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

Audience Poll #1: Has learning technology ever transformed your life?

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)
1728-1900s – 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

May 20, 2015
Tech Woes at Small Colleges: If it’s broken, and it probably is, then adapt, Chronicle of Higher Education, Jon Nichols

The Personal Computer Era...
May 10, 2013
10 ed-tech tools of the 70s, 80s, and 90s
eSchool News, Meris Stansbury
http://www.eschoolnews.com/2013/05/10/ed-tech-tools-of-the-70s-80s-and-90s/print/

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

Fall 2014, On Wisconsin
MOOC, Meet MORC (Massive Open Radio Course)
WHA, UW Madison, College of the Air; 1933, Vocational Training dedicated to Agriculture, and later Home Economics and Typing

Fall 2014, On Wisconsin
MOOC, Meet MORC (Massive Open Radio Course)
WHA, UW Madison, College of the Air; 1933, Vocational Training dedicated to Agriculture, and later Home Economics and Typing

Poll #2: Listen to the Radio Lately?
November 14, 2014
School lessons by radio in Sierra Leone, Liberia, IRIN (Humanitarian News and Analysis), MONROVIA/FREETOWN/DAKAR
http://www.pce.uw.edu/about/Leadership/

Poll #3: Turn on the TV Lately?
November 14, 2014 (2:25)
Why online ed disrupts the traditional model, Fareed Zakaria GPS, CNN. On GPS, Stuart Butler & Anant Agarwal explain why students are drawn to online higher education: tuition debt & exciting new technologies

Life as an accountant/CPA in a high tech company in the 1980s...
Knowledge Navigator (1987)
Apple Computer
http://www.youtube.com/watch?v=c18d8f4f8eoc

Fast Forward 25+ Years...
“Anyone can now learn anything from anyone at any time.”

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

Learning is Technology Based
New Technologies = New Delivery Methods...

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, Edward Baig, USA Today
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
February 15, 2015
Lynda.com Excel Training, IU

IV. Learning is More Visual
September 22, 2014
110 Foot Engagement, Elliott Masie’s Learning 2014
October 6, 2014
Stanford U Display Wall Takes Visualization to a Higher Level,
Dian Schaffhauser, Campus Technology

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

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/
Cardio 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
X. Learning is More Adventurous
Aaron Doering, Chasing Seals, TEDx
http://chasingseals.com/

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/

Kevin deLaplante, an associate professor at Iowa State U., makes an average of $2,500 per month teaching from his home studio (above) on sites like Udemy.

January 22, 2015
Noodle
When Can I Skip Taking the GRE or GMAT?
https://www.noodle.com/articles/when-can-i-skip-taking-the-gre-or-gmat

XII. Learning is More Synchronous
Dubai to Puerto Rico (Edgar Leon)
https://www.youtube.com/watch?v=Imxw0YwTh2Y&list=UUClhOjnvl1pEXd9SkvIw

XIII. Learning is More Digital
October 23, 2014
New Amazon Kindle is a Voyage into eReader luxury, USA Today, Edward C. Baig

XIV. Learning is Resource Rich
January 28, 2015
Discovery Education Techbook
XV. Learning is More Informal  
October 13, 2013  
A Dozen Ways To Promote Informal Learning  
Chief Learning Officer, Saul Carliner  
http://www.clomedia.com/articles/a-dozen-ways-to-promote-informal-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/hire-
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/)  
http://www.ecampusnews.com/top-
news/new-platform-challenges-conventional-moocs/print/

XVIII. Learning is More Hands-On  
February 2, 2015  
Makey Makey and the Kano  

XIX. Learning is More Personal  
March 10, 2013  
iPotty Aims To Entertain Toddlers During Toilet Training, Mashable, Kate Freeman  
(January 10, 2013)  
http://mashable.com/2013/02/10/i-potty/

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

Employee to Employee Training
G2g (Googler to Googler) Training
Seven Ways to Corporate MOOC, Udemy blog,
December 23, 2013, Shannon Hughes
https://www.udemy.com/organizations/blog/2013/12/23/seven-ways-to-corporate-mooc/

Classes range from management and public speaking, to parenting and mountain climbing.

February 5, 2015
XXI. Learning is More Online
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
January 10, 2014
The New-School Virtual Leader
Chief Learning Officer, Sharat Sharan
Hotel chain Marriott created a leadership program with a goal to provide training to 733 hotels in 23 countries.
Certified 5,000 managers trained; and 10,000 more given big picture training
http://www.clomedia.com/articles/the-new-school-virtual-leader

Gates Newsletter

Learning is More Online
June 15, 2014
Starbucks offers workers 2 years of free college, CNN Money, Gregory Wallace
(from Arizona State online programs)
**Blended Learning**
(Employee Blended Orientation, Flipping the Classroom—give access to course materials)

*Putting MOOCs to Work Recap*
September 8, 2014, Chris Hilger, Extension Engine
https://www.udemy.com/organizations/blog/2013/12/23/seven-ways-to-corporate-moocs/

**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

**May 17, 2015**
Fake Diplomas, Real Cash: Pakistani Company Axact Reaps Millions, NY Times, Declan Walsh

Axact makes tens of millions of dollars annually by offering diplomas and degrees online through hundreds of fictitious schools. Fake accreditation bodies and testimonials lend the schools an air of credibility. But when customers call, they are talking to Axact sales clerks in Karachi.
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

XXVIII. Learning is More Global
August 1, 2014
Can You Really Teach a MOOC in a Refugee Camp?, Chronicle of Higher Education, Steve Kolowich

Two men living in Dadaab, a refugee camp in Kenya, would watch lecture videos and take online quizzes at a nearby United Nations compound. (InZone)
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#  
Softcover ($30):  
http://www.parlorpress.com/invasion_of_the_moocs  
Free (PDF):  

April 20, 2015  
250 MOOCs and Counting: One Man’s  
Educational Journey, Chronicle of Higher Education  
http://chronicle.com/article/250-MOOCsCounting-One/229397/?sid=at  
If the MOOC movement has faded, nobody told Jima Ngei. Mr. Ngei, who lives in Port Harcourt, Nigeria, has completed and passed 255.

Building Talent Pipeline  
Master’s Degree Is New Frontier of Study Online,  
By Tamar Lewin  
http://chronicle.com/article/MOOCs-May-Not-Be-So-Disruptive/140965/  
http://extensionengine.com/putting-moocs-to-work-recap-infographic/#.VExR4o3wtjs

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

Nanodegrees (e.g., Web design, coding, etc.)  
(Open Education Alliance)
Aquent Gymnasium
(e.g., Web design, Coding, JavaScript, etc.)
A staffing agency for the marketing and creative industries, a MOOC provider that offers technology courses for creative professionals. http://gymnasium.aquent.com/

Better Money Habits
(personal finance, money habits, financial literacy)
(Bank of America and the Khan Academy)
The MOOC Marketplace Takes Off, Forbes, November 30, 2013, Josh Bersin

openSAP
MOOC platform to educate its ecosystem of developers and partners on SAP technologies
https://open.sap.com/

April 1, 2015
For a Better Flip, Try MOOCs,
David Raths, Campus Technology
http://campustechnology.com/articles/2015/04/01/for-a-better-flip-try-moocs.aspx

Things are heating up!
http://routledge-ny.com/books/details/9781138807419/

MOOCs and Open Education Around the World
By Bork, Lee, Renner, & Reynolds
http://routledge-ny.com/books/details/9781138807419/
Let’s Review:
Learning is Changing…
(i.e., it’s more informal, video-based, ubiquitous, collaborative, self-directed, global, mobile, 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.”

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 very open!
(in Ho Chi Minh City, Vietnam, Wednesday March 12th)

The Web of Learning

Audience Participation!
WE
ALL
LEARN!!!
We are entering a jumping off point...

Audience Poll #4: Are we going crazy yet?

20 More Technologies of Today...

Tech #31. Free Content Portals
MERLOT II: Multimedia Educational Resource for Learning and Online Teaching
http://www.merlot.org/merlot/index.htm?action=find

Tech #32. Online Study Groups
(e.g., Open Study: http://openstudy.com/)

Tech #33. Online Language Learning
May 5, 2014
Technology Provides Foreign-Language Immersion at a Distance,
Danya Perez-Hernandez, Chronicle of Higher Education,
https://chronicle.com/article/TechnologyProvides/146369/?cid=at&utm_source=at&utm_medium=en

Portuguese-language students at Virginia Commonwealth U. hold a "teletandem" session with students in Brazil who are learning English. The approach "basically forces you to learn," says one student. "It pushes you to practice the language to make sure you are ready for the next meeting."
October 24, 2014
Raw: Facebook CEO dazzles with Mandarin,
USA Today

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

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

Tech #36.
Web Conferencing
(Adobe Connect, Jabber, iMeet, GoToMeeting, etc.)
https://connect.iu.edu/p259wpiabg9/

Tech #37.
Videoconferencing and Telepresence Technology

February 18, 2015
Video Conferencing Robots
(e.g., Revolve, Kubi)
https://revolverobotics.com/
Tech #38. Goals Setting Tools (e.g., I Done This, Milestone Planner, and 43 Things)

Changing your life is hard. Doing it by yourself is harder.

Start listing your goals now...

43 Things is the world's largest goal setting community. People have used it to:
- lose weight
- save money
- increase productivity
- improve relationships
- achieve important life goals

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)

How Does It Work?

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

Watch Examples

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

Create Screencasts!

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

Try it in 60 seconds

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. Crowdsourced Website Donations (e.g., Scholar Match, Zero Bound, Pave, GoFundMe: http://www.gofundme.com/)

Tech #46. Collection Tools
Design Article Database in Pinterest, Jenny Webeck
https://www.pinterest.com/jennifertwebeck/emerging-learning-technologies/

Tech #47. Backchannel Chat (TodaysMeet)
https://todaysmeet.com/
R678_Emerging_Learning_Technologies
https://todaysmeet.com/R678_Emerging_Learning_Technologies

Tech #48. Virtual or Augmented Reality Training (Web-based Land Navigation Trainer Tutorial)
http://www.youtube.com/watch?v=b-WY9nazoGU

Tech #49. Interactive News and Science Globes, January 7, 2013, Digital Globes Offer a Dynamic Vision, NY Times, Mark Vanhoenacker
Tech #50.
Mobile Health (bio sensors)
7 new smartphone features that will help define your future
February 23, 2014, Stewart Wolpin, CNN

Bonus: September 16, 2014
Panipat Teen Develops Device to Convert Breath Into Words, NDTV

---

Poll #5: How many ideas did you get from this talk?

1. 0 if I am lucky.
2. Just 1.
3. 2, yes, 2...just 2!
4. Do I hear 3? 3!!!!
5. 4-5.
6. 5-10.

---

October 21, 2014
Teaching and the University of Tomorrow
Chronicle of Higher Education, Kelly J. Baker

Any Questions?

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