**Education 3.0:**  
My, Our Learning World is Changing!  
Curtis J. Bonk, Professor, Indiana University  
cjbonk@indiana.edu  
http://my-page.lu.edu/~cjbonk/

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**Poll #1:**  
Are you interested in Education 3.0?  
A = Yes  
B = No  
C = Not sure

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**March 2015**  
America’s Skills Challenge: Millennials and the Future  
Madeline Goodman, Anita Sands, and Richard Coley, ETS  

**Why Education 3.0?**  
(Global Education Leaders Program (GELP))  
http://gelonlinel.org/  
• Globalization and Demographic Shifts  
• Technological Revolution  
  – Transfer of ownership to students  
  – Collaborative learning technologies  
  – Holistic change in complex and interdependent system  
  – Higher-order thinking focus

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**Education 3.0**  

**Education 3.0: ‘Learning Psychology’—Embracing Better Ways to Teach**  
Jeff Borden, Pearson, October 28, 2013  
• Calculations (active)  
• Compelling questions  
• Communication of results  
• Critical Thinking  
• No single theory, report, or strategy (Vygotsky + McGonigal + Mezirow + Knowles + Pink + Gardner + Wiggins + Etc.)
What skills do we need in the 21st Century?
http://21stcenturyskillsbook.com/
http://toped.svefoundation.org/2011/08/05/the-digital-natives-are-coming/

1. Drive: The Surprising Truth About What Motivates Us
Daniel Pink (2009)

Motivation 3.0
• Freedom, challenge, purpose
• Creative, interesting, etc.
• self-directed work
• Intrinsic motivation
• Life as play and possibility
• Engagement and mastery
• Autonomy

2. Invent to Learn:
Making, Tinkering, and Engineering in the Classroom
Sylvia Libow Martinez & Gary Stager (2013)
http://www.inventtolearn.com/

3. Finding Your Element:
How to Discover Your Talents and Passions and Transform Your Life
Sir Ken Robinson and Lou Aronica (2013)
http://www.inventtolearn.com/

Poll#2: Read any good books lately?
Ten Books About Education 3.0

Finding Your Element:
How to Discover Your Talents and Passions and Transform Your Life
By Lou Aronica and Ken Robinson (2013)
http://www.inventtolearn.com/

• Find your zone (deep in the throes of exploration and personal passion)
• Think differently (make fresh connections and analogies; avoid groupthink)
• Do something, develop your creative ideas
• Use your imagination, play with ideas
• Free and open exchange of ideas
• Encourage expression of personal ideas/feelings
4. The Highest Goal:
The Secret That Sustains You in Every Moment
http://creatinginnovators.com/

- Find real meaning
- Become a generative leader
- What makes you feel connected, motivated, sustained
- Travel your own path
- Go beyond passion and success
- Relate from your heart
- Turn fears into breakthroughs

5. Creating Innovators:
The Making of Young People Who Will Change the World
Tony Wagner (2012)
http://creatinginnovators.com/

- Play
- Passion
- Purpose and life goals
- Open cultures of innovation and interdisciplinary problem solving
- Collaboration
- Intrinsic motivation

6. Mindset:
The New Psychology of Success
Carol Dweck (2006)
http://mindsetonline.com/index.html
http://mindsetonline.com/testyourmindset/step1.php

- Growth vs. fixed (i.e., entity) theories of intelligence
- Intelligence is not fixed
- Practice, practice, practice
- Do not blame others
- Learning goals over performance goals
- Asks: What can I learn from this?
- Asks: How can I improve?
7. Creativity, Inc.
Ed Catmull, President of Pixar and Disney Animation
http://www.creativityincbook.com/

8. The Influence of Technology and Globalization on the Lives of Students.

9. Powers of Two:
Joshua Wolf Shenk (2014)
http://www.shenk.net/powersoftwo

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

TakingITGlobal
https://www.tigweb.org/about/

World Savvy (global competency matrices)
http://worldsavvy.org/
Poll #3: 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 #4: 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  

Poll #5: Read Your Email Lately?  
January 15, 2015

Poll #6: Read Any Research Lately?  
October 25, 2014

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

More Education 1.0  
September 15, 2014  
Open, Distance and Online Learning: A Brief History, Sir John Daniel  
http://vimeo.com/106002761 (password knou)  
Notes and Slides: http://sirjohn.ca/wordpress/?page_id=29
May 20, 2015
Tech Woes at Small Colleges: If it’s broken, and it probably is, then adapt, Chronicle of Higher Education, Jon Nichols

Mimeograph machine, Wikimedia Commons

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

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

Took Correspondence & TV Courses (thanks to Bob Clasen and Charles Wedemeyer, the University of Wisconsin)

Life as an accountant/CPA in a high tech company in the 1980s...

Education 2.0?
Visions of Education 3.0?
Knowledge Navigator (1987)
Apple Computer
http://www.youtube.com/watch?v=hb4AzF6wEoc

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

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
http://www.today.com/health/smartphone-separation-anxiety-how-bad-yours-t20786

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
http://chronicle.com/article/When-a-Flipped-Classroom/151031/

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

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

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/
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

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
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, Google Helpouts, Gooru
When Can I Skip Taking the GRE or GMAT?
https://www.noodle.com/articles/when-can-i-skip-taking-the-gre-or-gmat
https://www.noodle.com/

XII. Learning is More Synchronous
Dubai to Puerto Rico (Edgar Leon)
https://www.youtube.com/watch?v=Imxw0YwTh2Y&list=UUClhOjnvl1pEXd9Skv_Iw

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
March 22, 2015
Madagascar marvel: Divers find fossils of extinct giant lemurs
Daisy Carrington, for CNN, March 22, 2015

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/
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/
https://vimeo.com/60307041

XIX. Learning is More Personal
iPotty Aims To Entertain Toddlers During Toilet Training, Mashable, Kate Freeman
(January 10, 2013)
http://mashable.com/2013/01/10/ipotty/

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
January 23, 2015
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)

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
http://www.usatoday.com/story/tech/2013/04/06/google-apple-iwatch-glass-jawbone-iphone-nike-microsoft-samsung/1979419/ (i.e., magnify moles or injuries, see vital signs, live stream surgeries, access previous PT sessions, access research and drug info, etc.)
http://www.fiercemobilehealthcare.com/story/google-glasses-could-have-strong-potential-healthcare-use/2013-03-18
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

President Obama running onto the stage before delivering remarks at Central High School in Phoenix on Thursday. Credit Doug Mills/The New York Times

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)

May/June 2014

Bringing the World to the Classroom through Videoconferencing and Project-based Learning
By Susan H. Hopper, University of North Texas
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

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

Disinfecting a room in Monrovia, Liberia: Online courses are providing health advice to fight Ebola.

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.”

April 20, 2015
250 MOOCs and Counting: One Man’s Educational Journey, Chronicle of Higher Education
http://chronicle.com/article/250-MOOCsCounting-One/229397/?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 17, 2015
Why Is The University Still Here?
TechCrunch, Danny Crichton
http://techcrunch.com/2015/05/17/why-is-the-university-still-here/#.cczeiq:nR1s
Things are heating up!
http://routledge-ny.com/books/details/9781138807419/
The World is very open!
(in Ho Chi Minh City, Vietnam, Wednesday March 12th)

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)

Audience Participation!
WE ALL LEARN!!!

Poll #7: How do you now view the instructor in the Open World of Education 3.0?

From Instructor as Credit Manager...

Poll #8: To Instructor as Orchestra Conductor or Concierge?
Poll #9: Instructor as Counselor?

Poll #10: Instructor as Course Ambassador?

Poll #11: Instructor as Curator?

How About Instruction as a Cognitive Apprenticeship?

Education 3.0?
Introducing the free “TEC-VARIETY” Framework…
http://tec-variety.com/

1. Tone/Climate: A. Threaded Video Discussions, e.g., Flipgrid
http://flipgrid.com/#429f88c5
October 4, 2014

2. Encouragement, Feedback, etc.:
   A. Class Facebook Group
      Dr. Bonk’s creative fun time group (R546)
      https://www.facebook.com/groups/830496290323899/

3. Curiosity, Fun:
   A. Design Article Database in Pinterest, Jenny Webeck
      https://www.pinterest.com/jennifertwebeck/emerging-learning-technologies/

4. Variety, Novelty, Fun:
   A. Teach from Vietnam to the World
      BBC News Asia, August 14, 2013
      Even though he is now very elderly Vinh Bao (age 96) still teaches music,
      using his computer to coach pupils across the globe.

5. Autonomy, Choice:
   A. Design Multimedia Glossaries
      Ozgur Ozdemir, December 2012
      http://r685glossary.shutterfly.com/
      Umida Khikmatillaeva, Dec. 2011, P540
      http://learningplanet.shutterfly.com/

6. Relevance, Meaningfulness:
   A. Guest Chats (e.g., Emily Hixon, January 20, 2015)
      https://connect.iu.edu/p259wpiahg9/

7. Interactive, Collaborative:
   A. Backchannel Chat (TodaysMeet)
      https://todaysmeet.com/
      R678_Emerging_Learning_Technologies
      https://todaysmeet.com/R678_Emerging_Learning_Technologies
8. Engagement, Effort: A. Guest Speaker Quotes (Rey Junco, February 25, 2013)

March 13, 2015
9. Tension, Challenge, etc.: A. Controversial Issue Debates
RS11 Midterm Video How to Create an Authentic Environment in a Content-Driven School, RS11, Nick and Nik
https://www.youtube.com/watch?v=Bcr3_aZT_xQ&feature=youtu.be

10. Yields Products, Goals: A. Student Created Mobile Apps and Videos

Commitments:
Stop and Share:
Which principle(s) of TEC-VARIETY will you use?
- Tone/Climate
- Encouragement, Feedback
- Curiosity
- Variety
- Autonomy
- Relevance
- Interactive
- Engagement
- Tension
- Yields Products

Framework #2: The R2D2 Model

January 28, 2015
Read 1a. Twitter Fed Class Discussions
Live-Tweeting Assignments: To Use or Not to Use?
The Chronicle of Higher Education, Adeline Koh
http://chronicle.com/blogs/profhacker/live-tweeting-assignments-to-use-or-not-to-use/58949
Reflect 2a.
Interpreting Infographics
July 24, 2014
Woman in Computer Science
http://graduatedegrees.online.njit.edu/resources/many-infographics/women-in-computer-science/

Display 3a. (April 28, 2015)
Concept Mapping and Timeline Tools
(Bubbl.us, Cmap, Gliffy, Spicynodes, or Mindomo)
http://www.spicynodes.org/index.html

Do 4a. Student Music Recordings on Course Content
April 26, 2015
IST Groove Song, Jeffrey Jenkins, R511
https://soundcloud.com/jeffjenkins52/ist-groove
The World is Open, Jill Kaufman, R678
https://www.youtube.com/watch?v=ZRGV0Mg5Ymw&feature=youtu.be

Poll #12: Which do you prefer...
(A) TEC-VARIETY or (B) R2D2?

Where are we headed?
Where is Education 3.0?

Any Comments or Questions?

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