

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

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Talk Overview

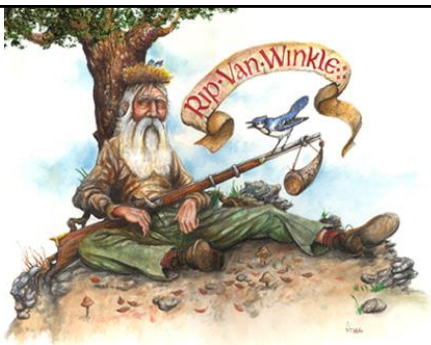
1. Education 20/20 and Education 3.0
2. Artificial Intelligence vs. Intelligence Augmentation
3. The Evolution of E-Learning
4. Megatrends of Learning: Engagement, Access, and Customization
(30 ways that learning is changing...)
5. Future Trends and Ideas



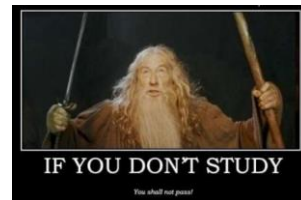
(Circa Confucius 551–479 BCE)



Academos
Plato Circa 428–347 BCE



**What happens to
sleeping students?**

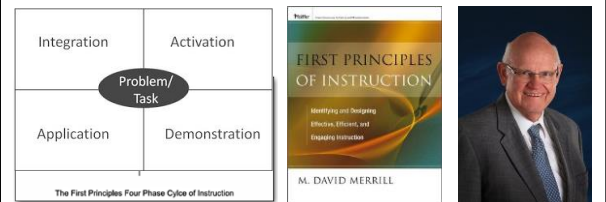


Education 20/20



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>



5. The Principle of High Expectations

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



6. The Principle of Choice and Options

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



8. The Principle of Support and Feedback

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



11. The Principle of Sharing

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



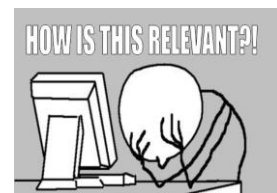
12. The Principle of Nontraditional Learning

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



14. The Principle of Relevance and Meaningfulness

<http://travelledman.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://travelmedman.blogspot.com/2011/09/bonks-test-principles-of-instruction.html>



16. The Principle of Expanded Resources

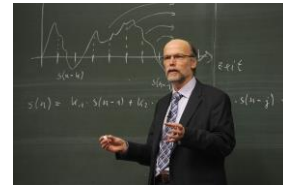
<http://travelmedman.blogspot.com/2011/09/bonks-test-principles-of-instruction.html>



Learning is Changing...



Education 3.0?



"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/issue/index.nhn/fm/article/view/1625/1540>

EDUCATION 3.0

Table 3: Educational generations in higher education			
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 freer/open 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 traditional boundaries of discipline, institution, nation

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."

January 14, 2016
The Fourth Industrial Revolution: What it means, how to respond
 Klaus Schwab, Founder and Executive Chairman, World Economic Forum
<https://www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/>
 (Ubiquitous, mobile, supercomputing, artificially-intelligent robots, self-driving cars, neuro-technological brain enhancements, genetic editing, etc.)
<http://www.trainingshare.com/fourth-industrial-revolution-video-clip-about-lab/>

Navigating the next industrial revolution

Revolution	Year	Information
1	1784	Steam, water, mechanical production equipment
2	1870	Division of labour, electricity, mass production
3	1969	Electronics, IT, automated production
4	?	Cyber-physical systems



August 15, 2016
The Maker Movement in Education: A New Global Transformation
 Paul Kim, ICT in Education, UNESCO
<http://www.unesco.org/education/ict-online-resources/databases/ict-in-education-databases/item/article/the-maker-movement-in-education-a-new-global-transformation/>




August 17, 2016
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

The 3D printing market will hit \$35.4 billion in 2020, according to a new report from International Data Corp. (IDC). That's more than double the revenue generated for this year and would translate a 34.1 percent compound annual growth rate over the course of the period forecast.






April 13, 2016
The Fourth Industrial Revolution: What it means, how to respond
 Klaus Schwab, Founder and Executive Chairman, World Economic Forum
<http://www.trainingshare.com/fourth-industrial-revolution-video-clip.php>
<http://www.tubechop.com/watch/8280981>





The world is really open to learning.

May 19, 2016
Pepper the robot needs U.S. programmers, Marco della Carva, USA Today
<http://www.usatoday.com/story/tech/news/2016/05/18/people-calling-all-android-robot-programmers/8446177/>
 Usual internal link: <http://trainingshare.com/usa2.html>
 New download link: <https://www.dropbox.com/s/hxuwgqvaj20olv/pepper-the-robot2.mp4?dl=0>

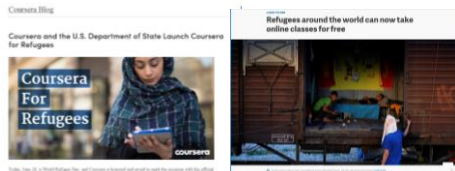



June 7, 2016
Teaching refugees how to code, CNN Money
<http://money.cnn.com/video/technology/2016/06/07/recorded-future-refugees-code.commonmoney/index.html>

June 20, 2016**Coursera on a Mission to Help Refugees**

Lauren Camera, US News and World Report

<http://www.usnews.com/news/articles/2016-06-20/coursera-on-a-mission-to-help-refugees>**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:**

Read any good books lately detailing this shift?

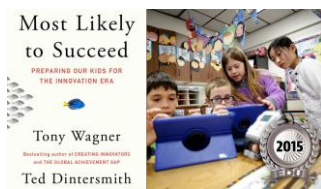


Grit: The Power of Passion and Perseverance
Angela Duckworth (2016)

**Most Likely to Succeed (2015):**

Preparing Our Kids for the Innovation Era

Tony Wagner and Ted Dintersmith

<http://www.tonywagner.com/1933>

Big Magic (2015):
Creative Living Beyond Fear

Elizabeth Gilbert

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

Creative Schools (2015): The Grassroots Revolution That's Transforming Education

Sir Ken Robinson

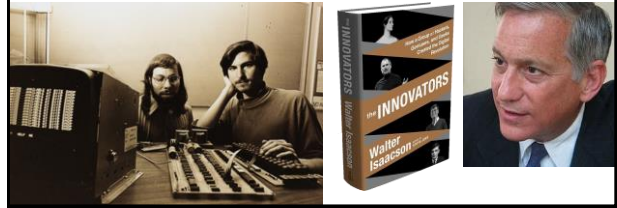
<http://sirkenrobinson.com/creative-schools-the-grassroots-revolution-thats-transforming-education/>



The Innovators: How a group of hackers, geniuses, and geeks created the digital revolution. New York: Simon & Schuster.

Walter Isaacson (2014)

<http://books.amazon.com/hunter.com/The-Innovators/Walter-Isaacson/9781475708899>



Machines of Loving Grace: The Quest for Common Ground Between Humans and Robots. HarperCollins.

John Markoff (2015)

<http://www.amazon.com/Machines-Loving-Grace-Common-Between/dp/0062266683>



Poll #7: What if you read these books?



Artificial Intelligence John McCarthy, Stanford AI Lab

<http://www.amazon.com/Machines-Loving-Grace-Common-Between/dp/0062266683>

John
McCarthy

- 1955: Develop the phrase "Artificial Intelligence"
- 1959: Programs with Common Sense
- 1960: First LISP implementation
- 1971: Turing Award Recipient



March 14, 2016 Artificial Intelligence and Robots Paul Basken, The Chronicle of Higher Education

<https://www.chronicle.com/article/Artificial-Intelligence-and-Robots/237500>

Behind a Computer's Surprise Victory,
Hints of Global Economic Upheaval

By Paul Basken | MARCH 12, 2016



Forget the robots — here come the geniuses!



Intelligence Augmentation and Amplification

Douglas Engelbart's "The Mother of All Inventions" (1968)

Augmentation Research Center (ARC)

(The live demonstration featured the introduction of the computer mouse, video conferencing, teleconferencing, hypertext, word processing, hypermedia, object addressing and dynamic file linking, bootstrapping, and a collaborative real-time editor.)
<http://www.amazon.com/75c300xep3-grace-common-between/dp/0062266863>



Engelbart's prototype of a computer mouse, as designed by Bill English from Engelbart's sketches.



June 10, 2015

Augmented reality promises 'superpowers', and people are listening

The USA Today, Marco della Cava

<http://www.usatoday.com/story/tech/2015/06/10/lets-see-what-augmented-reality-can-do/27817761/>
<http://www.youtube.com/watch?v=aTHCOPayua>



Letsee is an AR app from a South Korea consumers to scan a product and see reviews instantly overlaid.



June 3, 2016

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

Elyse Wanshel, Huffington Post

<http://ht.ly/bSpe300XEPJ>

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

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



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

April 10, 2016

Virtual reality tested by NFL as tool to confront racism, sexism

Marco della Cava, USA Today

<http://www.usatoday.com/story/tech/news/2016/04/10/virtual-reality-tested-tool-confront-racism-sexism/82624804/>



One VR diversity demo places the user in the body of an African-American woman as a white male avatar gets aggressive mere feet away. (In one Stanford VR demo, subjects are made to feel what it's like to be homeless, as in this scene where the user is transported into the body of a woman riding the bus with a few possessions.)

Knowledge Navigator (1987)

Apple Computer

<http://www.youtube.com/watch?v=chb4A2F6w6c>



October 14, 2011

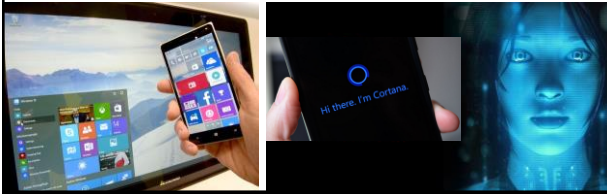
Siri (co-founder Tom Gruber)

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



August 22, 2016**Microsoft acquires AI assistant start-up Genie**

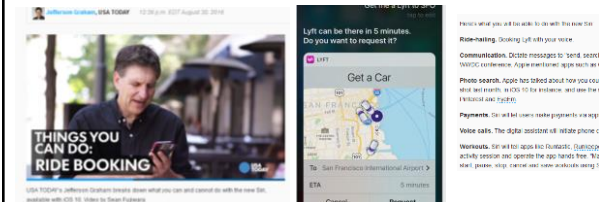
Marco della Cava, USA Today (Cortana)

<http://www.usatoday.com/story/tech/news/2016/08/22/microsoft-acquires-ai-assistant-startup-genie/91100932/>**May 9, 2016****Personal Digital Assistants (PDA)**

Personal digital assistants are on the rise (and they want to talk) USA Today, Edward Baig (i.e., Google codename of "Chirp"), Elizabeth Weise, USA Today

<http://www.usatoday.com/story/tech/news/2016/05/09/personal-digital-assistants-are-on-the-rise/84122461/>
<http://www.usatoday.com/story/tech/news/2016/05/09/personal-digital-assistants-are-on-the-rise/84122461/>
**August 30, 2016****New Siri to work with apps in iOS 10, but not all**

Jefferson Graham, USA Today

<http://www.usatoday.com/story/tech/news/2016/08/30/new-siri-work-apps-ios-10-but-not-all/9418482/>**August 5, 2015**
Shubham Jaglan (10 years old) Overwhelmed by "Dream" Return Home After Double World Championship
Disha Chopra, NDTV Sports
<http://www.ndtv.com/golf/shubham-jaglan-overwhelmed-by-dream-returns-home-after-double-world-championship/14122461/>
<http://www.ndtv.com/golf/shubham-jaglan-overwhelmed-by-dream-returns-home-after-double-world-championship/14122461/>
**April 20, 2015**
250 MOOCs and Counting: One Man's Educational Journey, Chronicle of Higher Education
<http://chronicle.com/article/250-MOOCsCounting-One/229397/?cid=at>

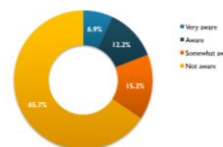
If the MOOC movement has faded, nobody told Jima Ngei. Mr. Ngei, who lives in Port Harcourt, Nigeria, has completed and passed 250.



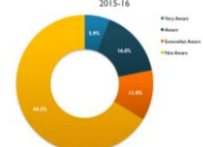
Jima Ngei: "I had this unrelenting fear that this miracle of free access might evaporate soon."

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.babsonsurveyresearchgroup.com/reports/opening-the-textbook-2015-16.pdf>


AWARENESS OF OPEN TEXTBOOKS: 2015-16



AWARENESS OF OPEN EDUCATIONAL RESOURCES AND CREATIVE COMMONS: 2015-16

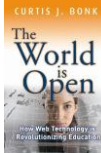


The World is Open: How Web Technology Is Revolutionizing Education

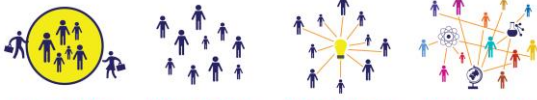


TEN OPENERS: (WE-ALL-LEARN)

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



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.

January 15, 2016 Wikipedia is 15!

Scott McLemee, Inside Higher Ed
<http://www.insidehighered.com/digital-learning/article/2016/01/15/wikipedia-15-years>



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 hope of reaching

April 4, 2016 MIT OpenCourseWare is 15!

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




MIT OpenCourseWare

MIT OpenCourseWare is a free and open publication of selected from thousands of MIT courses, covering the entire MIT curriculum. It is the largest and most comprehensive collection of open educational resources in the world.

August 6, 2016 The Web is 25!

Happy (sort of) birthday, World Wide Web!
Erica Fink and Jonathan Tortora, CNN Money (Tech)
<http://info.cern.ch/> (First website)
<http://www.cnn.com/2016/08/05/technology/world-wide-web-25-years-old/index.html>



World Wide Web

THE WORLD WIDE WEB BEGINS ON MARCH 12, 1989

1971 Email is 35 years old!

Raymond Tomlinson, inventor of modern email, dies, USA Today (March 7, 2016)
<http://www.usatoday.com/story/tech/2016/03/07/raymond-tomlinson-inventor-modern-email-dies/8142454/>

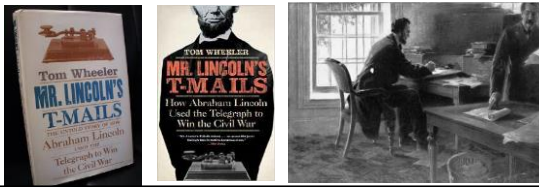
Raymond Tomlinson, inventor of modern email, dies



Ray Tomlinson, the man who is credited with creating the first email, died on March 7, 2016, at the age of 75.

Invented: May 24, 1844 150 Years since Lincoln needed the Telegraph (T-Mail)

Mr. Lincoln's T-Mails: How Abraham Lincoln Used the
Telegraph to Win the Civil War, Tom Wheeler (2008).

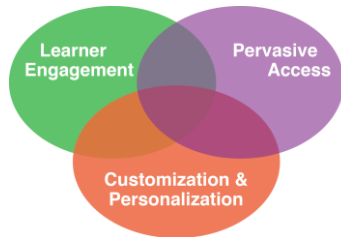


Thirty Ways Learning is Changing...

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



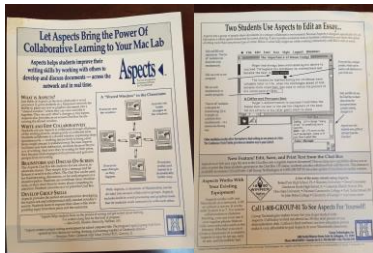
30+ Ways Learning is Changing: The Mega Trends



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



Decades of Online Collaboration (e.g., Aspects...circa 1991—25 years ago)



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

https://m.facebook.com/hacking/launched?refid=528_m_-%26%26https://m.facebook.com/story.php?story_fbid=10153360601231579&id=1025427830797
<http://gadgets.ndtv.com/videos/freedom-251-launched-as-world-s-cheapest-smartphone-at-rs-251-604002>



September 7, 2016 (Engagement)

Learning Apps - Personalized Interfaces for Performance

Elliott Masie's Learning TRENDS; trends@masie.com

Personalized for an employee based on their development goals, competency gaps and changing skill/information matrix in the workplace. A Learning App could provide a just in time set of content, context, collaboration connections, coaching sets and real time feedback.

Learningpool: <https://www.learningpool.com/services/apps-for-learning>



August 31, 2016 (Engagement)

Samsung ticks forward with new Gear S3 smartwatch

Edward C. Baig and Eli Blumenthal, USA TODAY

<http://www.usatoday.com/story/tech/2016/08/31/samsung-gear-s3-smartwatch/9564266/>



Samsung Pay on the Gear S3. (Photo: Eli Blumenthal, USA TODAY)

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

August 23, 2016 (Engagement)

Reef Videoconferencing

(Great Barrier Reef, Australia)

<http://www.preef.com.au/education/at-reef-hq-queue/reef-videoconferencing>



July 14, 2016 (Engagement)

Shindig

<http://events.shindig.com/event/ttf-wheeler>



July 22, 2016 (Engagement)

When Pokémon Goes to Campus: The Good, the Bad, and the Ugly

Gabriel Sandoval, Chronicle of Higher Education



Pokémon Go players converged last week on the U. of Nebraska at Lincoln's Memorial Stadium, which officials had opened to the animated-monster hunters. The hit augmented-reality game has prompted many colleges to jump on the bandwagon.

May 7, 2015 (Engagement)

Learning is More Adventurous

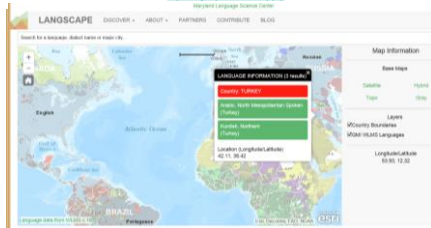
Aaron Doering, Chasing Seals, TEDx

<http://chasingseals.com/>

<https://twitter.com/chasingseals>

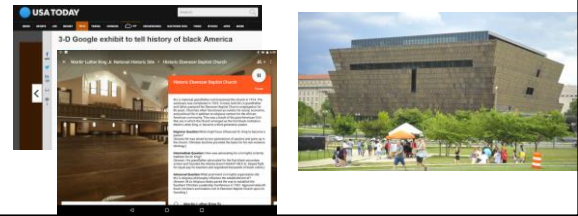


March 24, 2015 (Engagement) Maps of Languages Langscape, Language at Maryland



September 14, 2016 (Engagement) 3-D Google exhibit to tell history of black America

Jessica Guynn, USA Today



April 2, 2015 (Engagement) Learning is More Immersive

The Quest to Put More Reality in Virtual Reality,
Review: Samsung rises to challenge with Galaxy S6 and S6 Edge,
Edward Baig, USA Today

<http://www.usatoday.com/story/tech/columnist/2015/03/31/quest-to-put-more-reality-in-virtual-reality-with-galaxy-s6-s6-edge/2372752/>



NextVR crewmembers set up their virtual reality cameras at an NBA game, allowing viewers of the live event to see the game from a variety of positions in the arena.

January 7, 2016 (Engagement) Google Cardboard saves baby's life

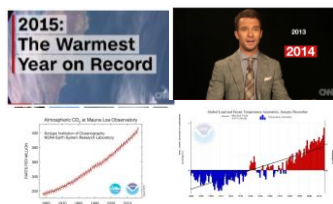
CNN, Elizabeth Cohen

<http://www.cnn.com/2016/01/07/health/google-cardboard-baby-saved/index.html>



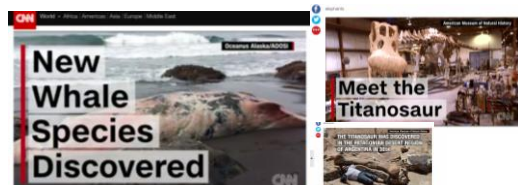
August 24, 2016 (Engagement) Changing opinions on climate change, from a CNN meteorologist, Chad Meyers, CNN

<http://www.cnn.com/2016/08/24/opinion/clad-meyers-climate-change-weather/index.html>




August 2, 2016 (Engagement) Mystery whale has scientists shocked, New Whale Species Discovered, CNN

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

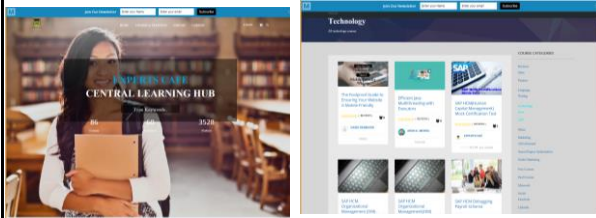


May 14, 2016 (Access)
Learning is more Immediate...
Mastodon bones offer clues of earliest humans in North America, Faith Karimi, CNN
 Abstract: <http://advances.sciencemag.org/content/2/5/e1600375>
 Full Article: <http://advances.sciencemag.org/content/2/5/e1600375.full>
 Supplemental materials (PDF): <http://advances.sciencemag.org/content/suppl/2016/05/10/2.5.e1600375.DC1>
 PDF: http://advances.sciencemag.org/content/advances/suppl/2016/05/10/2.5.e1600375.DC1/1600375_SM.pdf

Mastodon bones offer clues of earliest humans in North America



June 20, 2016 (Access)
The Expert Cafe
<http://expertscafe.com/>



June 13, 2016 (Access)
Nine-Year-Old Anvitha Vijay is the Youngest Developer at WWDC (age 9)
(Apple Worldwide Developers Conference), Gadgets
<http://gadgets.ndtv.com/apps/news/9-year-old-anvitha-vijay-is-the-youngest-developer-at-wwdc-2016-84841570>

Meet Apple's youngest app developer. She's nine.




May 4, 2016 (Access)
This Mongolian Teenager Aced a MOOC
Now He Wants to Widen Their Impact
 (140,000 people take the MIT MOOC on Circuits and Electronics, 5 of 300 to get a perfect score)
 The Chronicle of Higher Education, Jeffrey R. Young
<http://chronicle.com/article/This-Mongolian-Teenager-Aced-a/236362>

THE CHRONICLE OF HIGHER EDUCATION

TECHNOLOGY

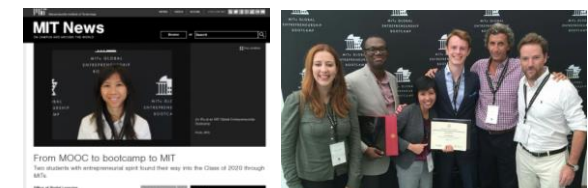
This Mongolian Teenager Aced a MOOC. Now He Wants to Widen Their Impact.

By Jeffrey R. Young | MAY 04, 2016




May 19, 2016 (Access)
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>

From MOOC to bootcamp to MIT



How Learning is Changing:
Mega Trend #3. Customization



September 7, 2016 (Customization) The Future of Collaboration Spaces Encompasses Video

Interactive, Mobil, Julie Johnston, IU, Campus Technology
<http://campustechnology.com/article/2016/09/07/The-Future-of-collaboration-spaces-encompasses-video-interactive-mobil.aspx>

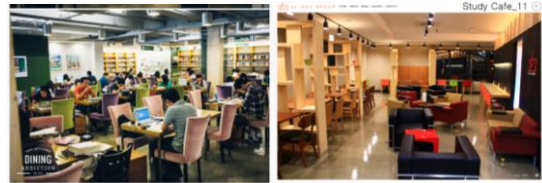


In the Indiana University Media School lobby, a large display will showcase student work and provide interactive sessions. (photo by Allen Major/The Media School @ Indiana University)

August 1, 2016 (Customization)

**363by Idea Group: Study Café
Meeting Place; Idea Space**

http://363.cc/biz/wp/wp-content/uploads/study-cafe_11



September 28, 2016 (Customization) Bookshare, An accessibility online library for people with disabilities

<https://www.bookshare.org/>



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>



May 20, 2016 (Customization) agMOOCs (India)

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



September 15, 2015 Customization) GROOCs are MOOCs for Social Impact

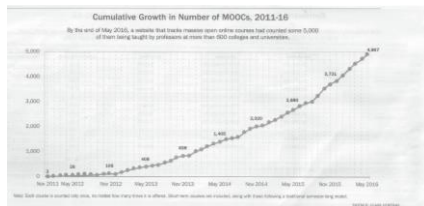
Social Learning for Social Impact, edX
Join the world's first GROOC – a MOOC for groups – to collaborate with others globally and create social change.

<https://www.edx.org/course/social-learning-social-impact-mooc-social-impact>



August 14, 2016 (Customization)

Data From the 2016 Almanac (as of May 2016) Chronicle of Higher Education

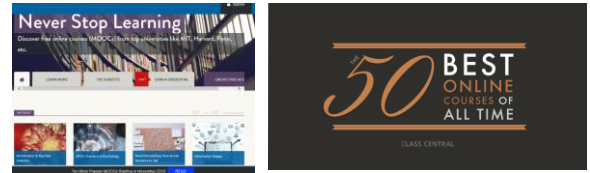


August 12, 2016 (Customization)

Class Central's Top 50 MOOCs of All Time, Dhawal Shah, Class Central Blog

"Now there are close to 6,000 MOOCs from 600+ universities around the world."

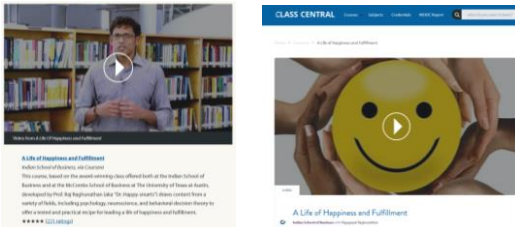
<https://www.class-central.com/report/top-moocs/>



August 12, 2016 (Customization)

A Life of Happiness and Fulfillment Indian School of Business, Rajagopal Raghunathan

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



August 5, 2015 (Customization)

How Nanodegrees Are Disrupting Higher Education

John Waters, Campus Technology

<http://campustechnology.com/articles/2015/08/05/how-nanodegrees-are-disrupting-higher-education.aspx>

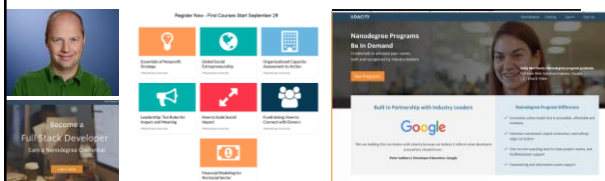


January 13, 2016 (Customization)

Degree gets you a tech job — or your money back

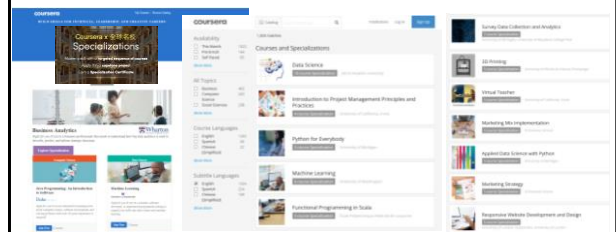
Marco della Cava, USA Today

<http://www.usatoday.com/story/tech/news/2016/01/13/degree-gets-you-tech-job-or-money-back/78703230/>



July 28, 2016 (Customization)

Coursera Specializations email Starting Monday August 1st: 9 Top Specializations



July 28, 2016 (Customization) Udemy: "Get cozy with a class"

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



MOOCs and Open Education Around the World

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



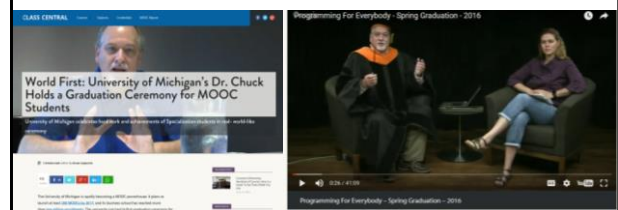
July 1, 2015 (Customization) Chapter 14: Creating a Temporary Spontaneous Mini-Ecosystem through a MOOC

Paul Kim and Charlie Chung, Stanford University
Figure 2. Twitter thread announcing the MOOC



June 14, 2016 (Customization) World First: University of Michigan's Dr. Chuck Holds a Graduation Ceremony for MOOC Students

Anuar Lequerica, Class Central
<https://www.class-central.com/report/dr-chuck-graduate-ceremony-python-specialization/>



August 24, 2016 K-MOOCs (and ocMOOCs and hMOOCs) Revolutionizing online education Professor creates courses tailored to cultural differences

Korea JoongAng Daily, Bong-Moon Kim
<http://www.kmooc.kr/>



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



WHAT'S NEXT?

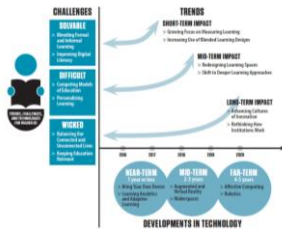
Where are we headed?
Where to find Education 3.0?
How to create Education 20/20?



February 2016

NMC Horizon Report > 2016 Higher Ed Edition
<http://www.nmc.org/publication/nmc-horizon-report-2016-higher-education-edition/>
<http://cdn.nmc.org/media/2016-nmc-horizon-report-hr-16.pdf>

Figures from the NMC Horizon Report > 2016 Higher Education Edition



September 2, 2016

Humans, the Latest MOOC Feature
Introduction to Philosophy: God, Knowledge and Consciousness
(\$300 USD for an identity-verified certificate)
Carl Straumsheim, Inside Higher Ed

<https://www.insidehighered.com/news/2016/09/02/massachusetts-institute-technology-experiments-instructor-grading-massive-open>



May 4, 2016

MOOC 4.0: The Next Revolution in Learning & Leadership
Otto Scharmer, Huffington Post

http://www.huffingtonpost.com/otto-scharmer/mooc-40-the-next-revolution_7209604.html



October 23, 2016

Ben Gose, The Chronicle of Higher Education

<http://www.chronicle.com/article/When-the-Teaching-Assistant-Is/238114>

When the Teaching Assistant Is a Robot

Faculty members experiment with artificial intelligence in the classroom



September 11, 2016

Research: Robots Give Chronically Ill Kids Valuable Social Ties with School

Dian Schaffhauser, THE Journal

<https://thejournal.com/articles/2016/09/12/robots-give-chronically-ill-kids-valuable-social-ties-with-school.aspx>

Penn State Students Attend Class via Robot

By Siri Ransgall 09/09/16



Research: Robots Give Chronically Ill Kids Valuable Social Ties with School

By Dian Schaffhauser 09/10/16



August 18, 2016

1. Deploying Swarms of Drones with... 2. The Driverless Truck is Coming and...

(e.g., Ryan Peterson, Flexport News/Blog)

<https://www.flexport.com/blog/deploying-drones-self-driving-trucks/>
<https://www.flexport.com/blog/self-driving-truck-automation-of-million-jobs/>
<https://www.flexport.com/>



Rethinking Last Mile Logistics: Deploying Swarms of Drones with Self-Driving Trucks

BY RYAN PETERSON, FLEXPORTECHNOLOGIES, TRUCKING

September 21, 2016

Udacity Unveils Nanodegree Program for Self-Driving Car Engineers

Sri Ravipati, Campus Technology

<https://campustechnology.com/articles/2016/09/21/udacity-unveils-nanodegree-program-for-self-driving-car-engineers.aspx>



Udacity Unveils Nanodegree Program for Self-Driving Car Engineers

By Sri Ravipati 09/21/16

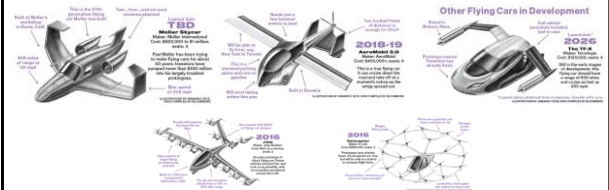


August 26, 2016

Welcome to Larry Page's Secret Flying-Car Factories:

With Zee.Aero and Kitty Hawk, the Google co-founder looks to the skies, Ashley Vance and Brad Stone, Bloomberg Businessweek

<http://www.bloomberg.com/news/articles/2016-08-26/google-co-founder-sees-flying-car-factories>



July 21, 2016

Facebook's Aquila drone completes first test flight

Jessica Guynn, USA Today

<http://www.usatoday.com/story/tech/news/2016/07/21/facebook-aquila-completes-first-test-flight/92368816/>



An aerial view of Aquila, a autonomous aircraft Facebook is designing to deliver mobile broadband networks to isolated people (mission to fly 60,000 above Earth for up to 3 months at a time; current record for solar-powered unmanned flight is 2 weeks). (Photo: Facebook)

Talk Reminder

1. Education 20/20 and Education 3.0
2. Artificial Intelligence vs. Intelligence Augmentation
3. The Evolution of E-Learning
4. Megatrends of Learning: Engagement, Access, and Customization
(30 ways that learning is changing...)
5. Future Trends and Ideas

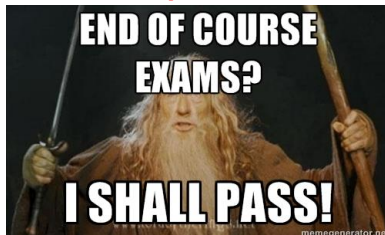
Things are heating up!



**Education 3.0 is coming
within reach!**



**Poll #10:
Who is now interested in Education
20/20...?**



**Remember for Education 20/20
to meet Education 3.0:
"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

