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
   (30 ways that learning is changing...)
5. Future Trends and Ideas

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(Circa Confucius 551–479 BCE)

Academos
Plato Circa 428–347 BCE

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(What happens to sleeping students?)
Bonk's Last Principles of Teaching/Instruction

1. The Principle of Flexibility

2. The Principle of Convenience

Education 20/20
5. The Principle of High Expectations
http://travelinedman.blogspot.com/2011/05/principles-of-instruction.html

6. The Principle of Choice and Options
http://travelinedman.blogspot.com/2011/05/principles-of-instruction.html

8. The Principle of Support and Feedback
http://travelinedman.blogspot.com/2011/05/principles-of-instruction.html

11. The Principle of Sharing
http://travelinedman.blogspot.com/2011/05/principles-of-instruction.html

12. The Principle of Nontraditional Learning
http://travelinedman.blogspot.com/2011/05/principles-of-instruction.html

14. The Principle of Relevance and Meaningfulness
http://travelinedman.blogspot.com/2011/05/principles-of-instruction.html
Learning is Changing…

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?

"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)
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/google-calling-all-android-robot-programmers/84461778/
Usual internal link: http://trainingshare.com/usa2.html
New download link: https://www.dropbox.com/s/hxcuwqgvaj20oiv/pepper-the-robot2.mp4?dl=0

January 30, 2017
A robotic barista is now serving — really fast
Jon Swartz, USA Today
http://www.usatoday.com/story/tech/2017/01/30/robotic-barista-now-serving-really-fast/95888780/

February 16, 2017
Bill Gates: If a robot takes a human job, it should be taxed
Mary Bowerman, USA Today

September 21, 2016
Udacity Unveils Nanodegree Program for Self-Driving Car Engineers
Sri Ravipati, Campus Technology
http://www.tubechop.com/watch/8280981

April 13, 2016
The Fourth Industrial Revolution: What it means, how to respond
Klaus Schwab, Founder and Executive Chairman, World Economic Forum
http://www.tubechop.com/watch/2340981
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.”

August 17, 2016
Research: 3D Printing Market to Double by 2020
Joshua Bolkan, Campus Technology

June 7, 2016
Teaching refugees how to code, CNN Money

June 20, 2016
Coursera on a Mission to Help Refugees
Lauren Camera, US News and World Report

February 9, 2017
More black and Latino students learn to code as Code.org classes swell
Jessica Guynn, USA Today

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?

Big Magic (2015): Creative Living Beyond Fear
Elizabeth Gilbert
http://www.elizabethgilbert.com/

http://books.simonandschuster.com/The-Innovators/Walter-Isaacson/9781476708690

John Markoff (2015)
http://www.amazon.com/Machines-Loving-Grace-Common-Between/dp/0062266683

Artificial Intelligence
John McCarthy, Stanford AI Lab
http://www.amazon.com/Machines-Loving-Grace-Common-Between/dp/0062266683

March 14, 2016
Artificial Intelligence and Robots
Paul Basken, The Chronicle of Higher Education
http://www.amazon.com/Machines-Loving-Grace-Common-Between/dp/0062266683
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, hypermedia, hypertext, object addressing and dynamic file linking, a collaborative real-time editor.)

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

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

Microsoft HoloLens:
https://www.youtube.com/watch?v=aThCr0PsyuA

Letsee is an AR app from a South Korean company that allows consumers to scan a product and see a series of product reviews instantly overlaid overtop.

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 tested by NFL as tool to confront racism, sexism
Marco della Cava, USA Today

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=hb4AzF6wEoc

October 14, 2011
Siri (co-founder Tom Gruber)
http://www.imore.com/siri
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/columnist/baig/2016/05/09/siri-creators-think-they-have-smarter-brainchild/84133244/

The World is Open: How Web Technology Is Revolutioning Education

February 22, 2017
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-twitter/

August 5, 2015
Shubham Jaglan (10 years old) Overwhelmed by “Dream” Return Home After Double World Championship
Disha Chopra, NDTV Sports

April 20, 2015
250 MOOCs and Counting: One Man’s Educational Journey, Chronicle of Higher Education
http://chronicle.com/article/250-MOOCs-Counting-One/229397/?cid=at

July 2016
I. Elaine Allen and Jeff Seaman, Babson Survey Research Group

Shubham Jaglan

Jima Ngei

Disha Chopra

Alan November

Edward Baig

Elizabeth Weise

I. Elaine Allen

Jeff Seaman

Babson Survey Research Group
**November 7, 2016**

**OER Use to Triple Over Next 5 Years, Campus Technology**


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**January 3, 2017**

**College is Over**

Roger Schank, LinkedIn


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**January 15, 2016**

**Wikipedia is 15!**

Scott McLemee, Inside Higher Ed


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**April 4, 2016**

**MIT OpenCourseWare is 15!**

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

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**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/hypertext/WWW/TheProject.html

1971
Email is 35 years old!
Raymond Tomlinson, inventor of modern email, dies, USA Today (March 7, 2016)

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
- Learner Engagement
- Pervasive Access
- Customization & Personalization

How Learning is Changing: Mega Trend #1. Learner Engagement
- social
- mobile
- hands-on
- visual
- touch-sensored
- game-based
- adventurous
- digital & resource rich
- immersive
- collaborative

February 7, 2017 (Engagement)
Learning is More Social
YouTube takes on Facebook with mobile live
Jefferson Graham, USA Today
August 23, 2016 (Engagement)
Learning is More Visual
e.g., reef videoconferencing
(Great Barrier Reef, Australia)

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

July 22, 2016 (Engagement)
Learning is More Game-like
When Pokémon Goes to Campus:
The Good, the Bad, and the Ugly
Gabriel Sandoval, Chronicle of Higher Education

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

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/ftf-anniversary

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

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.
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 just in time set of content, context, collaborative connections, coaching sets and real time feedback.
LearningApp: https://www.masie.com/learning/apps


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

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)

August 1, 2016 (Customization)
Learning is More Ubiquitous
363 by Idea Group; Study Café Meeting Place; Idea Space (Seoul, Korea)

September 28, 2016 (Customization)
Learning is More Free
Bookshare, An accessibility online library for people with disabilities
https://www.bookshare.org/
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
Dan Kolodinsky, THE Journal
http://www.eschoolnews.com/asugsvsummit/

September 14, 2015 (Access)
Learning is More Video-Based
Credit for Watching a TED Talk? A new platform aims to help employers track casual learning
Chronicle of Higher Education, Jeffrey R. Young
http://chronicle.com/article/Credit-for-Watching-a-TED/232973/?cid=at&utm_source=at&utm_medium=en
Degreed: https://degreed.com/

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

June 13, 2016 (Access)
Nine-Year-Old Anvitha Vijay is the Youngest Developer at WWDC (age 9)
(Associate Worldwide Developers Conference), Gadgets
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, 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/236362
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)

How Learning is Changing:
Mega Trend #3. Customization

September 7, 2016 (Customization)
Learning is More Comfortable
The Future of Collaboration Spaces Encompasses Video Interactive, Mobil, Julie Johnston, IU, Campus Technology
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)

January 20, 2016 (Customization)
Learning is More Blended
Universities tap growth of craft beer, offer classes, Chicago Tribune

February 16, 2017
Learning is More Communal
Building Global Community, Marc Zuckerberg, Facebook

February 16, 2017
Zuckerberg: Bonds between strangers can help in divisive times
Jessica Guynn, USA Today
May 20, 2016 (Customization)
Learning is More Massive
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.
http://www.edx.org/course/social-learning-social-impact-mcglx-groocx

December 25, 2016
By The Numbers: MOOCs in 2016
Dhawa Shah, Class Central

December 25, 2016
Class Central

December 23, 2016
HarvardX and MITx: Four Years of Open Online Courses -- Fall 2012 - Summer 2016
Isaac Chung, MIT, and Andrew Dean Ho, Harvard

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 Raghathan

August 30, 2016
Thousands sign up for free online wine course, John Elmes, Wine News
http://www.decanter.com/wine-news/online-wine-course-adelaide-325646/

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

July 28, 2016 (Customization)
Coursera Specializations email
Starting Monday August 1st: 9 Top Specializations

MOOCs and Open Education Around the World
http://routledge-nv.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

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/

May 4, 2016
MOOC 4.0: The Next Revolution in Learning & Leadership
Otto Scharmer, Huffington Post
http://www.huffingtonpost.com/otto-scharmer/mooc-4-0-the-next-revolution-b_7209606.html

**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  

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**October 23, 2016**

Ben Gose, The Chronicle of Higher Education  

*When the Teaching Assistant Is a Robot*

Faculty members experience with artificial intelligence in the classroom.

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**January 30, 2017**

Personal Professor Albert Einstein  

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)

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**Things are heating up!**

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**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."

Any Questions or Comments?

Slides at: TrainingShare.com
Papers: PublicationShare.com
Free book: http://tec-variety.com/
Email: curt@worldisopen.com