Living in Tech City: 50+ Technology Trends and Innovations Transforming Workplace Learning, Education, and Our Lives
Curtis J. Bonk, Professor, Indiana University
cjbonk@indiana.edu
http://mypage.iu.edu/~cjbonk/

“The log-on degree”
March 14, 2015
The Economist

The Innovators:
Walter Isaacson (2014)
http://books.simonandschuster.com/The-Innovators/Walter-Isaacson/9781476708690

Poll #2: Remember Education 1.0
1728-1st correspondence course advertised Boston
(learn shorthand from Caleb Phillips thru weekly mailed lessons)
The First University Correspondence Course
(University of London, External Program, 1858)
1728-1990s – Generally postal system based
1930s – phonograph and radio
1950s and 1960s – television
1970s and 1980s – VHS tapes
1980s and 1990s – DVD

The Problem with Learning Technology
Karen Wilcox, November 7, 2014, Chronicle of Higher Education

August 3, 2015
Long-Distance Networking
Chronicle of Higher Education, Melanie Nelson

Image: Telephone Switchboard Operators, circa 1914 (via Flickr CC user Bruce Blair)
Poll #2: Remember what was to be education 2.0?

Fast Forward 30+ Years...
“Anyone can now learn anything from anyone at any time.”
Poll #3: Any Visions of Education 3.0?
Knowledge Navigator (1987)
Apple Computer

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

I. Learning is More Mobile
(e.g., mobile courses on smartphone)
April 2, 2015
Review: Samsung rises to challenge with Galaxy S6 and S6 Edge

April 9, 2015
I’ll Buy the Apple Watch, Ed Baig, USA Today

May 14, 2015
Smartphone separation anxiety: How bad is your nomophobia?, Today Health, Meghan Holohan

March 2, 2015
Beware the smartphone zombies blindly wandering around Hong Kong, Mark Sharp, South China Morning Post
II. Learning is More Flipped  
January 7, 2015  
When a Flipped-Classroom Pioneer Hands Off His Video Lectures, This Is What Happens, Jeffrey R. Young, The Chronicle of Higher Education  
A student watches a video of Norman Nemrow’s accounting class. Mr. Nemrow started the video lectures nearly 15 years ago at Brigham Young U. He is now retired, but students still watch him on the screen.

III. Learning is More Video-Based  
June 16, 2015  
Lynda.com Excel Training, IU Acquired for $1.5 Billion, April 23, 2015  

IV. Learning is More Visual  
September 22, 2014  
110 Foot Engagement, Elliott Masie’s Learning 2014  

V. Learning is More Touch Sensored  
October 16, 2013  
Corporate Classrooms: Adapting to Change  
Chief Learning Officer, Frank Kalman  

VI. Learning is More Game-Based  
October 21, 2014  
Sexy iPad Air 2 is fabulous but not a must upgrade, Edward Baig, USA Today  
http://www.usatoday.com/story/tech/columnist/baig/2014/10/21/ipad-air2-fabulous-tablet-is-not-must-upgrade/17658295/
VII. Learning is More Immersive
April 2, 2015
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 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.

April 19, 2015
Mini's Augmented Vision concept puts navigation, safety in your glasses, CNET, Wayne Cunningham and Shara Tibken

VIII. Learning also is More Collaborative
March 26, 2014
Flat Connections: Welcome to Flat Connections - Learning about the world, with the world
http://www.flatconnections.com/

Global Collaboration Projects that Go Way Beyond Skype

IX. Learning is More Social
October 24, 2014
Facebook launches Rooms app for anonymous sharing of interests, USA Today, Jessica Guynn

Facebook launches Rooms app for anonymous sharing of interests

July 23, 2015
Meet Osterhout and its $2,700 AR glasses
June 10, 2015
Augmented reality promises 'superpowers', and people are listening
The USA Today, Marco della Cava
http://www.wired.com/2015/05/meet-osterhout-its-2700-ar-glasses/

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.

October 7, 2013
6 collaborative writing applications for group projects or papers, Casey Brown, Elon University
MeetingWords, Google Docs, NowComment, MixedInk
http://www.mixedink.com/#/how_it_works/
X. Learning is More Adventurous
May 7, 2015
Aaron Doering, Chasing Seals, TEDx
http://chasingseals.com/
https://twitter.com/chasingseals

XI. Learning is More Direct from Experts
February 2, 2015
Here Comes Professor Everybody: The 'sharing economy' meets higher education,
Chronicle of Higher Education, Jeffrey R. Young
http://chronicle.com/article/Here-Comes-Professor-Everybody/151445/?cid=at

XII. Learning is More Synchronous
May 28, 2015
World Bank Institute workshop on e-learning to finance people in Zhengzhou, China

XIII. Learning is More Immediate (and Digital)
January 28, 2015
Discovery Education Techbook

XIV. Learning is Resource Rich
March 22, 2015
Madagascar marvel:
Divers find fossils of extinct giant lemurs
Daisy Carrington, for CNN, March 22, 2015

May 28, 2015 (Immediate, Digital, and Resource Rich)
Ancient jawbones put new species on the human family tree, researchers say, Laura Smith-Spark, CNN
May 28, 2015
New species from Ethiopia further expands Middle Pliocene hominin diversity, Nature
http://www.nature.com/nature/journal/v521/n7553/full/nature14448.html

XV. Learning is More Informal
June 29, 2015
Is Facebook the next frontier for online learning? Christine Greenhow; greenhow@msu.edu, Andy Henion
http://msutoday.msu.edu/news/2015/is-facebook-the-next-frontier-for-online-learning/

XVI. Learning is More Competency-Based
July 31, 2014
Hire Education: Mastery, Modularization, and the Workforce Revolution, Michelle R. Weise and Clayton M. Christensen, The Christensen Institute
http://www.christenseninstitute.org/publications/hirecollege/
http://chronicle.com/article/College-On-Your-Own/147659/?cid=at
Nichele Pollock, a student in Northern Arizona U.'s competency-based bachelor's degree program, takes a Spanish exam online.

XVII. Learning is More On Demand
May 5, 2014
Mobile MOOCs: New platform challenges conventional MOOCs eCampus News (https://coursmos.com/)

XVIII. Learning is More Hands-On
February 2, 2015
Makey Makey and the Kano
http://makeymakey.com/
http://vimeo.com/60307043

XIX. Learning is More Personal
Localization and Translation of Open Content Coursera, Global Translator Community, Chronicle of Higher Education https://www.coursera.org/about/translate
XX. Learning is More Communal
April 30, 2014
New Learning Hubs Locations Hosted by The New York Public Library and Seven Other Int’l Partners, Coursera Learning Hubs
https://www.coursera.org/about/programs/learninghubs

XXI. Learning is More Online
February 5, 2015
2014 Survey of Online Learning
Grade Level: Tracking Online Education in the United States, 2014, Online Learning Consortium (formerly Sloan-C), by I. Elaine Allen and Jeff Seaman

Learning is More Online
June 15, 2014
Starbucks offers workers 2 years of free college, CNN Money, Gregory Wallace
(from Arizona State online programs)

XII. Learning is More Modifiable
Inside Look: Learning Spaces, Meeting classroom teaching and collaboration expectations, University Business, Feb. 22, 2013

XIII. Learning is More Comfortable
Design for Students, with Students, “Hub Central”, the $42 million University of Adelaide learning hub opened in October 2011, May 8, 2012, Mike Roberts
http://designbuildsource.com.au/design-for-students-with-students

XIV. Learning is More Ubiquitous
September 23, 2014
Elliott Masie’s (i-Beacon, Bluetooth low energy proximity sensing)
XV. Learning is More Instantaneous
April 9, 2013
HER Computer fashions face social test: Can wearable computers fit in? Scott Martin, USA Today
(i.e., magnify moles or injuries, see vital signs, live stream surgeries, access previous PT sessions, access research and drug info, etc.)

XVI. Learning is More Free
August 5, 2014
OpenStax Aims To Bring Free Digital Textbooks to High Schools, David Nagel, THE Journal

January 8, 2015
Obama Plan Would Help Many Go to Community College Free
JULIE HIRSCHFELD DAVIS and TAMAR LEWIN, The New York Times

Want something FREE?
Introducing the “TEC-VARIETY” book...
http://tec-variety.com/

The V-PORTAL (Bonk, IU)
“Video Primers in an Online Repository for e-Teaching and Learning” V-PORTAL, TravelinEdMan (27 free/open YouTube videos)
http://www.youtube.com/user/TravelinEdMan

XXVII. Learning is More Self-Directed
February 2013
TED Talks
(Build a School in the Cloud; Self-Organized Learning Environments (SOLEs), TED Talk from Sugata Mitra
http://www.ted.com/talks/sugata_mitra_build_a_school_in_the_cloud.html
July 27, 2015
Mature Minds Want To Know
Karie Willyerd, CLO
http://www.clomedia.com/articles/6392-older-folks-need-learning-too

XXVIII. Learning is More Global
May 26, 2015
Exploring by the Seat of Our Pants
National Geographic, Jessica Shea
http://blog.education.nationalgeographic.com/2015/05/26/exploring-by-the-seat-of-our-pants/

XIX. Learning is More Open
(December 2, 2014)
Nature, Openwords, etc.
http://www.openwords.com/
https://www.facebook.com/Openwords

XXX. Learning is More Massive
Sample Course: Open Knowledge:
Changing the Global Course of Learning
September 2, 2014 to December 12, 2014, Stanford
https://class.stanford.edu/courses/Education/OpenKnowledge/Fall2014/about#

Global Health Initiatives
October 7, 2014
Online Mooc courses deliver Ebola health advice, BBC News, Sean Coughlan

April 20, 2015
250 MOOCs and Counting: One Man’s Educational Journey, Chronicle of Higher Education
http://chronicle.com/article/250-MOOCs-Counting-One/239397/?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.”
May 26, 2015
Edtech and MOOC Times in China
Michael Trucano On Tue, 05/12/2015, EduTech

June 26, 2015
In China, Where Everything is a MOOC,
Education Week, Justin Reich, HarvardX Research Fellow
http://blogs.edweek.org/edweek/edtechresearcher/2015/05/in_china_where_everything_is_a_mooc.html?r=284759497

The most memorable line from my recent visit to China was this: "We have 12 million K-12 teachers in China who need to receive this particular in-service training, so we started with a group of about 200,000."

Let’s Review:
Learning is Changing…
(i.e., it’s more informal, video-based, ubiquitous, collaborative, self-directed, global, open, massive, etc.)

Frank Basile, an aircraft technician, took an MITx course on circuits and electronics to increase his knowledge.
Joe Alfonso, a financial adviser from Oregon, is taking the online finance course as a "refresher."

Things are heating up!
http://routledge-ny.com/books/details/978138807419/

MOOCs and Open Education
Around the World
http://routledge-ny.com/books/details/978138807419/
The Web of Learning

We are entering a jumping off point…

August 4, 2015
How Nanodegrees Are Disrupting Higher Education
John Waters, Campus Technology
http://campustechnology.com/articles/2015/08/05/how-nanodegrees-are-disrupting-higher-education.aspx

The World is very open!
(South University of Science and Technology of China, Wednesday June 10, 2015)

Framework: WE-ALL-LEARN:
Ten Forces that Opened the Learning World
- Web Searching in the World of e-Books (i.e., Darwin)
- E-Learning and Blended Learning
- Availability of Open Source and Free Software (e.g., Moodle)
- Leveraged Resources and OpenCourseWare (e.g., MIT)
- Learning Object Repositories and Portals (i.e., shared content)
- Learner Participation in Open Info Communities (YouTube)
- Electronic Collaboration and Interaction (sync and async)
- Alternate Reality Learning (Online Massive Gaming, Simulations, and Virtual Worlds; e.g., Second Life)
- Real-Time Mobility and Portability (e.g., iPhone)
- Networks of Personalized Learning (Blogs, RSS)
The World is Wide Open!
(South University of Science and Technology of China, Wednesday June 10, 2015)

Audience Participation!

WE
ALL
LEARN!!!

Audience Poll #4:
Are we going crazy yet?

20 More Technologies of Today...

Tech #31. Virtual Expeditions
July 23, 2015
What Google's virtual field trips look like in the classroom, eSchool News, Stephen Noonoo
https://www.google.com/edu/expeditions/
https://www.youtube.com/watch?v=mlYJdZeA9w4
http://www.eschoolnews.com/?p=159458

Tech #32. Online Study Groups
(e.g., Open Study: http://openstudy.com/)
Tech #33. Online Language Learning (e.g., OpenLanguage)
(Jenny Zhu and John)

Tech #34. Mobile Apps for the other training and resources

Tech #35. Social Books (e.g., Subtext; http://subtext.com/)

Tech #36. Multi-Participant Web Conferencing
(Zoom, Adobe Connect, Jabber, Imee, GoToMeeting)
https://www.youtube.com/watch?v=JPsnxom1y9M
https://www.youtube.com/watch?v=fGbpwZNW3oI (join a meeting)
https://zoom.us/

Tech #37. Videoconferencing and Telepresence Robot Technology (e.g., Revolve, Kubi)
https://revolverobotics.com/

Tech #38. Goals Setting Tools (e.g., I Done This, Milestone Planner, and 43 Things)
Tech #39. Shared Online Video Tests and Quizzes (e.g., TED-Ed)
http://education.ted.com/

Tech #40. Video Editing and Commenting Tools (e.g., TubeChop)

1. Find the video you want to chop.
2. Select & cut interesting part of the video.
3. Share it with friends.

Tech #41. Screencasts and Tutorials (Jing, GoView, Screenr)

Tech #42. Online Testing (Quizlet; http://quizlet.com/)

Tech #43. Big Data Visualization Tools (Harvardx and MITx)
http://harvardx.harvard.edu/harvardx-insights

Tech #44. Wikis and Collaborative Technology (negotiate meanings)
(PiratePad, MeetingWords, PBWorks, Wikispaces)
Tech #45. Collection Tools
Design Article Database in Pinterest, Jenny Webeck
https://www.pinterest.com/jennifertwebeck/emerging-learning-technologies/

Tech #46. Backchannel Chat
(TodaysMeet)
https://todaysmeet.com/
R678_Emerging_Learning_Technologies
https://todaysmeet.com/R678_Emerging_Learning_Technologies

Tech #47. Drones
July 28, 2015
Highway As It Readies For Flying Package Delivery,
Forbes, Ryan Mac
http://www.marketplace.org/topics/business/amazons-drone-highway-sky

Frank Wang Tao leads the world’s largest consumer drone company in DJI, which is currently raising money at a $10 billion valuation. (Photo: David Hartung For Forbes)


Tech #49. Mobile Health (bio sensors)
7 new smartphone features that will help define your future
February 23, 2014, Stewart Wolpin, CNN

Tech #50. Wearable Vibes
July 15, 2015
A high-tech high: Wearable gives you good vibes, USA Today, John Shinal
http://www.usatoday.com/story/tech/columnist/shinal/2015/07/14/thync-hippie-culture/29774829/
Ok, how do you now view the instructor in the Open World of Education 3.0?

From Instructor as Credit Manager

Instructor as Curator and Concierge

Any Questions or Comments?

😊 Slides at: TrainingShare.com
Papers: PublicationShare.com
Book: http://worldisopen.com/
Email: curt@worldisopen.com