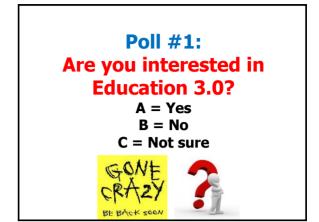
Education 3.0: My, Our Learning World is Changing!

Curtis J. Bonk, Professor, Indiana University cjbonk@indiana.edu http://mypage.iu.edu/~cjbonk/





March 2015

America's Skills Challenge: Millennials and the Future Madeline Goodman, Anita Sands, and Richard Coley, ETS

AMERICA'S SKILLS CHALLENGE:

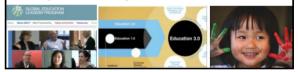
MILLENNIALS AND THE FUTURE

BY MADELINE J. GOODMAN, ANITA M. SANDS, RICHARD J. COLEY, EDUCATIONAL TESTING SERVICE

OVERVIEW

Why Education 3.0? (Global Education Leaders Program (GELP)) <u>http://gelponline.org/</u> • 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



Education 3.0

The Genesis and Emergence of Education 3.0 in Higher Education and its Potential for Africa, First Monday, by Derek Keats and J. Philipp Schmidt, March 2007 http://firstmonday.org/ois/index.php/fm/article/view/1625/1540

EDUCATION 73.0

Table 1: Educational generations in higher education				
Characteristics	Education 1.0	Education 2.0	Education 3.0	
Primary role of professor	Source of knowledge	Guide and source of knowledge	Orchestrator of collaborative knowledge creation	
Content arrangements	Traditional copyright materials	Copyright and free/open educational resources for students within discipline, sometimes across institutions	Free/open educational resources created and reused by students across multiple institutions, disciplines, nations, supplemented by original materials created for them	
Learning activities	Traditional, essays, assignments, tests, some groupwork within classroom	Traditional assignment approaches transferred to more open technologies; increasing collaboration in learning activities; still largely confined to institutional and classroom boundaries	Open, flexible learning activities that focus on creating room for student creativity; social networking outside traditional boundaries of discipline, institution, nation	

Education 3.0: `Learning Psychology'—Embracing Better Ways to Teach

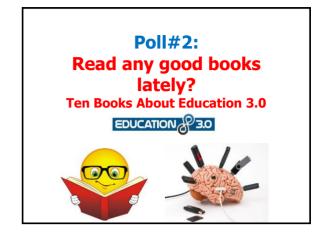
Jeff Borden, Pearson, October 28, 2013

- 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?

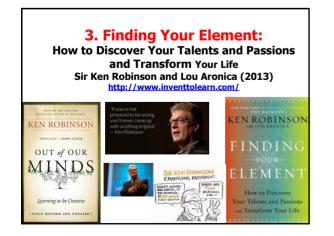
Bernie Trilling, 21st Century Skills: Learning for Life in Our Times (2006, Toward Learning Societies) http://21stcenturyskillsbook.com/

21ST ENTURY	The Seven Cs – 21 st Century Lifelong Skills		
SKILLS	Seven Cs	Component Skills	
-	Critical Thinking-and-Doing	Problem-solving, Research, Analysis, Project Management, sto.	
LEARNING FOR LIFE IN	Creativity	New Knowledge Creation, "Best Fit" Design Solutions, Artful Storytelling, etc.	
OUR TIMES	Collaboration	Cooperation, Compromise, Consensus, Community-building, etc.	
	Cross-cultural Understanding	Acrosa Diverse Ethnic, Knowledge and Organizational Cultures	
BERNIE TRILLING	Communication	Crafting Measures and Using Media Effectively	
CHARLES FADEL	Computing / ICT Literacy	Effective Use of Electronic Information and Knowledge Tools	
	Career & Learning Self-reliance	 Managing Change, Lifelong Learning and Career Recipilition 	









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





Creating Innovators Tony Wagner (2012)

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





Mindset: The New Psychology of Success Carol Dweck (2006) • 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 Pixat Animation and Disney Animation <u>http://www.creativityincbook.com/</u>



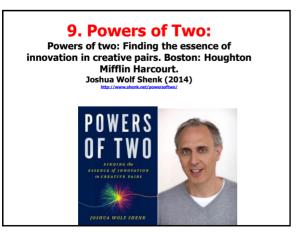
8. The Influence of Technology and Globalization on the Lives of Students.

Maguth, Brad M. (Ed.). (2012). New Directions in Social Education Research: The Influence of Technology and Globalization on the Lives of Students. Charlotte, NC: Information Age Publishing, Charlotte, NC. (book review, Mimi Lee, Ed Tech Magazine, 2013)











Poll #3: Listen to the Radio Lately? November 14, 2014

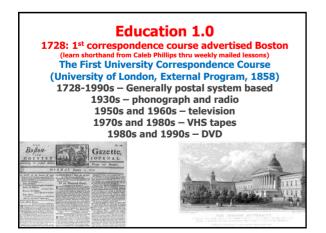
School lessons by radio in Sierra Leone, Liberia, IRIN (Humanitarian News and Analysis), MONROVIA/FREETOWN/DAKAR http://www.inews.ou/report/10038/ischool-lessons-by-radio-in-sierra-leone-liberia http://www.pce.uw.edu/about/Leadership/



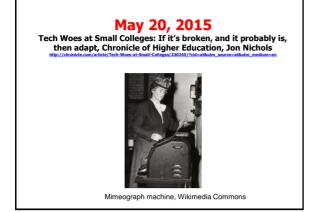


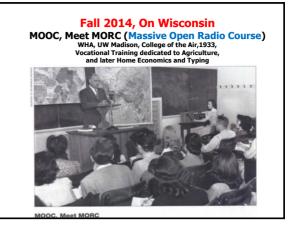




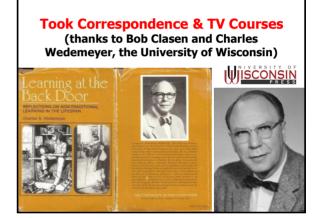




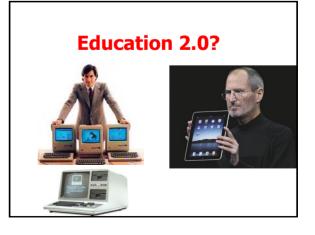








Life as an accountant/CPA in a high tech company in the 1980s...













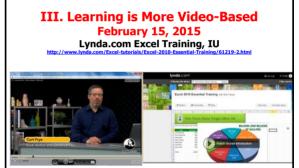








A student watches a video of Norman Nemrow's accounting class. Mr. Nemrow started the video lectures nearly 15 years ago at Brigham Young U. He is now retired, but students still watch him on the screen.







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





A technician uses virtual reality to test out new military hardware before it's ever put into production.







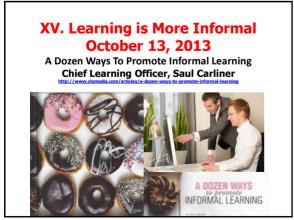


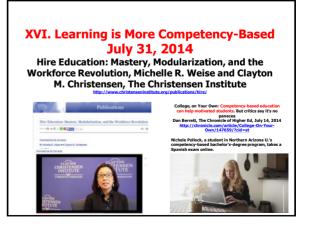






















February 5, 2015 XXI. Learning is More Online 2014 Survey of Online Learning

Grade Level: Tracking Online Education in the United States, 2014, Online Learning Consortium (formerly Sloan-C), by I. Elaine Allen and Jeff Seaman http://edition.cn.com/ideos/business/2015/03/11/bt/val-offers-online-denres-2u-ceo.cn

















XVI. Learning is More Free August 5, 2014

OpenStax Aims To Bring Free Digital Textbooks to High Schools, David Nagel, THE Journal



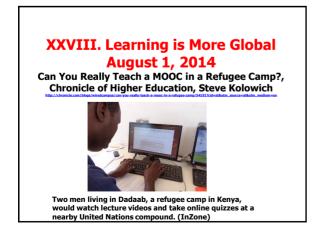




President Obama running onto the stage before delivering remarks at Central High School in Phoenix on Thursday. Credit Doug Mills/The New York Times















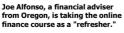
Disinfecting a room in Monrovia, Liberia: Online courses are providing health advice to fight Ebola.

April 20, 2015 250 MOOCs and Counting: One Man's Educational Journey, Chronicle of Higher Education http://chronicle.com/article/250-MOOCsCounting-One/229397/cdl=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."



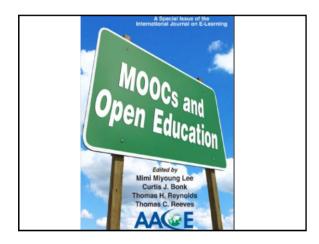
Frank Basile, an aircraft technician, took an MITx course on circuits and electronics to increase his knowledge.

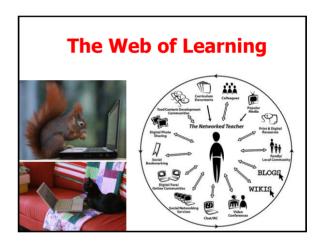
















World

Open

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)



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









Poll #9: Instructor as Counselor?





Poll #11: Instructor as Curator?



How About Instruction as a Cognitive Apprenticeship?













