration
Cheerfulness and Optimism	Sharing	Relevance and Meaningfulness
High Expectations	Purpose and Vision	Trial and Error (i.e., it is ok to fail)
Empowerment and Autonomy	Human Connectedness	Expanded Resources
	Cognitive Apprenticeship	#20 ???



20. ??? (what is missing)

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



Clearly... Learning is Changing!



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)

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/nis/index.nhn/fm/article/view/1625/1540>

EDUCATION 3.0

	Table 1: Educational generations in higher education		
	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, supplemented 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 rooms for student creativity; social networking outside institutional boundaries of discipline, institution, nation

September 18, 2017

Education 1.0 to 3.0

Gilly Salmon, University of Liverpool, UK

<http://www.gillysalmon.com/learningfutures.htm>



August 21, 2016

ST Future Economy Roundtable: Is Asia ready for the Fourth Industrial Revolution?

The Straits Times
<http://www.straitstimes.com/asia/is-asia-ready-for-the-fourth-industrial-revolution>



"It's quite clear that the established models of education have to change and adapt to the new environment."

June 7, 2016

Teaching refugees how to code CNN Money

<http://money.cnn.com/video/technology/2016/06/07/refugees-refugees-coding.money/index.html>

Coursera Blog
 Coursera and the U.S. Department of State Launch Coursera for Refugees

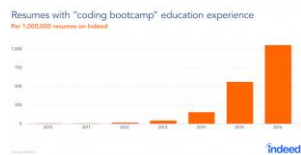


CNN Money
 Teaching refugees how to code

**May 3, 2017**

4 out of 5 Companies Have Hired a Coding Bootcamp Graduate

Sri Ravipati, Campus Technology
<https://campustechnology.com/2017/05/03/4-out-of-5-companies-have-hired-a-coding-bootcamp-graduate-also/>

**July 28, 2016**

Knod

(Per Dr. Michael Mayrath: work with employers to diagnose skills gaps, then provide a platform to deliver content to build those skills in a learn by doing experiences, real projects with employers)

<http://www.knod.net/>



Poll: Who wants one of these? Starbucks

**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. We know that breaks and interruptions after periods of focused activity actually help in learning, yet we sometimes ask our students to sit still for an hour or more with little freedom of movement. 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.

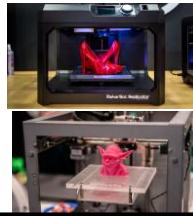
August 17, 2016 Research: 3D Printing Market to Double by 2020

Joshua Bolkan, Campus Technology

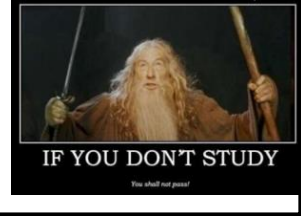
<https://campustechnology.com/articles/2016/08/17/research-3d-printing-market-to-double-by-2020.aspx>

Research: 3D Printing Market to Double by 2020

By Joshua Bolkan | 08/17/16



Clearly... Learning is Changing!



Poll: Do you remember the days before e-learning?

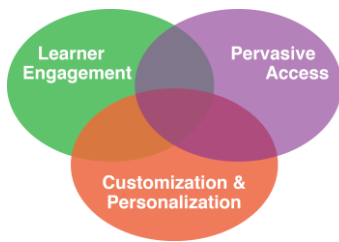


Thirty Ways Learning is Changing...

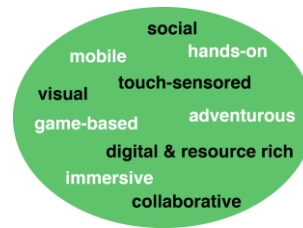
(i.e., it's more informal, video-based, ubiquitous, collaborative, self-directed, global, mobile, open, massive, etc.)



30+ Ways Learning is Changing: The Mega Trends



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



Learning is More Social



February 7, 2017 (Engagement)

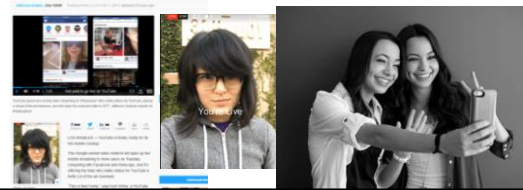
Learning is More Social

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



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/rf-anniversary>

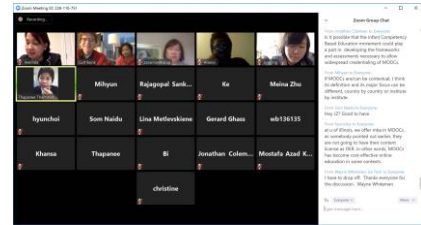


February 15, 2017 (Engagement)

Learning is More Synchronous

Zoom Weekly Guests, Maria Solomou, Sept. 20, 2017

Personal Zoom link: <https://IU.zoom.us/j/8123222878>



July 19, 2017

HoloLens Assists in Live Surgery

Tommy Palladino, Next Reality

<https://hololens.realitynews.com/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.realitynews.com/hololens-assists-live-surgery-9178887/>



July 19, 2017

Modern medicine breathes new life into virtual training

<https://www.usatoday.com/videos/tech/2017/07/18/modern-medicine-breathes-new-life-into-virtual-training/13640736956/>

Videos

2:34 (entire video): <http://curtbonk.com/vr-medicine4b.html>

.01-.21: <http://curtbonk.com/vr-medicine.html>

.37-.56: <http://curtbonk.com/vr-medicine2.html>

.57-1.29: <http://curtbonk.com/vr-medicine3.html>

1:30-2:27: <http://curtbonk.com/vr-medicine4.html>



May 7, 2015 (Engagement)
Learning is More Adventurous
Aaron Doering, Chasing Seals, TEDx
<http://chasingseals.com/>
<https://twitter.com/chasingseals>



August 8, 2017
Learning is More Game-Based
ShortSims
<http://www.shortsims.com/>
 Clark Aldrich clark@clarkaldrichdesigns.com



February 17, 2016 (Engagement)
Learning is More Mobile
World's Cheapest Smartphone at \$3.67

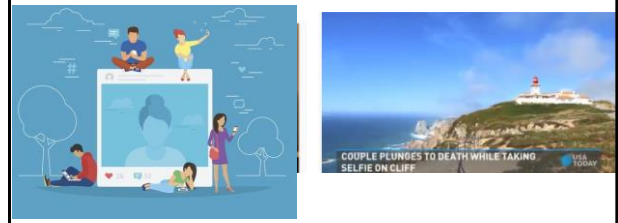
<https://m.facebook.com/hanbing/launched76fd528...in...c526>
https://m.facebook.com/story.php?story_fbid=1015398901211279&id=102527938797
<http://gadgets.ndtv.com/videos/trend-251-launched-as-world-s-cheapest-smartphone-at-rs-251-40404>



Samsung is hoping to have 10,000 apps by the time the Gear S3 launches this fall.

August 4, 2017
When our smartphones leave us out of touch
Brett Molina, USA Today

<https://www.usatoday.com/story/tech/news/2017/08/04/smartphone-distracted-walking-while-parenting-we-out/111452014>



Learning is More Free
Want "FREE" engagement?
How about
"Adding Some TEC-VARIETY"?
<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



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



May 4, 2016 (Access)
Learning is More Video-Based
 What I Learned at the ASU GSV Summit

Kenneth Green, Inside Higher Ed

July 18, 2016 (Access)

Survey: Video Usage in Ed Continues Ramp-up,
 Dian Schaffhauser, THE Journal

ASU GSV Summit



33 Interactive Thought Leader Interviews from the ASU GSV
 Innovation Summit



Learn Anything
 Using the World's Best Resources



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

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



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-species-dinosaur-named-ghostbusters/40475468/>

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

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

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



September 21, 2017

Learning is More Immediate...

Scientists just discovered the first brainless animal
 that sleeps

Sara Kaplan, Washington Post

https://www.washingtonpost.com/news/animal-world/wp/2017/09/21/scientists-just-discovered-the-first-animal-without-a-brain-that-sleeps/?hpid=hp_hp-top-table-main-brainless%3Ahomepage%2Ftcm%3A42113562a311



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)

August 9, 2017
Learning is More Immediate...

The biggest dinosaur in history: Archaeologists reveal
 122ft long PATAGOTITAN

Titansaurus: the largest animals ever to walk the Earth

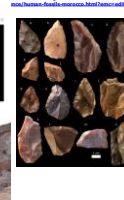
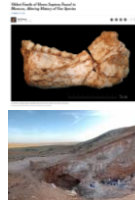
<https://www.theguardian.com/science/2016/jan/17/dinosaur-tyrannosaurus-largest-animal-ever-walk-earth-argentina>

https://www.youtube.com/watch?v=8F0H8A_4_w



June 7, 2017
Learning is More Immediate...

Oldest Fossils of Homo Sapiens Found in
 Morocco, Altering History of Our Species,
 Carl Zimmer, The New York Times



Learning is More Online (Access)

June 15, 2014

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

http://money.com/2014/06/15/news/economy/starbucks-scholar-education/index.html?hpid=hp_12

<http://www.primetime.com/2014/06/26/starbucks-to-provide-free-college-education-to-thousands-of-workers.html>



May 10, 2017 Learning is More Online (Access)

50-year-old Bible college in Colorado Springs to sell campus, switch to online-only instruction, Debbie Kelley, The Gazette

<http://www.thegazette.com/35-year-old-bible-college-to-sell-campus-switch-to-online-only-instruction/article1662879>

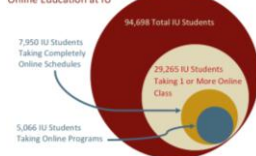
50-year-old Bible college in Colorado Springs to sell campus, switch to online-only instruction

<http://www.thegazette.com/35-year-old-bible-college-to-sell-campus-switch-to-online-only-instruction/article1662879>

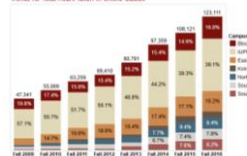


November 1, 2017 Indiana University, Office of Online Education

Fall 2017
Online Education at IU



Trends for Total Hours Taken in Online Classes



*Starting in fall 2007, ACP students are excluded from counts.

2016

Enrollment Report 2016, WCET

Poulin, R. and Straut, T. (2016). WCET Distance Education Enrollment Report 2016.

Retrieved from WICHE Cooperative for Educational Technologies website <http://wcet.wiche.edu/sites/default/files/WCETDistanceEducationEnrollmentReport2016.pdf>

Enrollment Report 2016

Using U.S. Department of Education Data

Taking at Least One Distance Course...

2002 1.4 Million Students

2008 4.6 Million Students

2014 5.8 Million Students

Distance Education is No Longer an Institutional Accessory



One in Four
Students Are
Taking at Least One
Distance Course

WCET WICHE Cooperative for Educational Technologies

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



Phase I, 1994:
THE AGE OF
PORTALS AND
PAGES (NETSCAPE
GOES PUBLIC).



Phase II, 2001:
THE AGE OF
OPENNESS
(MIT OCW &
WIKIPEDIA BORN).



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



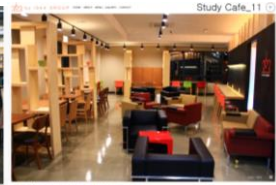
Phase IV, 2015
THE AGE OF
PERSONALIZATION.

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

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=244

http://363.co.kr/wp/?wp_gallery=study-cafe_11



May 7, 2014 (Access)

Learning is More Global

CNA - Speaking Exchange (video chats)

<https://www.youtube.com/watch?v=5-5E1wpFOk>

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.



February 22, 2017 (Access)

Learning is More Informal

Digital citizenship lessons from a 9-year-old with 18,000

Twitter followers, Alan November, eSchool News

<http://www.eschoolnews.com/2017/02/22/av-digital-citizenship-twitter/>

<http://www.eschoolnews.com/2017/02/22/av-digital-citizenship-twitter/>

<https://twitter.com/thelittlekingdom>



Digital citizenship lessons from a 9-year-old with 18,000 Twitter followers



BLC17 Keynote Speakers

Alan November, eSchool News

Alan November, eSchool News

Alan November, eSchool News

Alan November, eSchool News

Alan November, eSchool News

Alan November, eSchool News

Alan November, eSchool News

Alan November, eSchool News

Alan November, eSchool News

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/news/246551-shubham-jaglan-overwhelmed-by-dream-return-home-after-double-world-championship>

<http://sports.ndtv.com/golf/news/246551-shubham-jaglan-overwhelmed-by-dream-return-home-after-double-world-championship>



June 13, 2016 (Access)

Learning is More Free and Open

Nine-Year-Old Anvitha Vijay is the Youngest

Developer at WWDC (age 9)

(Apple Worldwide Developers Conference), Gadgets

<http://www.955mag.com/2016/06/13/anvitha-vijay-is-the-youngest-developer-at-wwdc-2016-8484151b>

<http://www.955mag.com/2016/06/13/anvitha-vijay-is-the-youngest-developer-at-wwdc-2016-8484151b>



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-New-He-Wants-to-Widen-Their-Impact/236362>

THE CHRONICLE OF HIGHER EDUCATION

THE CHRONICLE OF HIGHER EDUCATION

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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>



April 6, 2017 (Access) Learning is More Free and Open

Indiana University's eText program saves students over \$3.5 million (Program makes digital textbooks cost less and do more, grows 56 percent),
Indiana University Newsroom

<https://itnews.iu.edu/articles/2017/indiana-university-stext-program-saves-students-over-3.5-million.php>

INSIDE HIGHER ED

NEWS OPINION

Back to Inside Digital Learning

OpenStax Saved 1 Million Students \$70 Million

By Vicki Laskowski / August 3, 2017

March 27, 2017 (Access) Learning is More Free and Open

Beyond Free: Harnessing the resonant value in open and collaborative practices for the public good

David Porter, CEO, eCampus Ontario,

Open Education Ontario Summit

https://www.slideshare.net/David_Porter

<https://www.oecs.ca/events/open-education-ontario-summit>

Early Adopter and Adapter
Dr. Takashi Sato Physics KPU

Students: 240
Previous textbook: \$107
OpenStax textbook: \$0
Student savings: \$40,000

1 course
1 institution
4 terms

The Numbers in BC

151 Open Textbooks
720 Adoptions
31 Institutions
20,312 Students

\$1,998,978 - \$2,517,217

March 27, 2017 (Access) Learning is More Free and Open

Beyond Free: Harnessing the resonant value in open and collaborative practices for the public good

David Porter, CEO, eCampus Ontario,

Open Education Ontario Summit

https://www.slideshare.net/David_Porter

<https://www.oecs.ca/events/open-education-ontario-summit>

Why OPEN?

There is a direct relationship between textbook costs and student success

- 65% do not purchase textbooks at all (save cost due to cost)
- 20% take books course due to textbook cost
- 12% choose not to register for a course due to textbook cost
- 10% regularly go without textbooks due to cost
- 10% have dropped a course due to textbook cost
- 10% have withdrawn from a course due to textbook cost

Source: 2015 Student Survey by eCampus Ontario

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.onlinelearningnews.com/104921/openingthetextbook2016.pdf>

AWARENESS OF OPEN TEXTBOOKS: 2015-16

- Very aware
- Aware
- Somewhat aware
- Not aware

OER Use to Triple Over Next 5 Years

Open educational resources (OER) are rapidly gaining momentum in higher education with the potential to significantly reduce the cost of textbooks. The use of OER for supplemental learning material is expected to triple in size in and among four categories by 2020.

These findings and more were published in a report from the Center for Open Learning (COL) titled "Opening the Textbook: Educational Resources in U.S. Higher Education, 2015-2016".

September 19, 2017 Learning is More Free and Open

Reasons to Open Source Your Syllabus

Anatasia Salter, The Chronicle of Higher Education

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

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

ProfChatter

Reasons to Open Source Your Syllabus

share.

The Open Syllabus Project

OSP wins a Digital Science Catalyst Grant!

We're pleased to announce that we've won a Catalyst Grant for innovative research and teaching projects, awarded by Digital Science. The grant will support the expansion of the OSP digital syllabus, exploring new formats, formats, and business models to help us reach more people.

January 15, 2016

Wikipedia is 15!

Scott McLemee, Inside Higher Ed

<https://www.insidehighered.com/digital-learning/article/2016/01/15/wikipedia-15>

Wikipedia at 15

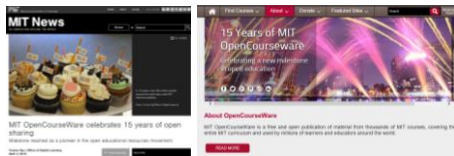
Celebrate or hate it as you will, writes Scott McLemee, Wikipedia has metamorphosed from its beginnings as a gangly cultural interloper into the de facto reference work of first resort.

January 15, 2016
by Scott McLemee

Wikipedia came into the world 15 years ago today -- and, man, what an ugly baby. The first snapshot of it in the Internet Archive is from late March of 2001, when Wikipedia was already 10 weeks old. At that point, it claimed to have more than 3,000 pages, with an expressed focus of reaching

April 4, 2016 MIT OpenCourseWare is 15!

<http://ocw.mit.edu/about/15-years/>



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



**"Anyone can now learn anything
from anyone at any time."**

SKILL SHARE Learn Share

Learn anything from
anyone, anywhere.



Join our first learning and sharing session in your city.

Learning is More Direct from Experts



June 20, 2016 (Access) Learning is More Direct from Experts (e.g., The Expert Café)

<http://expertscafe.com/>



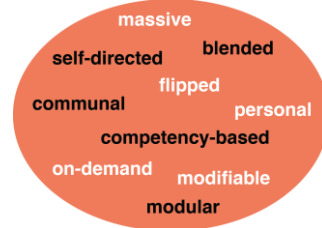
September 25, 2017

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

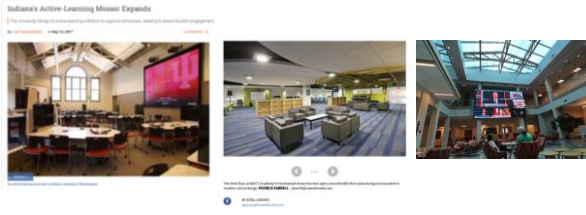


May 12, 2017 (Customization)

Learning is More Modifiable

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

<https://www.campus-technology.com/2017/05/12/future-of-collaboration-spaces-encompasses-video-interactive-mobile/>



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/496950601/>

Buildings That Foster Collaboration

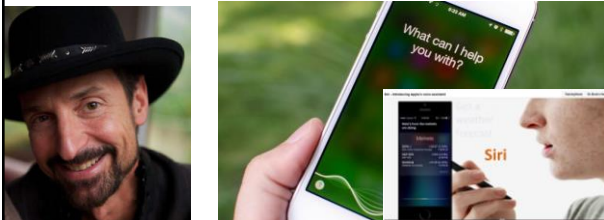


Social spaces, like this one in an interdisciplinary-science building at Arizona State U., don't qualify for federal reimbursement of research-overhead costs. So now "we don't build any single-purpose space," says the university architect.

October 14, 2011

Learning is On Demand
Siri (co-founder Tom Gruber)

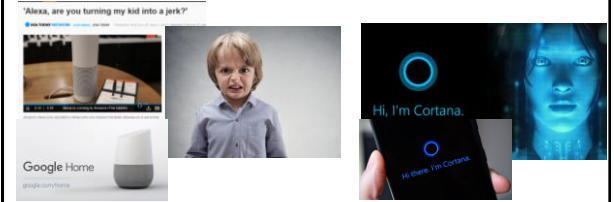
<http://www.imore.com/siri>



June 7, 2017

Learning is On Demand
'Alexa, are you turning my kid into a jerk?'
Josh Hafner, USA Today

<https://www.usatoday.com/story/tech/nation-now/2017/06/07/alexa-you-keeping-my-kid-into-jerk/275840001/>



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



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>

Universities tap growth of craft beer, offer classes



February 16, 2017 (Customization) Learning is More Communal

Building Global Community, Marc Zuckerberg, Facebook

<https://www.facebook.com/notes/mark-zuckerberg/building-global-community/10103508221158471/>

Mark Zuckerberg publishes manifesto to save the world



Building Global Community

Facebook

100 comments

Like and comment to support the world, we often discuss products and building and updates on our business. Today I want to focus on the most important question of all: how can we build the world we all want?



August 12, 2016 (Customization) A Life of Happiness and Fulfillment

Indian School of Business, Rajagopal Raghathan

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

2:31 Happiness video: <http://curtbonk.com/happiness.html>



A Life of Happiness and Fulfillment

Indian School of Business, Rajagopal Raghathan

This course, based on the award-winning book A

Business and the Indian School of Business

developing the Indian School of Business

developing the Indian School of Business

offer a novel and practical approach for teaching a

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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-MOOCs-Counting-One-2233977?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.

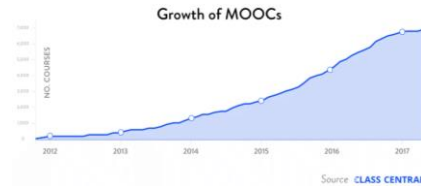


Jima Ngei: "I had this unrelenting fear that this miracle of free access might evaporate soon."

October 13, 2017**Udacity Official Declares MOOCs 'Dead'
(Though the Company Still Offers Them)**

Clarissa Shen, Vice President & International Executive, Udacity

Jeffrey R. Young, Ed Surge

<https://tinyurl.com/yaw4kbyr>**August 17, 2017****By the Numbers: MOOCs in 2016
Class Central, Dhawal Shah**<https://www.class-central.com/report/mooc-stats-2016/>**Cumulative Growth in
Number of MOOCs, 2011-17**

Almanac 2017 | August 13, 2017 PREMIUM

Month	Number of MOOCs
October 2011	3
June 2012	34
December 2012	108
June 2013	446
December 2013	859
June 2014	1,214
December 2014	2,090
June 2015	2,940
December 2015	4,207
June 2016	5,397
December 2016	6,543
June 2017	7,485

**Top 5 MOOC Providers by
Number of Registered Users, 2017**

Almanac 2017 | August 13, 2017

Rank	Provider	Registered users
1.	Coursera (U.S.)	27 million
2.	edX (U.S.)	11 million
3.	XuetangX (China)	7 million
4.	FutureLearn (Britain)	6.3 million
5.	Udacity (U.S.)	6 million

**August 7, 2017
MOOCs for Credit****FutureLearn and Coventry University to Roll
Out 50 Online Degrees**

Class Central, Dhawal Shah

<https://www.class-central.com/report/futurelearn-coventry-university-roll-50-online-degrees/>

Degree	Provider	University	Cost
MS Computer Science	Udacity	Georgia Tech	\$6,600
MS Analytics	edX	Georgia Tech	\$10k
MBA	Coursera	University of Illinois	\$22k
MS CS Data Science	Coursera	University of Illinois	\$19.2k
MS Accounting	Coursera	University of Illinois	\$27.2k
Masters in Innovation and Entrepreneurship	Coursera	HEC Paris	€20k
Cyber Security (Masters)	FutureLearn/Deakin University		£24k
Development and Humanitarian Action (Masters)	FutureLearn/Deakin University		£24k
Professional Practice Information Technology (Masters)	FutureLearn/Deakin University		£24k

**December 25, 2016
Class Central**<https://www.class-central.com/report/mooc-stats-2016/>**58M**
Students**700+**
Universities**6850**
Courses

MOOCs in 2016: Analysis by Class Central

March 3, 2017 (Customization) edX Expands MicroMasters Programs With Data Science ("nanodegrees") Digital Leadership and More, Sri Raviipati, Campus Technology

<https://campustechnology.com/Articles.aspx?CID=3321331&ArticleID=edX-expands-micromasters-programs-with-data-science-digital-leadership-and-more>

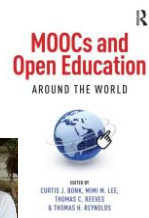
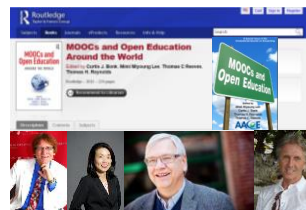
edX Expands MicroMasters Programs With Data Science, Digital Leadership and More

By Sri Raviipati / 03/03/17

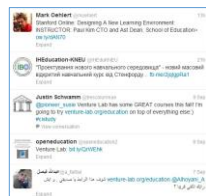


MOOCs and Open Education Around the World

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



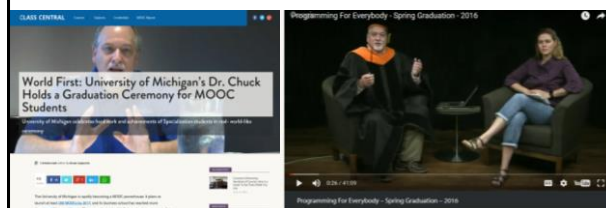
July 1, 2015 (Customization) Chapter 14: Creating a Temporary Spontaneous Mini-Ecosystem through a MOOC Paul Kim and Charlie Chung, Stanford University Figure 2. Twitter thread announcing the MOOC



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/dc-chuck-graduate-ceremony-python-specialization/>



June 15, 2017 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/report/mooc-providers-04x/>



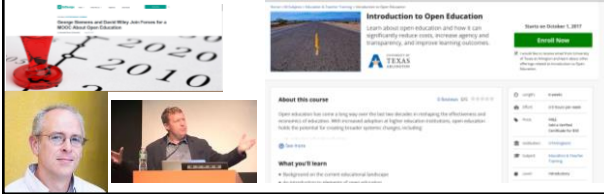
June 15, 2017 Massive List of MOOC Providers Around The World (Where to Find MOOCs: The Definitive Guide to MOOC Providers) ThaiMOOC / Thailand Class Central, Dhawal Shah

<https://www.class-central.com/report/mooc-providers-04x/>



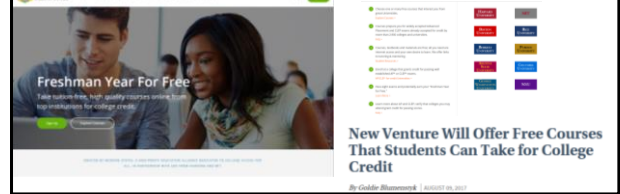
October 1, 2017 Introduction to Open Education edX

<https://www.edx.org/course/introduction-open-education-ufsfptexa-fib-ox>



August 9, 2017 Modern State Education Alliance

<https://modernstates.org/>



Let's Review: Learning is Changing... (i.e., it's more informal, video-based, ubiquitous, collaborative, self-directed, global, mobile, open, massive, etc.)

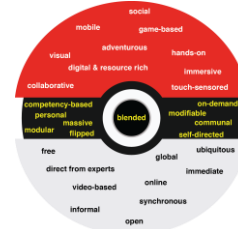


Frank Basile, an aircraft technician, took an MITx course on circuits and electronics to increase his knowledge.



Joe Alfonso, a financial adviser from Oregon, is taking the online finance course as a "refresher."

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



WHAT'S NEXT

January 30, 2017 1. Professor Einstein PDA's

<http://www.usatoday.com/story/tech/2017/01/30/robotic-barista-now-serving-really-fast/95888780/>

When the Teaching Assistant Is a Robot



Twenty-Four Seven Tutoring



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-barista-now-serving-really-fast/95888780/>

February 27, 2017
2. World Knowledge
Refreshment Stations

http://www.thefivingmoon.com/43ancients/527files/Library_Alexandria.html



February 27, 2017
3. Robot Collaborators/Partners

http://www.thefivingmoon.com/43ancients/527files/Library_Alexandria.html



June 3, 2016
4. Explosion of Virtual Reality
VR Lets Med Students Experience What
It's Like To Be 74
 Elyse Wanshel, Huffington Post
<http://ht.ly/hSpe300XEPJ>

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

They said we were too old for the average med student, who is 24.

By Elyse Wanshel

June 3, 2016

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

February 27, 2017
5. Web Conferencing
 Global Learning Partner or PBL Team Selection Walls

http://www.thefivingmoon.com/43ancients/527files/Library_Alexandria.html

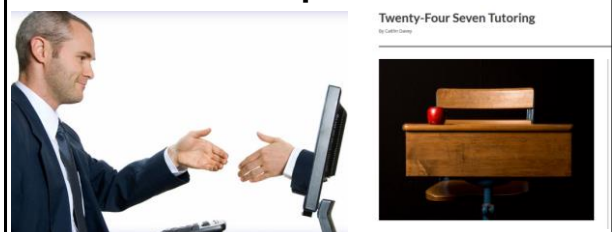


September 22, 2017
6. Binge Learning: What Online
Education Can Learn from Netflix
 Henry Kronk, E-learning Inside News

<https://theumlaut.com/binge-learning-is-online-education-s-killer-app-84dx18f8ae76>



June 11, 2017 (New Learning Times)
7. Rise of Super E-Mentors



Twenty-Four Seven Tutoring

By Lillian Dancy



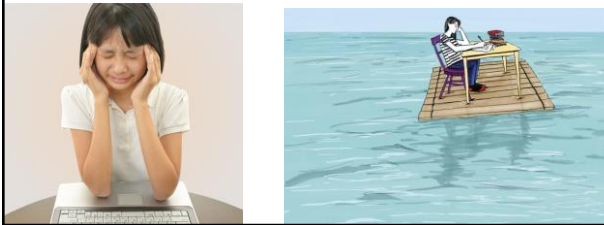
8. Instructional Designer Morphs into Learning Environment Engineer



9. Café Classroom and Café Connectedness



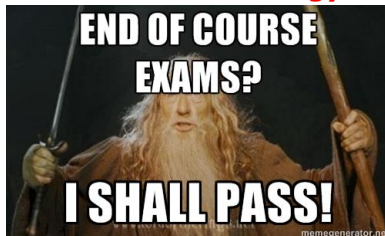
Poll #2: Does all this give you a headache?



**Not Me...I am happy!
and...
My minions are happy!**



Poll #3: Who is now interested in Educational Technology...?



We are entering a jumping off point...

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



Things are heating up!



**Educational Technology is
coming within reach!**



**Remember for Ed Tech and Instructional Tech
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
Papers: PublicationShare.com
Free book: <http://tec-variety.com/>
Email: curt@worldisopen.com

