

Blended Learning A to Z: Myths, Models, and Moments of Magic

Curt Bonk, Professor, Indiana University
 cjbok@indiana.edu
<http://mypage.iu.edu/~cjbok>

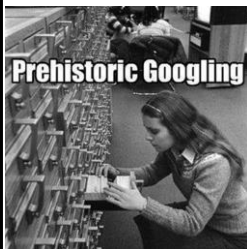


What I will discuss...

1. Definitions of blended learning
2. Myths of blended learning
3. Models of blended learning
4. Examples of blended learning



Part I. Learning is Changing New Technologies = New Delivery Methods...



Audience Poll #1:

Has learning technology has ever transformed your life?



October 21, 2014

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

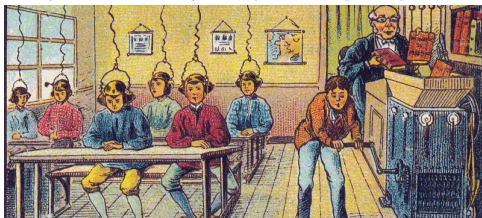


Image: France in 2000 year (XXI century). Future school. From a postcard by Villemard, 1910.

Audience Poll #2:

- I. Who remembers what they were doing on 911?
- II. Who remembers what they were doing on April 4, 2001?



Charles Vest (April 4, 2001)

<http://web.mit.edu/newsoffice/2001/ocw.html>

"This is about something bigger than MIT. I hope other universities will see us as educational leaders in this arena, and we very much hope that OpenCourseWare will draw other universities to do the same. We would be delighted if -- over time -- we have a world wide web of knowledge that raises the quality of learning -- and ultimately, the quality of life -- around the globe."



October 6, 2014

edX turns attention to high school MOOCs, eSchool News

<http://www.eschoolnews.com/2014/10/06/high-school-moocs-939/print/>

edX turns attention to high school MOOCs

Posted By eSchool News Staff On October 6, 2014 @ 5:00 am In Curriculum News, Top News | No Comments

Courses will help prepare students for postsecondary success, edX reps said



Anant Agarwal, CEO of edX, said this is a high priority for us.

While the courses are not offered for



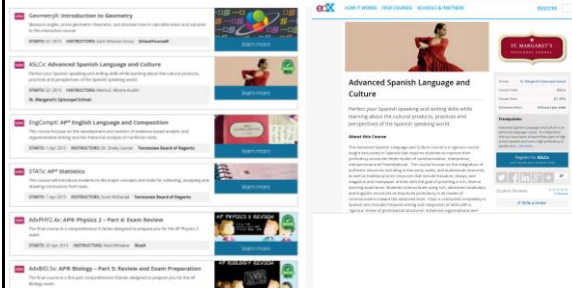
Search the news with keyword:

High School Initiative

Sometimes you want to complete a course for the sheer joy of learning something new. And sometimes you take a course to prepare yourself for future education. Colleges and universities that track learning outcomes could benefit from taking a few extra courses to help close the

October 6, 2014 High School Initiative

<https://www.edx.org/high-school-initiative>
<http://www.eschoolnews.com/2014/10/06/high-school-moocs-939/print/>



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/>



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



Fast Forward 25+ Years...

"Anyone can now learn anything from anyone at any time."

SKILLSHARE LEARN TEACH

Learn anything from anyone, anywhere.



Join our first learning and discover unique classes in your city.

Knowledge Navigator (1987)

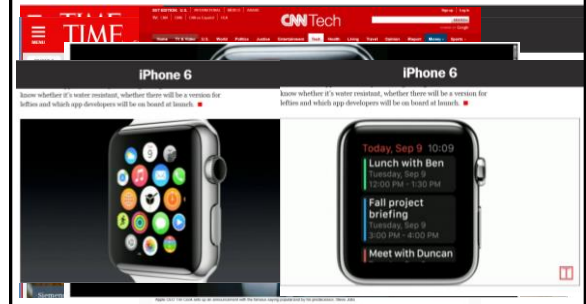
Apple Computer

<http://www.youtube.com/watch?v=hb4A2F6vEoc>



September 9, 2014

I. Learning is More Technology-Based



II. Learning is More Mobile

August 5, 2014

Timex enters smartwatch category. No phone needed, Edward C. Baig, USA Today,

<http://www.usatoday.com/story/tech/2014/08/05/timex-smartwatch-category-no-phone-needed/1359733/>



III. Learning is Hands On

October 8, 2014

With This Computer, Assembly is Required, Ed Baig, USA Today, HispanicBusiness.com

<http://www.hispanicbusiness.com/2014/10/08/with-this-computer-assembly-is-required.htm>
<https://www.kickstarter.com/projects/alexklein/kano-a-computer-anyone-can-make>
<http://www.usatoday.com/story/tech/2014/02/04/diy-toy-computers/5203889/>



IV. Learning is More Flipped

August 1, 2014

Get schools out of the 1890s, Newt Gingrich, CNN

http://www.cnn.com/2014/08/01/opinion/gingrich-schools-technology/index.html?hpt=hp_13

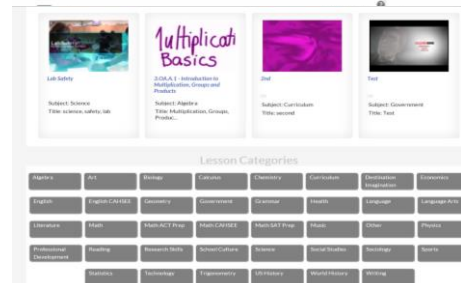
<http://www.flipforlearning.com/>
<http://www.flippinteachers.com/>

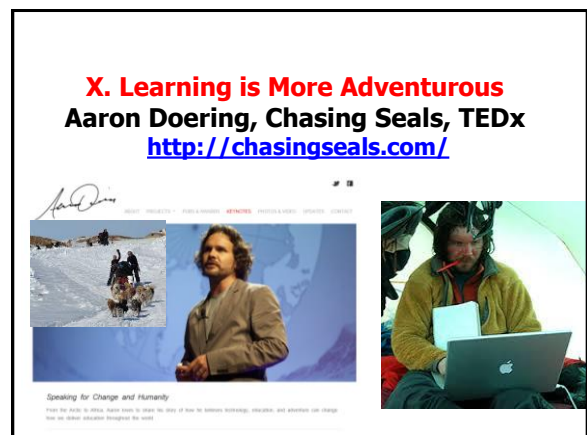
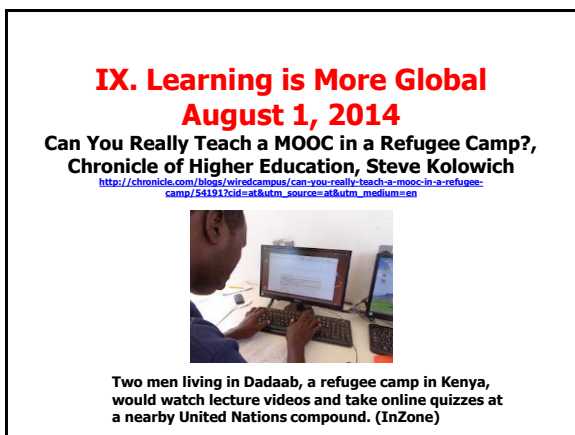
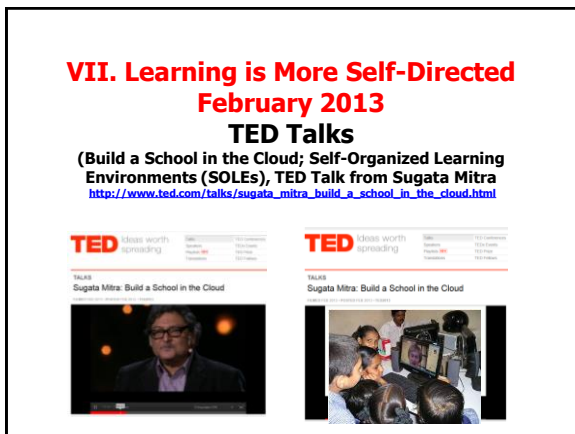
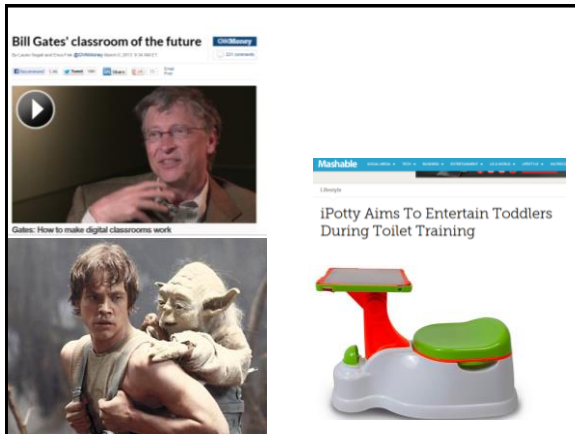


V. Learning is More Personal

uTutor.me

<http://www.ututor.me/>





XI. Learning is More Free August 5, 2014

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

<http://thejournal.com/articles/2014/08/05/openstax-aims-to-bring-free-digital-textbooks-to-high-schools.aspx>

New mobile app helps a Cambridge press offer free digital monographs even to those without computers



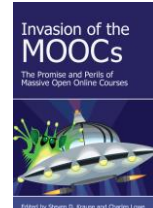
Screen capture. Books can now be read on almost any mobile phone



XII. 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#Software \(\\$30\):http://www.parlorpress.com/invasion_of_the_moocs](https://class.stanford.edu/courses/Education/OpenKnowledge/Fall2014/about#Software%20($30):http://www.parlorpress.com/invasion_of_the_moocs)
Free (PDF): http://www.parlorpress.com/pdf/invasion_of_the_moocs.pdf



Things are heating up!

<http://routledge-ny.com/books/details/9781138807419/>



MOOCs and Open Education Around the World

By Bonk, Lee, Reeves, & Reynolds

MOOCs and Open Education Around the World

<http://routledge-ny.com/books/details/9781138807419/>



MOOCs and Open Education Around the World



EDITED BY
CURTIS J. BONK, MOH M. LEE,
THOMAS C. REEVES
& THOMAS H. REYNOLDS

Global Health Initiatives October 7, 2014

Online Mooc courses deliver Ebola health advice, BBC News, Sean Coughlan

<http://www.bbc.com/news/education-29521360>
<http://www.advancelearning.com/why-wait-for-others-to-fight-ebola>



WHY WAIT FOR OTHERS TO FIGHT EBOLA?

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

XIII. Learning is More Online August 1, 2014

**Evergreen Schools Case Study:
How Online Learning Serves a Diverse Student Population, eSchool News**

<http://www.eschoolnews.com/2014/08/01/evergreen-schools-case-study-online-learning-serves-diverse-student-population/>



XIV. Learning is More Blended

Joseph Rapposelli, THE Journal, October 22, 2014
<http://www.christenseninstitute.org/publications/hybrids/>

Blended Learning Provides Pathway to Success for High School Students

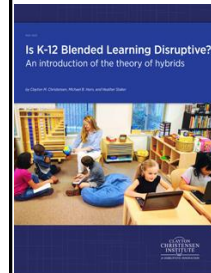
Joseph Rapposelli, administrator of the Red Clay Consolidated School District's blended learning program, explains how his district helped expand course options and prepare students for college with one of Delaware's first blended learning initiatives.

By Joseph Rapposelli | 10/22/14

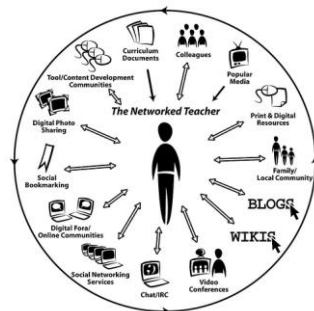


Is Blended Learning Disruptive?

Heather Staker and Michael B. Horn,
 Clayton Christensen Institute, May 2013
<http://www.christenseninstitute.org/publications/hybrids/>



The Web of Learning



We are entering a jumping off point...



Framework #1: WE-ALL-LEARN: Ten Forces that Opened the Learning World

- **W**eb Searching in the World of e-Books (i.e., Darwin)
- **E**-Learning and Blended Learning
- **A**vailability of Open Source and Free Software (e.g., Moodle)
- **L**everaged Resources and OpenCourseWare (e.g., MIT)
- **L**earning Object Repositories and Portals (i.e., shared content)
- **L**earner Participation in Open Info Communities (YouTube)
- **E**lectronic Collaboration and Interaction (sync and async)
- **A**lternate Reality Learning (Online Massive Gaming, Simulations, and Virtual Worlds; e.g., Second Life)
- **R**ead-Time Mobility and Portability (e.g., iPhone)
- **N**etworks of Personalized Learning (Blogs, RSS)



Audience Participation!

WE

ALL

LEARN!!!



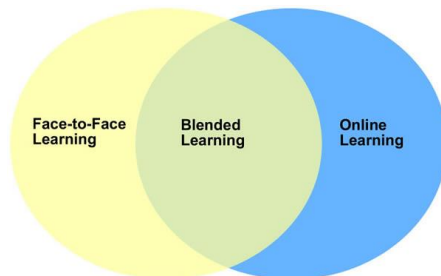
Instructor as Curator



Instructor as Concierge



Part II. Blended Learning



Myth #1: If you read the enough research you will be able to know the impact of blended learning.

1. **Improved Pedagogy**
 - More interactive instead of transmissive
 - Authentic, real world, etc.
2. **Increased Access/Flexibility**
3. **Increased Cost Effectiveness**



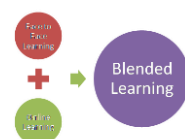
Blended Learning Defined and Explained

Khan Academy and Clayton Christensen Institute
<http://www.khanacademy.org/partner-content/ssf-cci>



Myths #2: Blended learning is easy to define.
Myth #3: Blended learning is hard to define.
Blending Online and F2F Instruction

"Blended learning refers to events that combine aspects of online and face-to-face instruction" (Rooney, 2003, p. 26; Ward & LaBranche, 2003, p. 22)

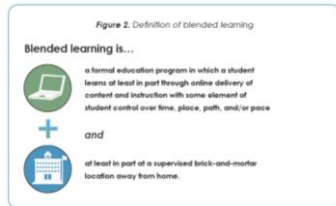


Classifying K-12 Blended Learning

Heather Staker and Michael B. Horn, May 2012

<http://www.projectred.org/uploads/The-Rise-of-K-12-Blended-Learning.pdf>

"Blended learning is any time a student learns at least in part at a supervised brick-and-mortar location away from home *and at least in part* through online delivery with some element of student control over time, place, path, and/or pace."



Classifying K-12 Blended Learning

Heather Staker and Michael B. Horn, May 2012

<http://www.projectred.org/uploads/The-Rise-of-K-12-Blended-Learning.pdf>

One critical part of the definition of blended learning is that it involves "some element of student control of time, place, path, and/or pace." Digital Learning Now! describes each dimension:

- **Time:** Learning is no longer restricted to the school day or the school year.
- **Place:** Learning is no longer restricted to the walls of the classroom.
- **Path:** Learning is no longer restricted to the pedagogy used by the teacher. Interactive and adaptive software allows students to learn [in a method that is customized to their needs].
- **Pace:** Learning is no longer restricted to the pace of an entire classroom of students.

Source: "Roadmap for Reform,"

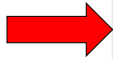
<http://digitalelearningnow.com/wp-content/uploads/2011/10/Roadmap-for-Reform-.pdf>

Myth #4: People will know what I am saying when I say "blended learning."

Myth #5: Blended is the same as "hybrid."

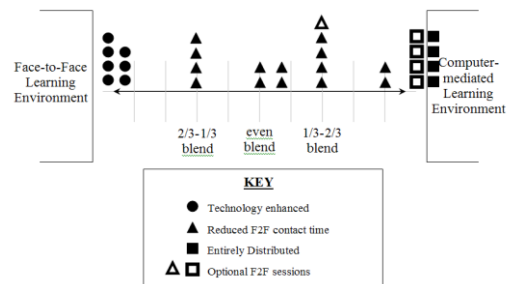
The Sloan Consortium

Proportion of content delivered online	Type of Course	Typical Description
0%	Traditional	Course with no online technology used - content is delivered in writing or orally.
1 to 29%	Web facilitated	Course which uses web-based technology to facilitate what is essentially a face-to-face course. Might use Blackboard or WebCT to post the syllabus and assignments, for example.
30 to 79%	Blended/Hybrid	Course that is a blend of the online and face-to-face course. Substantial proportion of the content is delivered online, typically uses online discussions, typically has some face-to-face meetings
80+%	Online	A course where the vast bulk of the content is delivered online. Typically has no face-to-face meetings.



Myth #6: Knowing "how much" to blend is vital.

Range of Blends in Pew Cases



Source: Graham, C. R., & Allen, S. (2005). Blended learning: An emerging trend in education. In C. Howard & J. V. Boettcher & L. Justice & K. D. Schenk & P. L. Rogers & G. A. Berg (Eds.), *Encyclopedia of Distance Learning* (pp. 172-179). Hershey, PA: Idea Group Inc.

Myth #7: Blended learning works everywhere.

Where is Blended Beneficial?

- Intro Classes (Spanish, psych, algebra, biology)
- AP and Required Classes
- Classes with students working part-time
- Students are rural or spread over a distance
- Classes with certification or standardization
- Classes with new requirements or standards
- Writing intensive classes, theory classes, etc.
- Lab classes?



Examples of Blended Learning

- Put assessments/reviews online
- Online discussions
- Online labs
- Put reference materials on Web
- Deliver pre-work online
- Use online mentoring/coaching
- Access experts live online



Myth #8: People learn more in face-to-face settings than blended or fully online ones.

Fully Online and Blended Learning Advantages

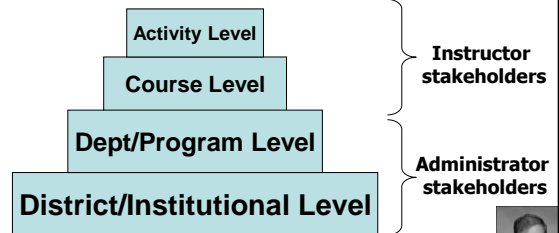
1. Increased Learning (better papers, higher scores)
2. More effective pedagogy and interaction
3. Course access at one's convenience and flexible completion (e.g., multiple ways to meet course objectives)
4. Reduction in physical class or space needs, commuting, parking, etc.
5. Increased opportunities for human interaction, communication, & contact among students
6. Introverts participate more



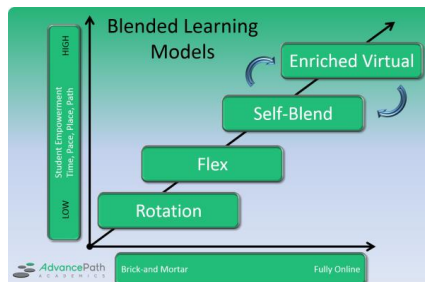
Myth #9: Instructors can have a logical discussion with administrators about blended learning.

Models of Blending

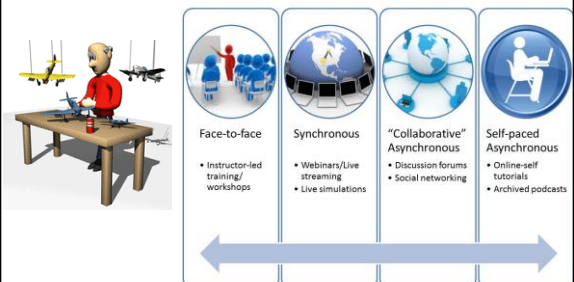
Blending occurs at the following four levels:



Myth #10: There is a best model of blended.



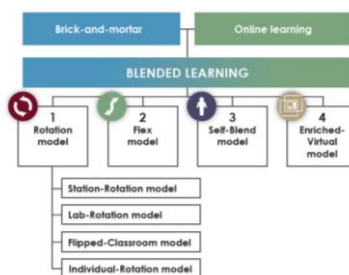
Blended Learning Models



Classifying K-12 Blended Learning

Heather Staker and Michael B. Horn, May 2012
<http://www.innosightinstitute.org/innosight/wp-content/uploads/2012/05/Classifying-K-12-blended-learning2.pdf>

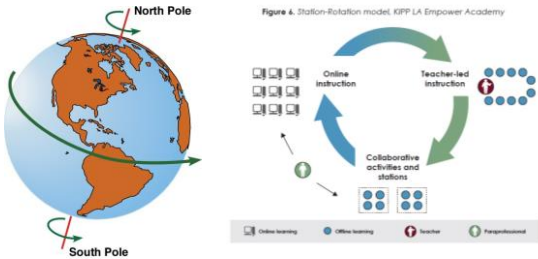
Figure 1. Blended-learning taxonomy



Blended Model #1.
Face-to-Face Primary
 (online is for remediation of supplement)



Blended Model #2. Rotation (students alternate FTF and Online instruction)

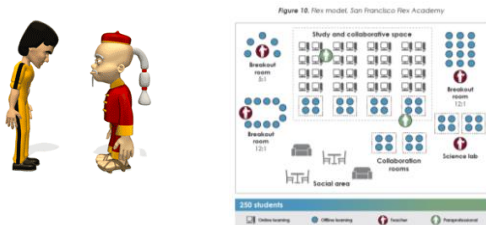


Rotation Model

Khan Academy and Clayton Christensen Institute
<http://www.khanacademy.org/partner-content/sf-cci>

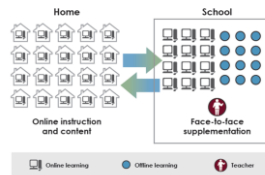


Blended Model #3. Flex (curriculum primarily online with instructors available FTF)



Online Driver (now: "Enriched Virtual Model") (courses primarily online and physical facilities used to supplement or as needed)

Figure 12. Enriched-Virtual model. Albuquerque eCADEMY

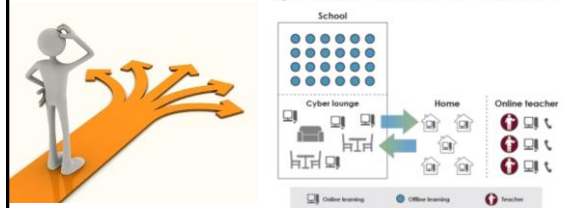


Blended Model #4. Online Lab (lab or field experience component of course is online)



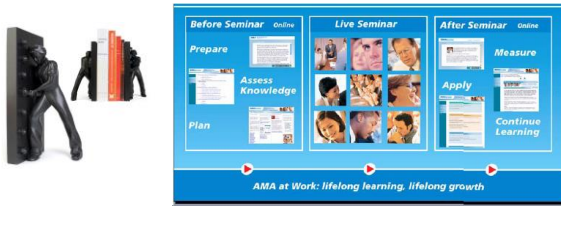
Blended Model #5. Self-Blend (students decide on which courses they take online or which portion of the course is online)

Figure 11. Self-Blend model. Quakertown Community School District



Blended Model #6. Bookend

(first and last part of the course is online and middle portion is FTF)

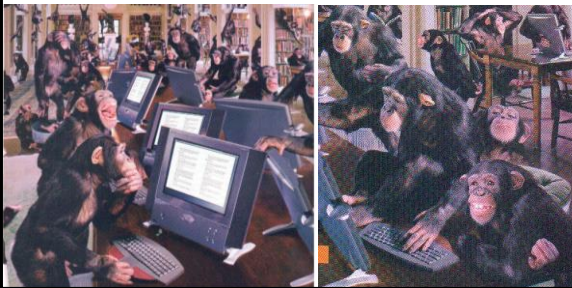


Blended Model #7. Anchor

(start with FTF or what students are familiar with and then move to online)



10 Blended Learning Examples



Blended Solution #1.

Interactive Labs and Simulations

<http://phet.colorado.edu/en/simulation/energy-skate-park>

PhET Interactive Simulations

Color Vision

Download 1,234,567 Embed Version: 1.04 (change log)

Sample of student-generated explanation of spring energy

Blended Solution #2.

Online Practice Tests

<http://quizlet.com/>

Quizlet

electrician apprentice

kinetic energy

Energy is motion or released potential energy

Blended Solution #3.

Screencasts and Tutorials

(Jing, GoView, Screnr)

Create Screencasts!

Jing, ScreenToaster, Camtasia, Wink, Camtasia

Blended Solution #4.

Explore Online Resources

(Commonwealth of Learning, March 2013)

http://www.col.org/news/Connections/2013Mar/Documents/Connections_March2013.pdf

ONLINE COURSE DEVELOPMENT FOR TEACHER EDUCATION IN JAMAICA



Workshop on OER use and re-use for teacher educators in Jamaica



Blended Solution #5.

Concept Mapping and Timeline Tools

(VUE, Bubbl.us, Cmap, Freemind, Gliffy, Mindmeister, or Mindomo)



Blended Solution #6.

Free Expert Videoconferencing

February 22, 2013

NASA's spacey Google+ Hangout shows off zero-G antics – and cats!

http://cometcoop.thetimes.com/_news/2013/02/22/17057888-nasas-spacey-google-hangout-shows-off-zero-g-antics-and-cats?l



Blended Solution #7.

Virtual Mentor Teachers

(e.g., The Granny Cloud)

(Build a School in the Cloud; Self-Organized Learning Environments (SOEs), February 2013, TED Talk from Sugata Mitra

http://www.ted.com/talks/sugata_mitra_build_a_school_in_the_cloud.html



Blended Solution #8.

Expert Question and Answer Sessions (e.g., International Studies in Schools (ISIS))

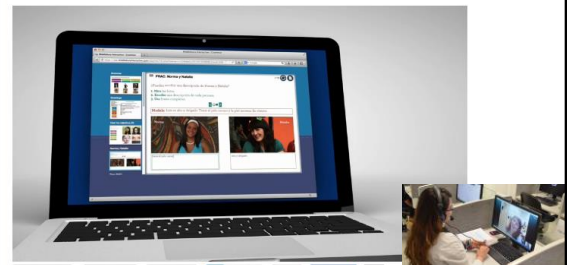
The guest expert responds to questions posed by the audience based on a particular topic (the audience might read or watch ahead of time).



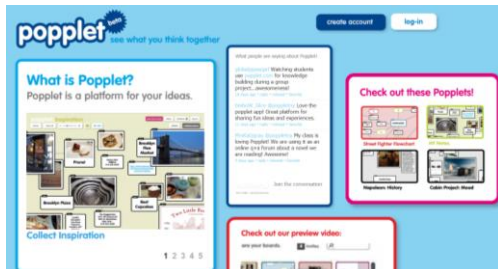
August 1, 2014

Blended Solution #9. K-12 Digital World Language Courses Immerse Students in Language & Culture, eSchool News

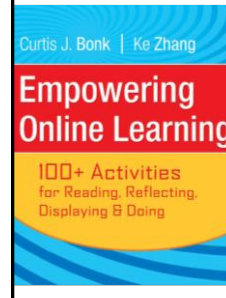
<http://www.eschoolnews.com/2014/09/10/k-12-digital-world-language-courses-immerses-students-language-culture/>



Blended Solution #10. Student Collaborative Knowledge Building and Sharing (e.g., Popplet: <http://popplet.com/>)



Framework #1: The R2D2 Model



Read 1a. Interactive Flashcards (e.g., Study Stack <http://www.studystack.com/flashcard-136259>)

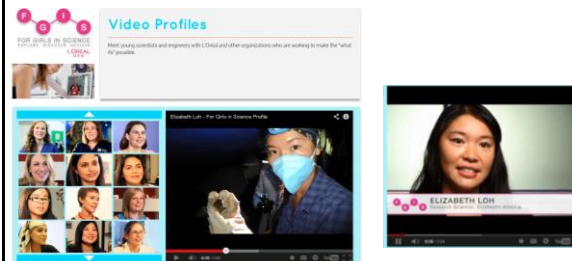


Reflect 2a. Reflect on Virtual Timelines (Dipity, xtimeline, Simile, etc.) (How Facebook changed our lives, Marco della Cava, USA Today, February 3, 2014)

<http://www.usatoday.com/story/tech/2014/02/02/facebook-timeline-10-cultural-impact/5063979/>
<http://www.usatoday.com/tech/news/story/2011-09-22/steve-jobs-dies/50672498/1>
<http://www.usatoday.com/news/destinations/story/2011-09-25/steve-jobs-dies/50672498/1>
<http://www.usatoday.com/story/life/movies/2013/04/10/harrison-ford-jackie-robinson/2001783/>



Display 3a. Video Profiles of successful female scientists, (e.g., For Girls in Science) <http://forgirlsinscience.org/video-profiles/?key=GEOC4jhUkbg>



Do 4a. Book Trailers for Readers

<http://www.booktrailersforreaders.com/How-to-make-a-book-trailer>
http://www.booksurge.com/content/Video_Book_Trailer_Samples.htm
<http://www.thebooklife.com/2012/01/upcoming-2012-ya-book-trailers.html>
<http://bookriot.com/category/book-trailer/>
<http://scottwesterfeld.com/blog/2009/09/leviathan-trailer/>



Framework #2. Introducing the "TEC-VARIETY" book...

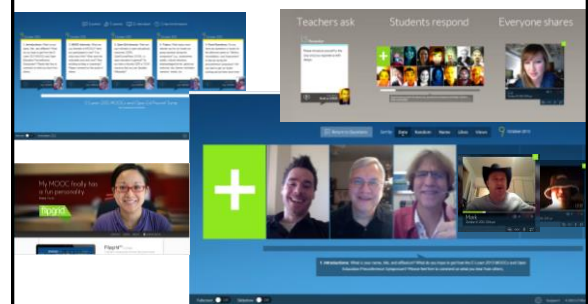
<http://tec-variety.com/>



What motivates?

1. **Tone/Climate:** Psychological Safety, Comfort, Sense of Belonging
2. **Encouragement:** Feedback, Responsiveness, Praise, Supports
3. **Curiosity:** Surprise, Intrigue, Unknowns
4. **Variety:** Novelty, Fun, Fantasy
5. **Autonomy:** Choice, Control, Flexibility, Opportunities
6. **Relevance:** Meaningful, Authentic, Interesting
7. **Interactivity:** Collaborative, Team-Based, Community
8. **Engagement:** Effort, Involvement, Investment
9. **Tension:** Challenge, Dissonance, Controversy
10. **Yielding Products:** Goal Driven, Purposeful Vision, Ownership

1. Tone/Climate: A. Video Introductions, e.g., Flipgrid <http://flipgrid.com/#429f88c5>



2. Encouragement, Feedback, etc.: A. Voice Feedback

Vocaroo; <http://vocaroo.com/>

<http://vocaroo.com/i/s1Tase0mLdJ> (OKC)



3. Curiosity, Fun:

A. Something in the News

New 'massive' dinosaur skeleton discovered, USA Today,

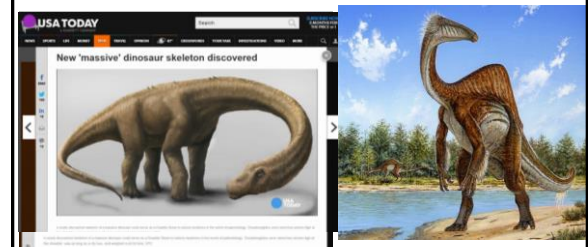
September 5, 2014 (Dreadnoughtus)

<http://www.usatoday.com/story/tech/2014/09/04/dinosaur-skeleton-discovered/15031803/>

October 23, 2014

Goofy dinosaur blends Barney and Jar Jar Binks, SF Gate, Seth Borenstein

<http://www.sfgate.com/news/entertainment/Goofy-dinosaur-blends-Barney-and-Jar-Jar-Binks/article23497559.html>



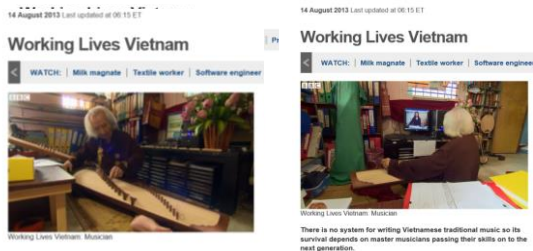
4. Variety, Novelty, Fun:

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.

<http://www.bbc.com/news/world-asia-23497559>



5. Autonomy, Choice:

A. Online Learning Object Repositories and Portals (shared content)

April 23, 2014

Shakespeare's Dictionary? Skepticism Abounds,
Chronicle of Higher Education, Jennifer Howard

<http://shakespearebeehive.com/bests-dictionary>

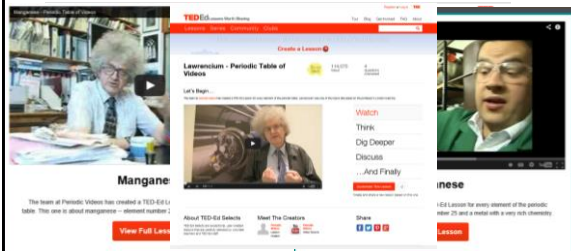


November 1, 2014

6. Relevance, Meaningfulness: A. TEDEd

lesson about every single element on the periodic table

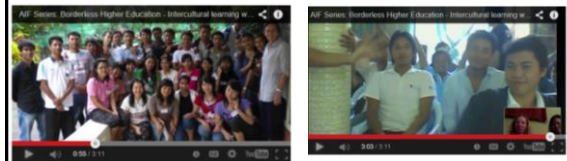
http://ed.ted.com/periodic-videos?utm_source=TED-Ed+Subscribers&utm_campaign=92b1054add-2013_09_219_19_2013&utm_medium=email&utm_term=0_1aaccdd48-92b1054add-46761201



7. Interactive, Collaborative: A. Intercultural learning

virtual and on-site exchanges between York University students, refugee students on the Thai Burma border and displaced migrant students in Ranong, Thailand, and York University, Toronto, Canada

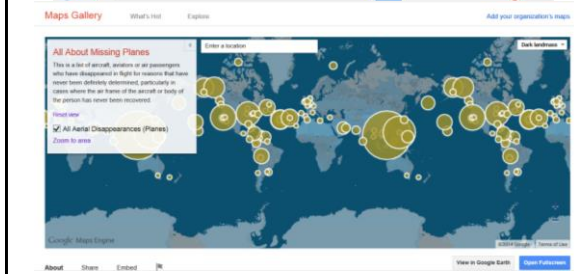
<http://aifprojects.yorku.ca/projects/intercultural-learning-thailand-2012-13/>



8. Engagement, Effort: A. Google Map Gallery

September 16, 2014

<http://maps.google.com/gallery/>



9. Tension, Challenge, etc.: A. picoCTF 2014

(October 27-November 7, 2014)

(a computer security game targeted at middle and high school students, \$30,000 in prizes to winning teams)

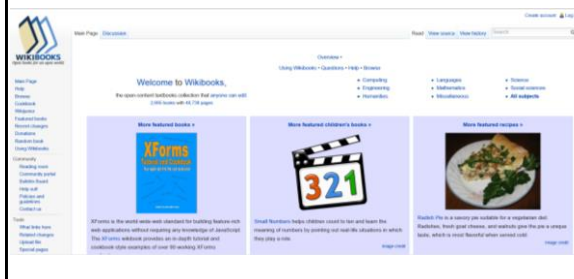
<https://picoctf.com/>



10. Yields Products, Goals: A. Write Wikibook Chapters

http://en.wikibooks.org/wiki/Web_2.0_and_Emerging_Learning_Technologies/Andragogy_and_Technology

http://en.wikibooks.org/wiki/Web_2.0_and_Emerging_Learning_Technologies



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



Charles Wedemeyer Quote:

"It should be immaterial whether one has learned at the front door or the back door of the Palace of Learning. **What one has learned**—not where, or how, in what sequence, at what institution, or in what period of time—is the only criterion of supreme importance."
(Charles Wedemeyer, 1981, p. 216)



December 13, 2013

Former MIT president Charles M. Vest dies at 72
As the Institute's leader from 1990 to 2004, he sparked a period of dynamism.

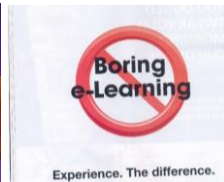
Steve Bratt, MIT News Office

<http://web.mit.edu/newsoffice/2013/former-mit-president-charles-m-vest-dies-at-72-1213.html>



Again, this talk covered...

1. 1 Definition of blended learning
2. 10 Myths of blended learning
3. 7 Models of blended learning
4. 10 Examples of blended learning



Any Questions?

Slides at: TrainingShare.com

Papers: PublicationShare.com

Book: <http://tec-variety.com/>

Dr. Curt Bonk – CJBonk@Indiana.edu

