Education 20/20 Meets Education 4.0: Visions of Our Changing Learning World!

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Talk Overview

1. Jobs are changing
2. Education 20/20 and the Role of the Instructor (First and Last Principles of Instruction)
3. Megatrends of Learning: Engagement, Access, and Customization (30 ways that learning is changing...)
4. Trends for tomorrow

Part I. June 3, 2017
How PLATO changed the World...in 1960
Cait Etherington, ElearningInside News


PLATO was the first generalized computer-assisted instruction system. Starting in 1960, it ran on the University of Illinois ILIAC I computer. By the late 1970s, it supported several thousand graphics terminals distributed worldwide, running on nearly a dozen different networked mainframe computers. Many modern concepts in multi-user computing were originally developed on PLATO, including forums, message boards, online testing, email, chat rooms, picture languages, instant messaging, remote screen sharing, and multiplayer games.

September 26, 2018
Remember Education 2.0?
The rise and fall of the company behind 'Reader Rabbit' and all your favorite educational games
Abigail Cain, The Outline


Fast Forward 30+ Years...

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

January 25, 2021
Dead Man Teaching
Tom Bartlett, The Chronicle of Higher Education

https://www.futuretng.org/
December 7, 2020
ART of the MOOC: Activism and Social Movements
Nato Thompson, Pedro Lasch, Duke, Coursera
https://www.coursera.org/learn/activism-social-movements

December 4, 2020
Mysterious monoliths are appearing across the world. Here's what we know.
Constance Grady, Vox
https://www.vox.com/culture/22062796/monoliths-utah-california-romania

November 30, 2020
Cyber Monday

November 9, 2020
'It's the screams of the damned!' The eerie AI world of deepfake music
Derek Robertson, The Guardian
Song: http://curtbonk.com/sinatra.html

July 30, 2020

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
July 24, 2018
The 100-Year Life: Living and Working in an Age of Longevity
Lynda Gratton and Andrew Scott
http://www.100yearlife.com/
https://www.amazon.com/100-Year-Life-Living-Longevity/dp/1543624634

March 13, 2019
The Career Curriculum Continuum
Andrew Hermaly, Inside Higher Ed

February 25, 2020
The 60 Year Curriculum:
Developing New Educational Models to Serve the Agile Labor Market
Chris Dede, Harvard University, The Evolllution

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.”

Part II. Education 20/20
20 New Roles of the Instructor

- Course Ambassador
- Curator
- Cook
- Consumer Advocate
- Change Catalyst
- Coach
- Collaborator
- Care Giver
- Conductor
- Counselor
- Camp Guide
- Consultant
- Community Organizer
- Chemist
- Colleague
- Cultivator

Merrill’s First Principles of Teaching/Instruction

<table>
<thead>
<tr>
<th>Integration</th>
<th>Activation</th>
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<tbody>
<tr>
<td>Problem/Task</td>
<td>Application</td>
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<td>Demonstration</td>
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1. The Principle of Flexibility

- The Principle of Choice and Options

Bonk’s Last Principles of Teaching/Instruction (Education 4.0?)
8. The Principle of Support and Feedback

(e.g., offer extensive feedback, assign critical friends for feedback, offer summary feedback for common questions, use job aids and scaffolds, etc.)

11. The Principle of Sharing

14. The Principle of Relevance and Meaningfulness

16. The Principle of Expanded Resources

The World is Open: How Web Technology Is Revolutionizing Education
Bonk’s 20 "Last" Principles of Instruction (LAST = Learning Activation System Template)

http://travelinedman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html

Convenience
Support and Feedback
Choice and Options
Flexibility
Choice and Options
Convenience
Spontaneity
Organization
Sharing
Collegiality
Relevance and Meaningfulness
Nontraditional Learning
Passion and Inspiration
High Expectations
Purpose and Vision
Human Connectedness
Empowerment and Autonomy
Cognitive Apprenticeship

Clearly...
Learning is Changing!

Part III. Thirty Ways Learning is Changing...
(i.e., it's more informal, video-based, ubiquitous, collaborative, self-directed, global, mobile, open, massive, etc.)

November 11, 2020
Educational technology is coming of age during the pandemic: Nowhere more so than in India

30+ Ways Learning is Changing:
The Mega Trends

How Learning is Changing:
Mega Trend #1. Learner Engagement
July 26, 2020
Learning is Digitally Rich
EDUCATING ALL LEARNERS DURING THE COVID-19 DISASTER
An alliance dedicated to equity for complex learners
https://www.educatingalllearners.org/
Resources and Guidance
https://www.educatingalllearners.org/for-educators
https://www.educatingalllearners.org/educator-resources

April 22, 2018
Learning is More Visual
Microsoft AI Commercial ft. Common
Video 1:00: Microsoft AI Commercial ft. Common
https://www.youtube.com/watch?v=9tucY7Jhhs4
(Feb 11, 2018)
Video 1:48: Microsoft AI: Amplifying Human Ingenuity:
https://www.youtube.com/watch?v=NDmu7Z5NPXo
Video 1:00: Microsoft AI: Empowering Innovators ft. Common:
https://www.youtube.com/watch?v=Z5OWdqfAYfw
(April 22, 2018)
Video 1:00: Microsoft AI + Iconem: Preserving History ft. Common:
https://www.youtube.com/watch?v=ZDZjaIhzMSM
(April 22, 2018)
Video: 1:00 Microsoft AI + The Yield: Taking the guesswork out of farming ft. Common:
https://www.youtube.com/watch?v=7rzufxlGH4o
(April 22, 2018)

October 20, 2020
Learning is More Visual
The British Museum
https://britishmuseum.withgoogle.com/

May 1, 2018
Learning is More Immersive
3 ways districts can use AR and AI
Justin Anglio, eSchool News
https://www.eschoolnews.com/2018/05/01/3-amazing-ways-our-district-is-using-ar-and-vr/

When a teacher glances around her classroom, Lumilo allows her to see real-time analytics (in the form of icons) floating directly above each student’s head. The teacher can glance directly at a student or “click” on a student’s icon to see more detailed information about where and how that student might be struggling.

July 17, 2017
Learning is More Immersive
Learning Chemistry in Virtual Reality, Sarah Hardman, New Learning Times

How Learning is Changing:
Mega Trend #2. Pervasive Access
June 23, 2020
Learning is More Synchronous
Turns Out You Can Build Community in a Zoom Classroom
Rachel Toor, The Chronicle of Higher Education

November 10, 2020
Learning is More Synchronous
‘Telepresence’ robots are making virtual school feel a little more like real school
Jennifer Davis, The Washington Post

June 5, 2018
Learning is More Global
Chatterbox: Master a Language, Change a Life
The overall winner in the competition was Chatterbox, an online language school powered by refugees
https://wearechatterbox.org/
Mursal Hedayat, London
https://www.youtube.com/watch?v=3K3VexuIpe0

January 27, 2021
Learning is More Immediate...
Science in the News
‘Holy Grail’ of dinosaur fossils discovered in Egyptian desert, Doyle Rice, USA Today
‘Siberian unicorn’ once walked among early humans, Tara John, CNN

April 11, 2020
Learning is More Video-based...
(e.g., Flipgrid)
Ed Tech with Adam: https://www.youtube.com/watch?v=b8yydVpeFLs
https://techcrunch.com/2018/06/18/microsoft-acquires-social-learning-platform-flipgrid/

July 25, 2020
Learning is More Video-based...
Silver Lining for Learning
https://silverliningforlearning.org/
https://www.youtube.com/channel/UC9XEsh89qrIlpmVVpAa/live
March 19, 2018
Learning is More Free and Open
Open Textbook Network
Center for Open Education, University of Minnesota
http://research.cehd.umn.edu/otn/

July 31, 2020
Learning is More Personal
Khan Academy aims to give ‘strategic supplement’
Brett Molina, USA Today

May/June 2020
Learning is More On Demand
Chatting with Chatbots and Text Buddies
Lindsey McKenzie, Inside Higher Ed

August 27, 2020
Alternative Credentials on the Rise
Paul Fain, Inside Higher Ed

Sources: Moody’s, U.S. Department of Education
Professional Certificates
October 3, 2019
Google IT Professional Certificates
Coursera Blog
https://www.google.com/it professional certificates
https://www.coursera.org/programs/it

Video: Melinda Williams: Aspiring IT Support Specialist (2:57)
https://www.youtube.com/watch?time_continue=107&v=fvhPKZWbfms&feature=emb_logo

Alternative Credentials on the Rise
August 27, 2020
Paul Fain, Inside Higher Ed

New Udemy Report Shows Surge in Global Online Education in Response to COVID-19
There has been an immense surge in enrollments in courses related to Telecommuting (21,598% increase) and Virtual Teams (1,523%), as well as Decision Making (277%), Self Discipline (237%), and Stress Management (235%).

By the Numbers: MOOCs During the Pandemic
August 16, 2020
Dhawal Shah, Class Central

Greetings from Nepal,
Baman Kumar Ghimire
Teacher, Motherland Secondary School, Pokhara
I held a workshop to a group of students who wanted to learn that in less than 8 months 78 students of age 13-15 from that school completed at least a MOOC.
Likewise, lately reported that, a school whose head teacher and a few students I mentored in 2017 has about 350 students completing at least a MOOC. Acknowledging the benefits of MOOCing and the growing interest of the students and guardians, the school administration has made at least a MOOC compulsory for the students age 11-14 in its school.
November 26, 2019
Chapter 16: Courses for a Cause: MOOC Contributions to a "Better Place for All" (Marianne Krasny et al., 2020)

November 26, 2019
Chapter 25. Responsive Innovations in MOOCs for Development: A Case Study of AgMOOCs in India 300
Balaji Venkataraman and Tadinada V. Prabhakar (AgMOOCs in India)
http://www.agmoocs.in/

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

Part IV. Trends for Tomorrow
http://www.huffingtonpost.ca/dr-marie-bountrogianni/prepare-for-future-learni_b_16407756.html

September 22, 2017
1. Binge Learning Experiences
What Online Education Can Learn from Netflix
Henry Kronk, E-learning Inside News
https://theumlaut.com/binge-learning-is-online-education-s-killer-84da18f8ae76

2. Rise of Super E-Mentors and AI Coaches
(Paul Kim, 2018)
September 26, 2018
3. Interactive Agents and Tutors
Pushing the Boundaries of Learning With AI
Lindsay McKenzie, Inside Higher Ed

June 15, 2019
4. University of the Third Age, London, UK
https://www.u3a.org.uk/
U3A (The University of the Third Age) is a UK-wide movement which brings together people in their ‘third age’ to develop their interests and continue their learning in a friendly and informal environment.

If you’re wondering what we mean by the third age—it is a time after you have finished working full-time or raising your family and have time to pursue your interests or just try something new.

June 10, 2020
Learning in 2050
Edward J. Mahoney and Joshua Kim, Inside Higher Ed
Per Kim and Mahoney: “Where might we be in 2050? As we said, a lot can happen. We might see changes in how we use technology, and how students use technology engage in both curricular and co-curricular activities.”

We are entering a jumping off point...
(South University of Science and Technology of China, Wednesday June 10, 2015)

Remember...
“I cannot do this alone.”
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Any Questions or Comments?
Slides at: TrainingShare.com
Papers: PublicationShare.com
Free book: http://tec-variety.com/
Email: cjbonk@indiana.edu