Education 3.0: My, Our Learning World is Changing!

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





Poll #1:

Are you interested in **Education 3.0?**

A = YesB = NoC = Not sure





Poll#2: Read any good books lately?

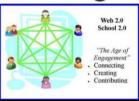
A = YesB = No





Nine Books About Education 3.0





1. Invent to Learn:

Making, Tinkering, and Engineering in the Classroom

Sylvia Libow Martinez & Gary Stager (2013) http://www.inventtolearn.com/





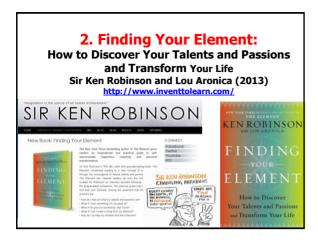


Invent to Learn:

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

Using technology to:

- Making,
- Tinkering
- Repairing,
- · Inventing,
- Customizing
 - the things we need brings engineering, design, and computer science to the masses.



Finding Your Element:

How to Discover Your Talents and Passions and Transform Your Life

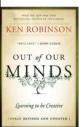
By Lou Aronica and Ken Robinson (2013) http://www.inventtolearn.com/

- 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



3. Out of Our Minds:

Learning to be Creative By Sir Ken Robinson (2011) http://www.inventtolearn.com/







4. Makers:

The New Industrial Revolution (DIY Culture)
Chris Anderson (2012)

http://www.inventtolearn.com/





Makers:

The New Industrial Revolution (DIY Culture)
Chris Anderson (2012)

- People make products (and from home)
- Technology (e.g., 3-D printing) makes us all manufacturers
- Instant connections to potential customers
- Hold up things you personally design
- Desktop fabrication
- · Do-it-yourself (DIY) industry



5. Drive: The Surprising Truth About What Motivates Us Daniel Pink (2009) RSA Animate: http://www.youtube.com/watch?v=u6XAPnuFile

http://www.youtube.com/watch?v=u6XAPnuFjJc http://www.ted.com/talks/dan_pink_on_motivation http://www.danpink.com/books/drive/







2

Drive: The Surprising Truth About What Motivates Us

Daniel Pink (2009)

Motivation 3.0

- · Freedom, challenge, purpose
- · Creative, interesting, and self-directed work
- Intrinsic motivation
- · Life as play and possibility
- · Engagement and mastery
- Autonomy



6. The Highest Goal:

The Secret That Sustains You in Every Moment Michael Ray (2004)
http://creatinginnovators.com/



The Highest Goal:

The Secret That Sustains You in Every Moment Michael Ray (2004)

- 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



7. Creating Innovators:

The Making of Young People Who Will Change the World

Tony Wagner (2012)

http://creatinginnovators.com/



Creating Innovators

Tony Wagner (2012) http://creatinginnovators.com/

- 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?



9. Creativity, Inc.

Ed Catmull, President of Pixat Animation and Disney Animation

http://www.creativityincbook.com/





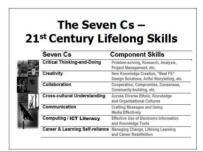
9. Creativity, Inc.

Ed Catmull, President of Pixat Animation and Disney Animation

http://www.creativityincbook.com/

- Give a good idea to a mediocre team, and they will screw it up. But give a mediocre idea to a great team, and they will either fix it or come up with something better.
- If you don't strive to uncover what is unseen and understand its nature, you will be ill prepared to lead
- It's not the manager's job to prevent risks. It's the manager's job to make it safe for others to take them.

What skills do we need in the 21st Century?



What's unique about these 2 people on the left?





If you had to give a word or phrase to describe "21st Century Skills," what would that word be?

- 1. Locate info, synthesize it,
- 2. Use and communicate effectively and ethically,
- 3. Evaluate products,
- 4. Producers and consumers of visual info,
- 5. Sensitive to bias and cultural differences,
- 6. Sets own goals,
- 7. Willing to make mistakes,
- 8. Comparison and contrast skills, inferencing skills,
- 9. Participate in a team, exercise leadership
- 10.Make decisions

Digital Literacy (Bonk, June 2, 2007)



Digital literacy is the ability to browse, locate, filter, synthesize across, and eventually use information appearing in multiple formats and in a wide range of sources that can lead to communication of what one discovered as well as the production of still additional information. (Paul Gilster (1997), Digital Literacy.)

Poll #3:

Has Learning Technology Transformed your life?

A = Yes B = No C = Not sure





I. Learning is More Open October 31, 2013

U.S. Teams Up With Operator of Online Courses to Plan a Global Network, Tamar Lewin, NY Times

From Seoul, South Korea, to La Paz, Mexico, Coursera is partnering with local institutions to create "Global Learning Hubs," the company announced Oct. 31.

coursera





MIT OpenCourseWare (OCW) http://ocw.mit.edu/index.htm OVI Accessed by a locally influentiated proportion of elucation and flares. Overlanged by a locally influentiated proportion of elucation and flares. Noted Impact Note

September 16, 2013

Rwandan Degree Program Aims for a 'University in a Box', Chronicle of Higher Education, Megan O'Neil http://chronicle.com/article/Rwandan-Degree-Program-Aims/141631/



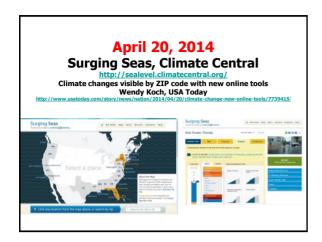
Students attend an orientation session at Kepler, a new hybrid program in Kigali, Rwanda, which will use MOOCs and classroom time to help students earn competency-based associate degrees.

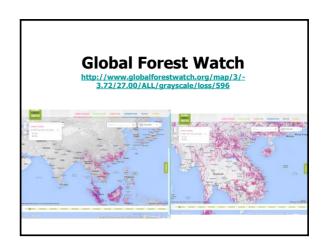
October 31, 2013

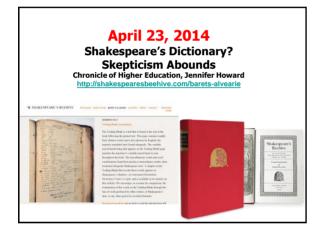
The launch of OERu: Towards free learning opportunities for all students worldwide, BC Campus (Canada)

The launch of OERu: Towards free learning opportunities for all students worldwide

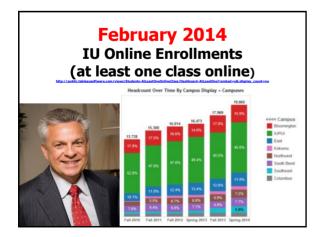






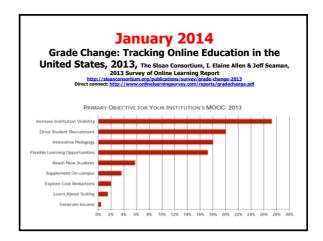


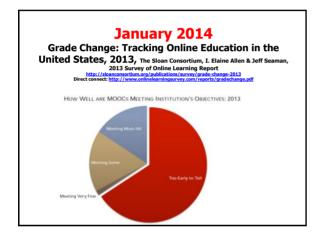




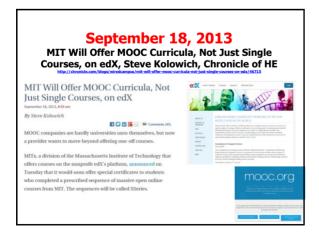


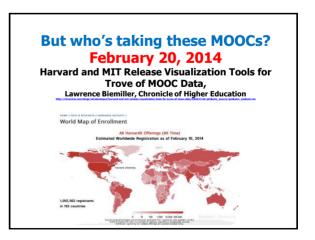


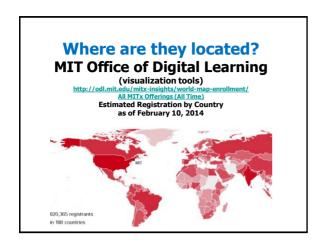




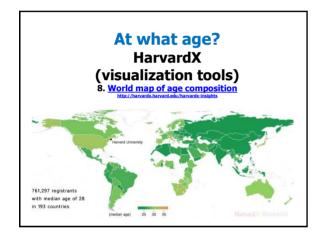


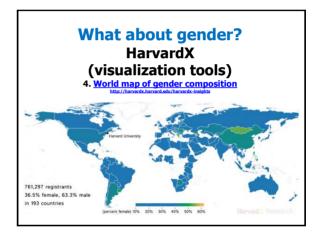


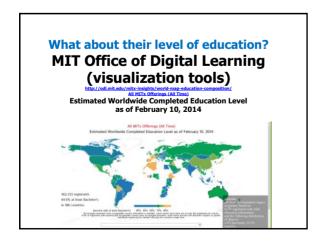


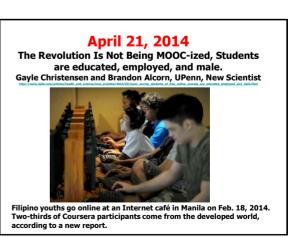


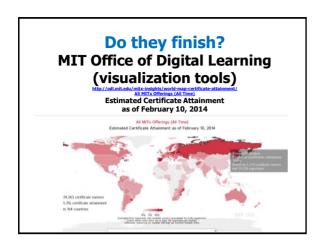


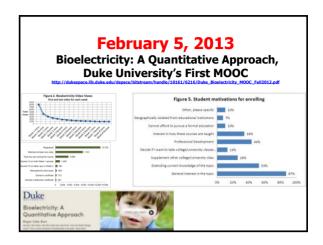


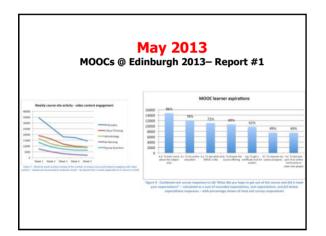








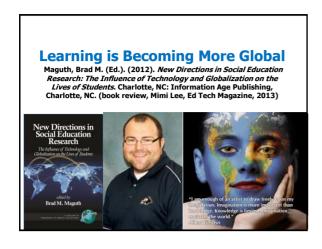








Poll #4: Why would you take a MOOC? A = For fun B = To get credit C = To learn something new D = Curious about it E = See if you like a topic













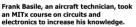






(i.e., it's more open, online informal, video-based, ubiquitous, collaborative, self-directed, global, mobile, massive, etc.)







Joe Alfonso, a financial adviser from Oregon, is taking the online finance course as a "refresher."

Poll #5: Learning is more?

A = Mobile

B = Video based

C = Massive

D = Collaborative

E = Open

F = Global

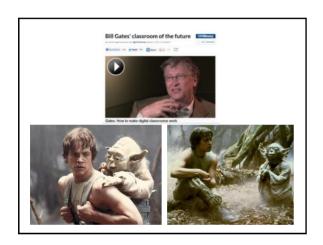
G = Online



















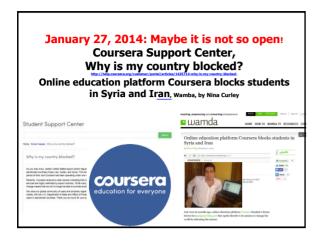


















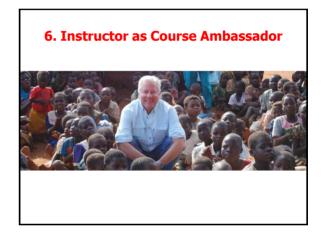
















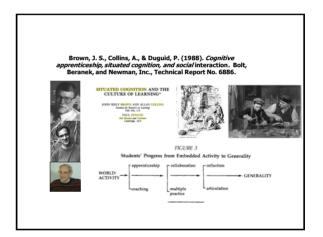
9. Instructor as Camping Trip Guide





How About Instruction as a Cognitive Apprenticeship?





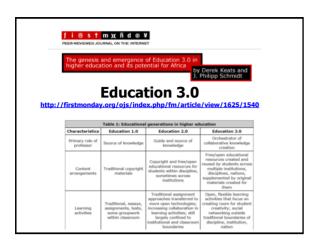
Why Education 3.0?

(Global Education Leaders Program (GELP)) http://gelponline.org/

- Globalization
- · 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: '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.

Education 3.0: Embracing Technology to Jump the Curve

Jeff Borden, Pearson, September 24, 2013

- · Opportunities for creativity
- Outcomes
- · Big data visualization
- Personalization
- · On-demand reports
- Machine learning (technology used to empower)

From Tinkering to Tottering to Totally Extreme Learning...



