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

Curtis J. Bonk, Professor, Indiana University

cbonk@indiana.edu

http://curtbonk.com/

Talk Overview

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

(Circa Confucius 551–479 BCE)

Needed: New Models of Motivation and Engagement

February 26, 2021

Ever have ‘Zoom fatigue?’ These are the causes and how to fix them, researchers say

Brett Molina, USA Today

https://www.usatoday.com/story/tech/2021/02/26/zoom-fatigue-causes-how-to-fix/6831569002/

October 5, 2020

Remote learning isn’t new: Radio instruction in the 1937 polio epidemic

Katherine A. Foss, The Conversation

February 2, 2016
1960’s PLATO Computer System –
Computer Aided Learning CAL CBT CDC Control Data Educational

March 17, 2018
February 27, 1934

May 22, 2019
Who Remembers VisiCalc???
How computing’s first ‘killer app’ changed everything
Tom Harford, BBC News

Dan Bricklin, inventor of the first computer spreadsheet

September 19, 2014
Bob Clasen, University of Wisconsin
https://www.youtube.com/watch?v=kCm1_MGaqec&feature=youtu.be

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
https://www.youtube.com/watch?v=NLh58bIIk
Project YES (Curt Bonk): https://youtu.be/bZD5mQH4Ups

Fast Forward 30+ Years…
"Anyone can now learn anything from anyone at any time."

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. It standardized internet networking. Modern concepts in multi-user computing were developed on PLATO, including forums, message boards, online testing, email, chat rooms, picture languages, instant messaging, remote computer monitoring, and procurement tools.
Sterile, industrial-era rows aren’t very attractive or motivating. Even more, I’ve become convinced that traditional educational settings dull the senses… 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.

“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 20/20

“Now What is Education 4.0?

“Innovation-producing education. Learn more in:
Development of Individual Agency within a Collaborative, Creative Learning Community”

http://www.igi-global.com/dictionary/education-40/41755
https://thinc.in.th/engadmission/education4.html (Chula Engineering)

June 26, 2020
Learning from Home with Sir Ken Robinson – Episode 3 with Natalie Bigney
https://www.youtube.com/watch?v=1hpikfzI3p0&feature=youtu.be
In fact, every year since 1840, there has been a three-month increase in life expectancy. Today the average life expectancy in the United States is 79, and millennials have a 50 percent chance of living to 100 years. In past centuries, people would study, get a job and retire at age 65. But times have changed, and it’s now estimated that the average person will have 12 to 14 careers in a lifetime.

“IT’S QUITE CLEAR THAT THE ESTABLISHED MODELS OF EDUCATION HAVE TO CHANGE AND ADAPT TO THE NEW ENVIRONMENT.”

“It’s quite clear that the established models of education have to change and adapt to the new environment.”

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**March 13, 2019**

*The Career Curriculum Continuum*

Andrew Hermalyn, Inside Higher Ed

In fact, every year since 1840, there has been a three-month increase in life expectancy. Today the average life expectancy in the United States is 79, and millennials have a 50 percent chance of living to 100 years. In past centuries, people would study, get a job and retire at age 65. But times have changed, and it’s now estimated that the average person will have 12 to 14 careers in a lifetime.

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**March 13, 2019**

*The Career Curriculum Continuum*

Andrew Hermalyn, Inside Higher Ed

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**August 21, 2016**

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

The Straits Times

“It’s quite clear that the established models of education have to change and adapt to the new environment.”

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**April 13, 2016**

*The Fourth Industrial Revolution: What it means, how to respond*

Klaus Schwab, Founder and Executive Chairman, World Economic Forum

http://www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/


http://www.tubechop.com/watch/8280981

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**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

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**February 25, 2020**

*The 60 Year Curriculum: Developing New Educational Models to Serve the Agile Labor Market*

Chris Dede, Harvard University, The Evolllution


219: The 60-Year Curriculum with Rovy Branon

https://teibelinc.com/podcast/219
July 11, 2017
The Rise of the Phigital Learner
Going ‘phigital?’ 4 things schools need to know about Generation Z, Todd Kominiak, TrustEd
http://trustedk12.com/phigital-
digital-learning/

July 30, 2020
Disruptive Ecology:
The New Normal of Education in Post COVID-19

Part II. Education 20/20

From Instructor as Credit Manager and Court Room Judge

1. Instructor as Counselor
2. Instructor as Consultant

3. Instructor as Conductor

4. Instructor as Course Ambassador

5. Instructor as Curator

6. Instructor as Concierge

7. Instructor as Camping Trip Guide
8. Instructor as Cultivator

20 New Roles of the Instructor

Course Ambassador
Curator
Concierge
Cook
Camping Trip Guide
Consultant
Counselor
Consumer Advocate
Change Catalyst
Comedian
Coach
Collaborator
Care Giver
Cultivator
Chemist
Colleague

Bonk’s Last Principles of Teaching/Instruction

1. The Principle of Flexibility

Merrill’s First Principles of Teaching/Instruction
2. The Principle of Convenience

[https://travelinedman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html](https://travelinedman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html)

(e.g., multiple ways to turn in, record the class, get student input on time to teach the class, etc.)

3. The Principle of Collegiality

[https://travelinedman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html](https://travelinedman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html)

(e.g., help turn papers into publications, introduce students to colleagues, ask them to share resources and papers with you, etc.)

4. The Principle of Cheerfulness and Optimism

[https://travelinedman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html](https://travelinedman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html)

(e.g., smile, celebrate accomplishments, positive feedback before any criticisms, etc.)

5. The Principle of High Expectations

[https://travelinedman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html](https://travelinedman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html)

(e.g., post high quality student work, challenge, offer job aids, mention students prior successes like conference presentations from final projects, etc.)

6. The Principle of Choice and Options

[https://travelinedman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html](https://travelinedman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html)

(e.g., sign up for weeks to present, have 10 midterm or final options and pick any 4, choose if want to work as a group/team or individually, etc.)

7. The Principle of Empowerment and Autonomy

[https://travelinedman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html](https://travelinedman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html)

(e.g., build something for a wider audience, design, negotiate the syllabus in a wiki, students vote on agenda items, student presentations of final projects, etc.)
8. The Principle of Support and Feedback
(http://travelinedman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html)
(e.g., offer extensive feedback, assign virtual mentors for feedback, offer summary feedback for common questions, etc.)

9. The Principle of Spontaneity
(http://travelinedman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html)
(e.g., try stuff out and debrief, teach agenda or syllabus, combine ideas, etc.)

10. The Principle of Organization
(http://travelinedman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html)
(e.g., create and share agenda in advance, contact guest speakers in advance and share their bios and pics, arrange order of student presentations, etc.)

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

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

13. The Principle of Passion and Inspiration
(http://travelinedman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html)
14. The Principle of Relevance and Meaningfulness

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

16. The Principle of Expanded Resources

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

The World of Open Education

The World is Open: How Web Technology Is Revolutionizing Education
The World is very open!
(South University of Science and Technology of China, Wednesday June 10, 2015)

17. The Principle of Human Connectedness
http://travelinedman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html

18. The Principle of Cognitive Apprenticeship
http://travelinedman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html

19. The Principle of Purpose and Vision
http://travelinedman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html

20. ?? (what is missing)
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

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

Part IV. 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

April 20, 2020
Learning is Digitally Rich
New website offers tips for teachers about virtual special education
Carolyn Jones, April 20, 2020, EdSource
Teachers can share ideas online for serving students with disabilities during the pandemic:
March 21, 2021
Learning is Digitally Rich
ELCL 6270: Teaching Physical Science with the STEAM Approach
Heejung An: ANH2@wpunj.edu, William Paterson University
https://padlet.com/anh21/4hla7fwe1z7f

January/February 2021
Engaging Students in Online Learning Using Teacher Demonstration
By Denise Wright, The Online Teacher, NSTA
https://www.nsta.org/science-science-january-february-2021/engaging-students-online-learning-using-teacher-demonstration

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 for Educators
https://www.educatingalllearners.org/for-educators
https://www.educatingalllearners.org/educator-resources

March 1, 2021
Learning is Hands-on
Student Designed Videos
M-Learning for K-12 Education
Terri and Terri
https://www.youtube.com/watch?v=4gv_mc7D6vo
Amy Papst:
https://www.youtube.com/watch?v=jJcaqGoSspE&feature=youtu.be
Qi Li, Gangnam:
http://www.youtube.com/watch?v=7Q429lqxZaU&feature=youtu.be
Miguel Lara (Web 2.0 FREEDOM):
http://www.youtube.com/watch?v=8cmCFWi9lW8
Kimberly Vincent-Layton:
https://www.youtube.com/watch?v=4Ic39_rYLII&feature=youtu.be

Interactive Labs and Simulations
Learning is More Hands-on
http://phet.colorado.edu/en/simulation/energy-skate-park

May 11, 2020
Learning is More Game-based
What is smileUP & How to use it?
SMILE, Paul Kim at Stanford
https://www.youtube.com/watch?v=pBlU8sASAlw
What is turbulence?
Why is turbulence dangerous to small airplanes?

When did Elon successfully launch the SpaceX program?
Who admitted that launching the car into space was “kind of silly and fun?”

If he did not devise ever-more sensitive receivers to detect these waves, what could have been the consequence?
If he did not introduce the AC motor in the late 1880s, what would have been the consequence?

Why did Tesla build a plant in Colorado, not in New York?
Why did Tesla at first consider whether they were “electrical disturbances as are produced by the sun?”

Who are the things Tesla designed?
What were the things Tesla couldn’t determine the cause of?

How do you compare Elon Musk and Nicolas Tesla?
How is Mars different from Jupiter?

What are the things Tesla built a plant in Colorado, not in New York?
Why did Tesla at first consider whether they were “electrical disturbances as are produced by the sun?”

If he did not devise ever-more sensitive receivers to detect these waves, what could have been the consequence?
If he did not introduce the AC motor in the late 1880s, what would have been the consequence?

(Paul Kim, Taiwan, November 2018)
May 14, 2018 (Engagement)
Learning is More Adventurous
Aaron Doering, Chasing Seals, TEDx
http://chasingseals.com/
https://twitter.com/chasingseals

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, Lumino 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

1:38 video: https://vialogues.com/vialogues/play/38337/
All: http://curtbonk.com/chemistry-vr.html
01. 01:41: http://curtbonk.com/chemistry-vr-1.html
02. 1:16: http://curtbonk.com/chemistry-vr-2.html
03. 1:16: http://curtbonk.com/chemistry-vr-3.html

May 18, 2017
Learning is More Immersive
Google Expeditions Adds Augmented Reality for Classrooms, Sri Ravipati, THE Journal
https://thejournal.com/articles/2017/05/18/google-expeditions-adds-augmented-reality-for-classrooms.aspx
https://www.youtube.com/watch?v=40Z6CmcQhY4
27 seconds http://curtbonk.com/thejournal27.html
38 Seconds http://curtbonk.com/thejournal38.html
1:10: http://curtbonk.com/thejournal.html

June 23, 2020
Learning is More Synchronous
Turns Out You Can Build Community in a Zoom Classroom
Rachel Toor, The Chronicle of Higher Education
September 23, 2020
Learning is More Synchronous
Introduction to Class for Zoom
Michael Chasen, Co-Founder & CEO of Class for Zoom
https://www.youtube.com/watch?v= concealed date

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
Mursal Hedayat, London
https://wearechatterbox.org/

July 7, 2020
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= concealed date

April 29, 2020
Learning is More Video-based...
Animated COVID-19 prevention video goes viral
Mandy Erickson, SCOPE Stanford Medicine
https://www.youtube.com/watch?v= concealed date

Video: 53 seconds

A new species of dinosaur has been discovered in Sahara Desert. It's an extremely rare discovery because dinosaur fossils are not known to be in that part of the world. USA TODAY
July 25, 2020
Learning is More Video-based...
Silver Lining for Learning
https://silverliningforlearning.org/
https://www.youtube.com/channel/UC9XEsh89qrIlpmVVpQt

March 19, 2018
Learning is More Free and Open
Open Textbook Network
Center for Open Education, University of Minnesota
http://research.cehd.umn.edu/

January 9, 2019
2018 National Higher Education Report
Freeing the Textbook: Open Education Resources in U.S. Higher Education, 2018
Julie E. Seaman and Jeff Seaman

August 9, 2017
Learning is More Free and Open
Modern State Education Alliance
https://modernstates.org/

March 21, 2018
Learning is More Direct from Experts
TeachMeNow and VIPKid
TeachMeNow is a gig-economy platform for teachers. This marketplace connects teachers, experts, and mentors to students. The technology combines scheduling, payments and the virtual setting that can connect an unlimited number of learners to experts from all over the world, with new courses run 24/7/365 and new, in-attentive, engaged, and competent students enrolled every day.
https://teachmenow.com/

How Learning is Changing:
Mega Trend #3. Customization
massive
self-directed
blended
flipped
communal
personal
competency-based
on-demand
modifiable
modular
The Evolution of E-Learning (All 7 year cycles)

Phase IV, 2015: THE AGE OF PERSONALIZATION.

Other prior significant e-learning dates:
1985: FIRST ONLINE COURSE, LINDA HAESEM, UNIV. OF TORONTO
1993: HYPERCARD FIRST SHIPPED.

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

March 2, 2018
Learning is More Modifiable
The Architecture of Ideal Learning Environments
Emelina Minero, Edutopia
https://www.edutopia.org/article/architecture-ideal-learning-environments

August 22, 2020
Learning is More Blended
Blended in Action
Raise Your Hand Texas
https://www.raiseyourhandtexas.org/foundation/blended/blended-in-action/

August 23, 2020
Tips and Guidelines
Catlin Tucker blog
https://catlintucker.com/
September 17, 2018
Learning is More On Demand
Talk to Books
https://books.google.com/talktobooks/
https://qz.com/1252664/talk-to-books-at-ted-2018-
ray-kurzweil-unveils-googles-astounding-new-search-
tool-will-answer-any-question-by-reading-thousands-
of-books/

May 9, 2017 (Customization)
Learning is More On Demand (PDAs)
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/reviews/2017/05/09/amazon-
echo-show-touchscreen-video-alexa/101448844/
44 Seconds: http://curtbonk.com/jetsons44.html

August 2, 2018
Learning is More On Demand
Hey, Alexa, Should We Bring Virtual Assistants to Campus? These Colleges Gave Them a Shot
Lindsey Ellis, The Chronicle of Higher Education
https://www.chronicle.com/article/Hey-Alexa-Should-We-
Bring/244129

May/June 2020
Learning is More On Demand
Chatting with Chatbots and Text Buddies
Lindsey McKenzie, Inside Higher Ed
https://www.insidehighered.com/news/2019/09/06/expansion-
chatbots-higher-ed

October 12, 2018 (Customization)
Learning is More on Modular
edX Expands MicroMasters Programs With Data Science (“nanodegree”) Digital Leadership and More, Sri Ravipati, Campus Technology
https://campustechnology.com/articles/2017/03/01/edx-
expands-micromasters-programs-with-data-science-
digital-leadership-and-more.aspx

August 27, 2020
Alternative Credentials on the Rise
Paul Fain, Inside Higher Ed
https://www.insidehighered.com/news/2020/08/27/interest-
spike-short-term-online-credentials-will-it-be-sustained-
Sources: Moody’s, U.S. Department of Education
Professional Certificates  
October 3, 2019  
Google IT Professional Certificates  
Coursera Blog  
https://grow.google/programs/it-support/?cid=wc&source=ams&sourceId=61203

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  
April 30, 2020  
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 in a school about 70 students of age 13-15. I was excited to learn that in less than 8 months 78 students of age 10-15 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 200 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 the school.
August 1, 2018
1. Independent Studies Via MOOCs
   MOOC: AI A-Z: Learning How to Build an AI Online Course and Machine Learning
   Mengyuan Zhao
   https://www.udemy.com/artificial-intelligence-az/
   https://www.coursera.org/learn/machine-learning

October 12, 2018
2. OER-Based Courses and Programs
   The Chronicle of Higher Education
   Launching OER Degree Pathways: An Early Snapshot of Achieving the Dream’s OER Degree Initiative and Emerging Lessons

September 22, 2017
3. 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-app-84da18f8ae76

June 11, 2017
4. Rise of Super E-Mentors and AI Coaches
   (Paul Kim, 2018)

September 26, 2018
5. Interactive Agents and Tutors
   Pushing the Boundaries of Learning With AI
   Lindsay McInnis, Inside Higher Ed

January 30, 2017
6. Professor Einstein PDA’s
   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/
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.

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.”

Chat Window Poll: Is this an Evolution or Revolution?

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

Things are heating up!

The Learning Revolution is coming within reach!
Remember...
“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: cjbonk@indiana.edu