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

(Circa Confucius 551–479 BCE)

Academos
Plato Circa 428–347 BCE

What happens to sleeping students?
1. The Principle of Flexibility

2. The Principle of Convenience
5. The Principle of High Expectations

6. The Principle of Choice and Options

8. The Principle of Support and Feedback

11. The Principle of Sharing

12. The Principle of Nontraditional Learning

14. The Principle of Relevance and Meaningfulness
15. The Principle of Trial and Error (i.e., it is ok to fail)
https://travelinedman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html

16. The Principle of Expanded Resources
https://travelinedman.blogspot.com/2011/05/bonks-last-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?

“Education 3.0 is...”

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

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/

August 15, 2016
The Maker Movement in Education:
A New Global Transformation
Paul Kim, ICT in Education, UNESCO


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


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/8280981

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/

December 15, 2016
How robots will change the American workforce

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

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/

September 21, 2016
Udacity Unveils Nanodegree Program for Self-Driving Car Engineers
Sri Ravipati, Campus Technology

Poll:
Read any good books lately detailing this shift?

Most Likely to Succeed (2015):
Preparing Our Kids for the Innovation Era
Tony Wagner and Ted Dintersmith
http://www.tonywagner.com/1933
Creative Schools (2015):
The Grassroots Revolution That's Transforming Education
Sir Ken Robinson
http://sirkenrobinson.com/creative-schools-the-grassroots-revolution-that's-transforming-education/

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

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

Machines of Loving Grace:
John Markoff (2015)

December 15, 2016
The Digital Era: How 50 years of the information age transformed college forever, Ben Myers & Erica Lusk, The Chronicle of Higher Education
http://www.chronicle.com/interactives/50-years-of-technology

Poll #7:
What if you read these books?
Artificial Intelligence
John McCarthy, Stanford AI Lab

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

Intelligence Augmentation and Amplification
Douglas Engelbart’s "The Mother of All Inventions" (1968)
Augmentation Research Center (ARC)

June 10, 2015
Augmented reality promises 'superpowers', and people are listening
The USA Today, Marco della Cava

June 3, 2016
Virtual Reality Lets Med Students Experience What It’s Like To Be 74
Elyse Wanshel, Huffington Post

April 10, 2016
Virtual reality tested by NFL as tool to confront racism, sexism
Marco della Cava, USA Today
**Knowledge Navigator (1987)**
Apple Computer

**October 14, 2011**
Siri (co-founder Tom Gruber)

**August 22, 2016**
Microsoft acquires AI assistant start-up Genee
Marco della Cava, USA Today (Cortana)

**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

**August 30, 2016**
New Siri to work with apps in iOS 10, but not all
Jefferson Graham, USA Today

**The World is Open:**
How Web Technology Is Revolutioning Education
August 5, 2015
Shubham Jaglan (10 years old) Overwhelmed by “Dream” Return Home After Double World Championship
Disha Chopra, NDTV Sports

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

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

November 7, 2016
OER Use to Triple Over Next 5 Years, Campus Technology

November 18, 2016
OER Revolution in Higher Ed, Matt Zalaznick, University Business
https://www.universitybusiness.com/article/oer-revolution-higher-ed

The University of Maryland's open source textbook initiative, known as "MOST," has guided faculty through more than 50 OER adoptions. The program helps instructors assemble resources to significantly bring down the cost of course materials.

October 29, 2016
OpenLearning
https://www.openlearning.com/
January 3, 2017
College is Over
Roger Schank, LinkedIn

January 15, 2016
Wikipedia is 15!
Scott McLemee, Inside Higher Ed
http://ocw.mit.edu/about/15-years/

August 6, 2016
The Web is 25!
Happy (sort of) birthday, World Wide Web!
Erica Fisk 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

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
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.
LearningApps: 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
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)

July 14, 2016 (Engagement)
Shindig
http://events.shindig.com/event/ftf-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
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

NextVR crew members 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

Want “FREE” engagement?
How about “Adding Some TEC-VARIETY”?
http://tec-variety.com/

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

The Age of Videopedia...
July 18, 2016 (Access)
Survey: Video Usage in Ed Continues Ramp-up,
Dian Schaffhauser, THE Journal

Source: http://reviews-bonuses.net/videopedia-pro-1-0-reviews-bonuses/
May 4, 2016 (Access)
What I Learned at the ASU GSV Summit
Kenneth Green, Inside Higher Ed

September 14, 2015 (Access)
Credit for Watching a TED Talk? A new platform aims to help employers track casual learning
Chronicle of Higher Education, Jeffrey R. Young

May 14, 2016 (Access)
Learning is more Immediate...
Mastodon bones offer clues of earliest humans in North America, Faith Karimi, CNN

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

May 4, 2016 (Access)
This Mongolian Teenager Aced a MOOC
Now He Wants to Widen Their Impact
(140,000 people took 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
massive
self-directed
blended
communal
flipped
personal
competency-based
on-demand
modifiable
modular

September 7, 2016 (Customization)
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)

August 1, 2016 (Customization)
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/?bw_gallery=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
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-mcgillx-groocx

December 25, 2016
By The Numbers: MOOCs in 2016
Dhawa Shah, 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."
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

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 Laquerica, 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/

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

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://cdn.nmc.org/media/2016-nmc-horizon-report-he-EN.pdf
September 11, 2016
Research: Robots Give Chronically Ill Kids Valuable Social Ties with School
Dian Schaffhauser, THE Journal

October 23, 2016
Ben Gose, The Chronicle of Higher Education
http://www.chronicle.com/article/When-the-Teaching-Assistant-is-a-Robot/238114

December 26, 2016
Glimpse into the Future of Learning
Jenny Abamu, New Learning Times (NLT)
https://newlearningtimes.com/cms/article/4022/?ddc_source=Via&ddc_medium=E&ddc_name=December%2029%20Newsletter

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

May 4, 2016
MOOC 4.0: The Next Revolution in Learning & Leadership
Otto Scharmer, Huffington Post

July 21, 2016
Facebook’s Aquila drone completes first test flight
Jessica Guynn, USA Today

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
   (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.”
“...”
“...”
“...”

Any Questions or Comments?

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