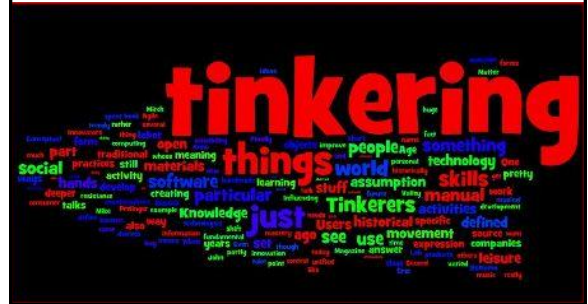


Learning is Changing Part 1: Blended Learning A to Z: Myths, Models, and Moments of Magic

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



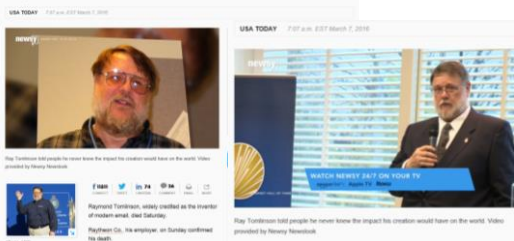
Blended is Tinkering...



March 7, 2016 A Famous Tinkerer Raymond Tomlinson, inventor of modern email, dies, USA Today

<http://www.usatoday.com/story/tech/2016/03/06/tomlinson-inventor-modern-email-dies/81413414/>

Raymond Tomlinson, inventor of modern email, dies



Blended is Tottering...

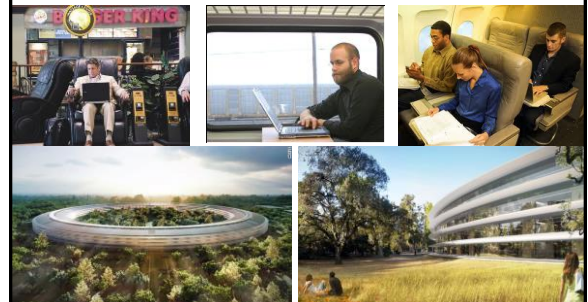


January 20 and 26, 2016 Weekly Sync Guests Chats Weekly Guests in Zoom

R511 Chat with Mike Molenda, IU
R511 Chat Charles Graham, BYU



Blended is Transformative or even Extreme...



August 5, 2015

Anchored Instruction Videos

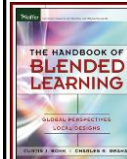
Shubham Jaglan Overwhelmed by "Dream" Return Home After Double World Championship
Disha Chopra, NDTV Sports

<http://sports.ndtv.com/golf/news/246551-shubham-jaglan-overwhelmed-by-dream-return-home-after-double-world-championship>
<http://www.ndtv.com/video/player/news/india-s-golf-prodigy-shubham-jaglan-returns-home-to-hero-s-welcome/377614>



Learning is More Blended...

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



Poll #1:

Who Needs Blended and Online Learning?



Winter Weather Alerts
 Alerts issued by the National Weather Service, in association with Winter Storm Kayla.

May 31, 2015

MERS, South China Morning Post

<http://www.scmp.com/news/hong-kong/health-environment/article/1913390/mers-case-keeps-back-memories-hong-kong-sars>

Mers case brings back memories of Hong Kong's Sars outbreak



January 20, 2016

Universities tap growth of craft beer, offer classes, Chicago Tribune

<http://www.chicagotribune.com/business/ct-college-craft-beer-offer-classes-20160120-story.html>



January 20, 2016

Universities tap growth of craft beer, offer classes, Chicago Tribune

<http://www.chicagotribune.com/business/ct-college-craft-beer-offer-classes-20160120-story.html>

Portland State University in Oregon started an online Business of Craft Brewing program in 2013. It has become one of the school's most successful professional certificate programs, drawing people from around the world, said Scott Gallagher, the university's director of communications.



January 20, 2016

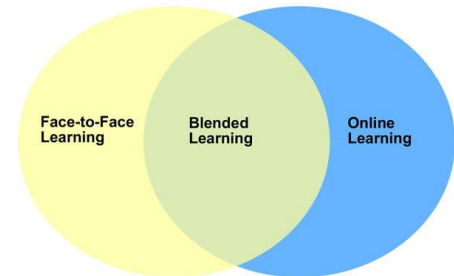
Universities tap growth of craft beer, offer classes, Chicago Tribune

<http://www.chicagotribune.com/business/ct-college-craft-beer-offer-classes-20160120-story.html>

"We discovered that there's a huge need for people who wanted to get a certificate," Gallagher said. "They didn't necessarily want to go to college or already had a college degree and wanted to open up a brew pub."



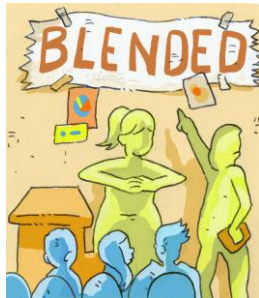
What is Blended Learning?



October 15, 2015

An EdTech Buzzword Bingo Card
NPR Ed, Anya Kamenetz

<http://www.npr.org/sections/ed/2015/10/15/436984129/an-edtech-buzzword-bingo-card>



January 31, 2016

Hybrid Courses
University of Wisconsin Milwaukee

<http://www4.uwm.edu/lrc/hybrid/>

January 30, 2016

Welcome to the Blended Learning Toolkit, University of Wisconsin

<https://blendedtoolkit.wisc.edu/blended-learning-modules-offer-dvm-students-more-complete-education/>

January 30, 2016

The Blended Learning Toolkit
University of Wisconsin Madison

<https://blendedtoolkit.wisc.edu/blended-learning-modules-offer-dvm-students-more-complete-education/>

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



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)

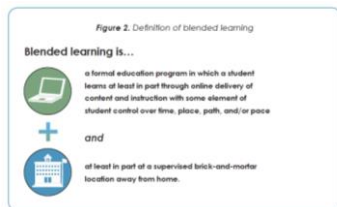


Classifying K-12 Blended Learning

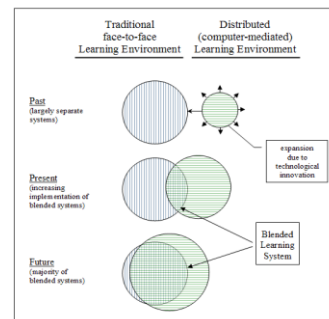
Heather Staker and Michael B. Horn, May 2012

<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."



Historical Emergence of Blended (Graham, 2006)



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

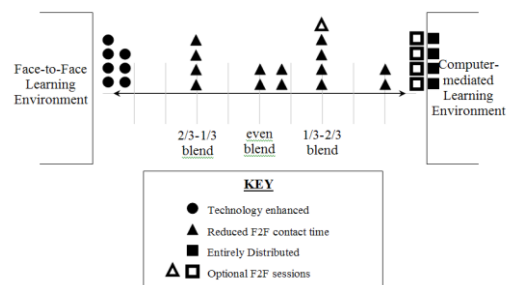
Myth #5: Blended is the same as "hybrid."

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 Classes
- Classes with low success rates
- Classes with students working part-time
- Required classes
- 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
- Provide office hours online
- Use mentoring/coaching tool
- Access experts live online



January 30, 2016
Welcome to the Blended Learning Toolkit, University of Wisconsin

<https://blendedtoolkit.wisc.edu/blended-learning-modules-offer-dvm-students-more-complete-education/>



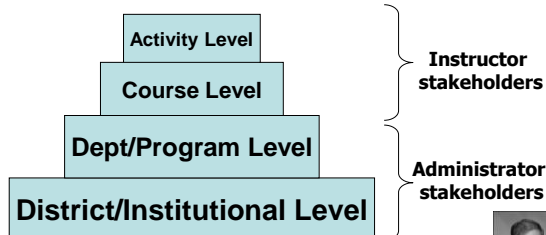
Myth #8: People learn more in face-to-face settings than blended or fully online ones.
Fully Online and Blended Learning Advantages

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:

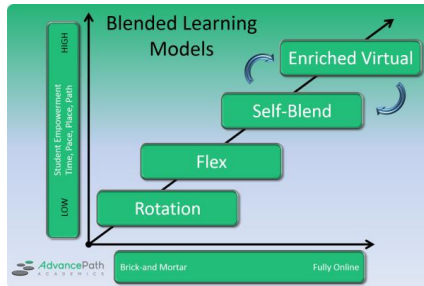


Myth #10: There is a best model of blended.
AMA Special Report, Effectively Implementing a Blended Learning Approach
(Steven Shaw & Nicholas Ignieri, 2006)

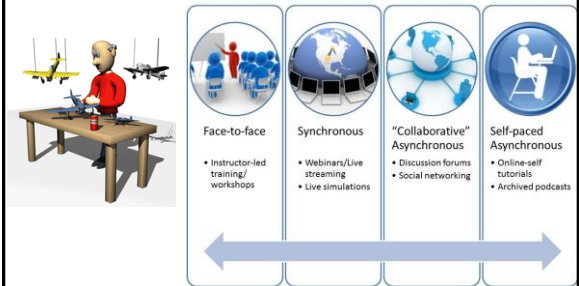


Source: American Management Association, AMA at Work

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



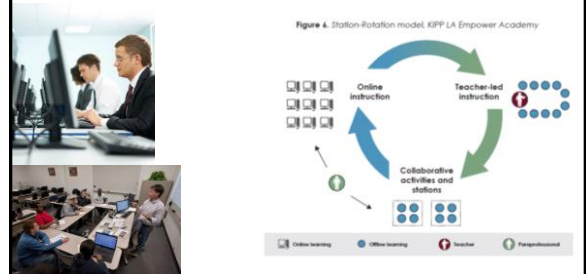
Seven Example Blended Learning Models



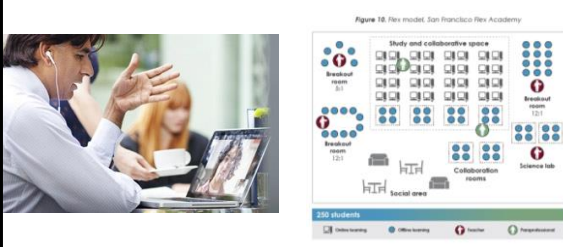
Blended Model #1. Face-to-Face Primary (online is for remediation of supplement)



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



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

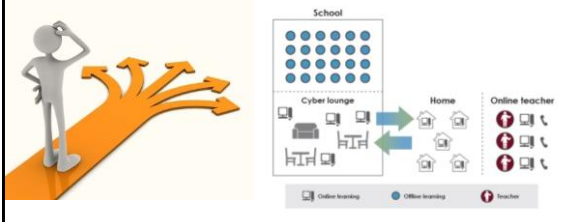


Blended Model #3. Online Lab (lab or field experience component of course is online)



Blended Model #4. Self-Blend (students decide on which courses they take online or which portion of the course is online)

Figure 11. Self-blend model. Quakerstown Community School District



Blended Model #5. Bookend (first and last part of the course is online and middle portion is FTF; AMA Special Report, Blended Learning Opportunities, Alison Rossett (2006))

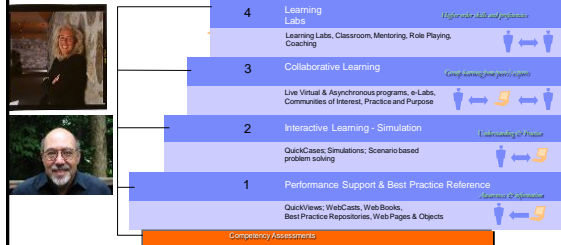


Blended Model #6. Anchor (start with FTF or what students are familiar with and then move to online; or the opposite and start online and move to F2F)

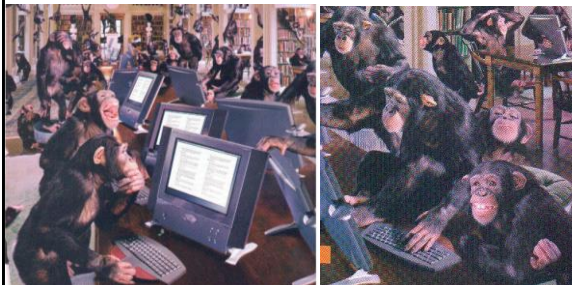


Blended Learning Model #7: Gradual Human (F2F) Approach

The IBM Four Tier Learning Model. Blending Learning for Business Impact – IBM's case for learning success. *Nancy Lewis, VP, & Peter Orton, IBM*



27... Blended Learning Examples



August 19, 2015 Blended Solution #1. Use the Media to Supplement Content (e.g., CNN Money)

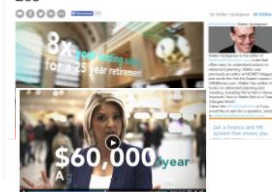
<http://money.cnn.com/2015/08/19/retirement/retirement-savings-20s/index.html>

Millennials & Their Money



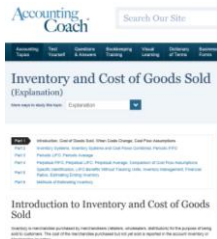
3 tips to getting retirement right in your 20s

3 tips to getting retirement right in your 20s



January 28, 2015
Blended Solution #2. Find
Quality Supplemental Text Resources
 (e.g., Accounting Coach; includes tests, Q&A, visuals, forms, definitions, etc.)

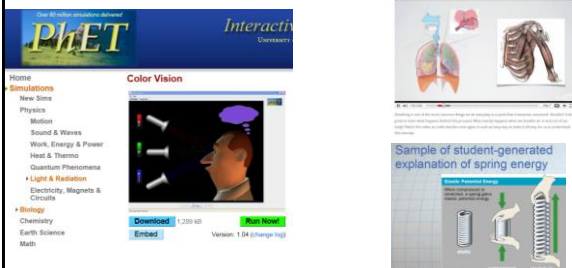
<http://www.accountingcoach.com/inventory-and-cost-of-goods-sold/explanation>



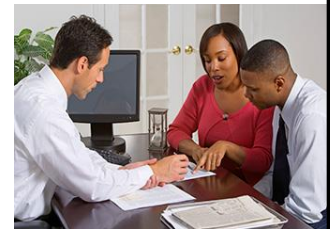
Blended Solution #3.
Workplace Internship, Practicum, and Field
Experiences Online Reflections



Blended Solution #4.
Interactive Labs and Simulations
<http://phet.colorado.edu/en/simulation/energy-skate-park>

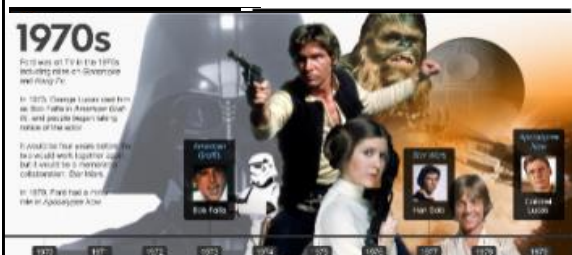


Blended Solution #5.
Online Role Play or Debate
 (e.g., documentary production)



Blended Solution #6.
Reflect on Virtual Timelines
 (Dipity, xtimeline, Simile, etc.)

<http://www.usatoday.com/news/entertainment/story/2011-08-22/Martin-Luther-King-Jr.-funeral-in-Washington-A-close-book/3813847013?top-story>
<http://usatoday30.usatoday.com/tech/news/story/2011-09-22/steve-jobs-dies/50672498/1>
<http://www.cnet.com/news/steve-jobs-a-timeline/>



Blended Solution #7.
Online Database Activities
 (e.g., WolframAlpha)

<http://www.wolframalpha.com/>



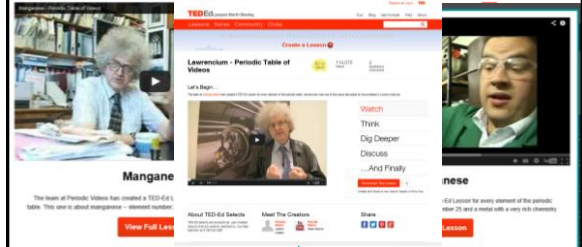
A Quick Introduction to WolframAlpha
 by Stephen Wolfram



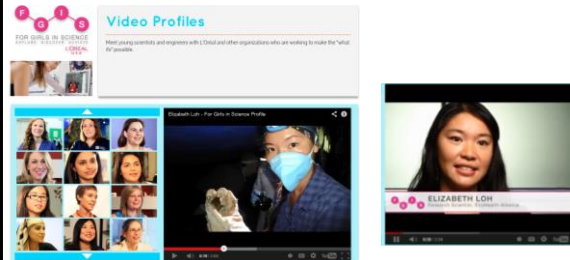
August 31, 2015
Blended Solution #8.
Short Educational Video Anchors:
 CNN, BBC, TED, TED-Ed, ForATV
 BBC One-Minute World News
<http://www.bbc.com/news/business-34105708>



Blended Solution #9.
Videos with Test Questions (e.g., TEDEd)
 (Lessons about every single element on the periodic table)
<http://ed.ted.com/periodic-table-of-elements>



Blended Solution #10.
Video Profiles of successful female scientists, (e.g., For Girls in Science)



Blended Solution #11.
Collaborative Video Annotations and Discussions (Craig Howard, IU)
<http://scholarworks.iu.edu/journals/index.php/ijl/article/view/853/912>



Blended Solution #12.
Video Tutorials, Demonstrations, and How-To's
 Investopedia (videos, tutorials, etc.)
<http://www.investopedia.com/video/play/deferred-revenue/>



Blended Solution #13.
Create Screencasted Tutorials
 (Jing, GoView, Screenr, Overstream, Screencast-o-Matic; see http://tec-variety.com/TEC-Variety_links-examples-resources.pdf)



Blended Solution #14. Combining Media (Dual Coding Theory: Wikipedia + Video + Pictures)

Text: http://en.wikipedia.org/wiki/Ray_Dolby
Video (September 20,2000): <http://www.gigwise.com/news/84155/audio-pioneer->



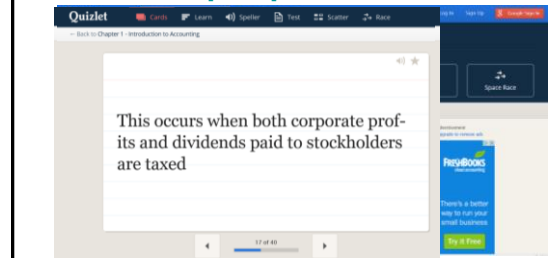
Blended Solution #15. Animations with Practice Tests (e.g., Human Embryology) (Valerie O'Loughlin, Indiana University)



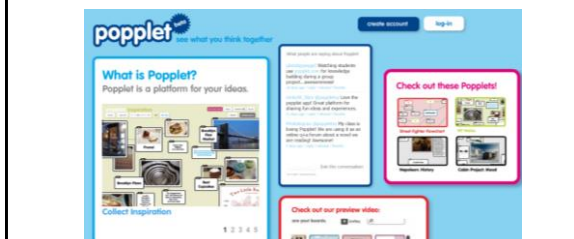
Blended Solution #16. Using Readings from Open Access Journals (e.g., PLOS, IRRODL, etc.) <http://www.plos.org/>; <http://www.plosbiology.org/>; <http://www.plosgenetics.org/>



Blended Solution #17. Online Practice Tests and Interactive Flash Cards <http://quizlet.com/>



Blended Solution #18. Student Collaborative Knowledge Building and Sharing (e.g., Popplet: <http://popplet.com/>)



Blended Solution #19. Flipping the Classroom **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/131831/>



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.

Blended Solution #20. Analyzing Financial Statements (e.g., Twitter)

<https://finance.yahoo.com/q/is?s=TWTR+Income+Statement&annual>
<http://www.marketwatch.com/investing/stock/twtr/financials>
<http://www.nasdaq.com/symbol/twtr/financials?query=income-statement>

| Revenue | Cost of Revenue | Gross Profit | Operating Expenses | Operating Income | Other Income | Income Before Taxes | Income Tax Expense | Net Income |
|-----------|-----------------|--------------|--------------------|------------------|--------------|---------------------|--------------------|------------|
| 1,000,000 | 800,000 | 200,000 | 100,000 | 100,000 | 0 | 100,000 | 0 | 100,000 |

Blended Solution #21. Review and Reflect on Existing Expert Content

<https://www.youtube.com/watch?v=Sb0jR-C57f0>



Blended Solution #22. Online Longitudinal Maps

(e.g., New USDA climate zone map reflects northward warming trends, By Janice Lloyd, USA TODAY, January 26, 2012)
<http://www.usatoday.com/news/nation/environment/story/2012-01-26/USDA-climate-zone-map/52787142/>

New USDA climate zone map reflects northward warming trends



Blended Solution #23. Sample Student Work e.g., Interactive Archive/Gallery of Student Exemplary Work

(University of Notre Dame, Freshman Writing September 24, 2014; <https://freshwriting.nd.edu/>)



Blended Solution #24. Language Lessons Online

BBC Learning English

<http://www.bbc.co.uk/learningenglish>

Blended Solution #25. Goal Setting Tools

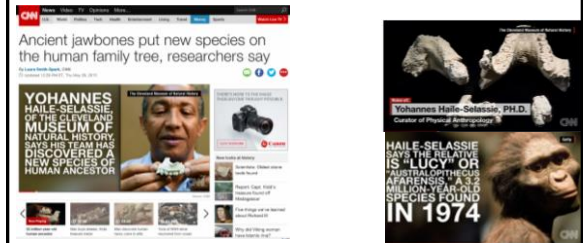
(e.g., I Done This, Milestone Planner, and 43 Things)

March 22, 2015
Blended Solution #26.
Online News with Embedded Media
Madagascar marvel:
Divers find fossils of extinct giant lemurs
Daisy Carrington, for CNN, March 22, 2015
<http://www.cnn.com/2015/03/19/africa/underwater-fossil-lemur-graveyard-madagascar/index.html>



May 28, 2015
Blended Solution #27.
Immediate Science

Ancient jawbones put new species on the human family tree, researchers say, Laura Smith-Spark, CNN
<http://www.cnn.com/2015/05/28/africa/ethiopia-fossil-hominin-ancestor/index.html>



May 28, 2015
New species from Ethiopia further expands Middle Pliocene hominin diversity, Nature
<http://www.cnn.com/2015/05/28/africa/ethiopia-fossil-hominin-ancestor/index.html>
<http://www.nature.com/nature/journal/v521/n7553/full/nature14448.html>

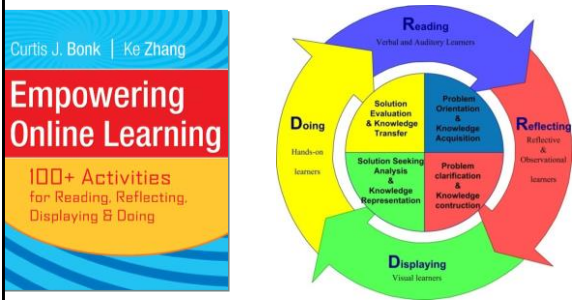


So far, this talk covered...

1. 1 Definition of blended learning
2. 10 Myths of blended learning
3. 7 Models of blended learning
4. 27 Examples of blended learning



A Blended Approach:
The R2D2 Model



Addressing Learning
Styles with R2D2



Question: How can technology address diverse learner needs?

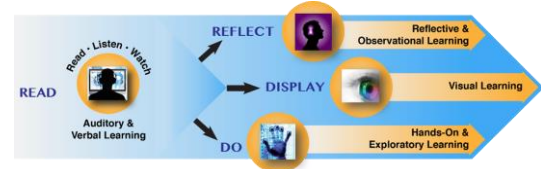


August 12, 2015

Create Engaging Learning Experiences

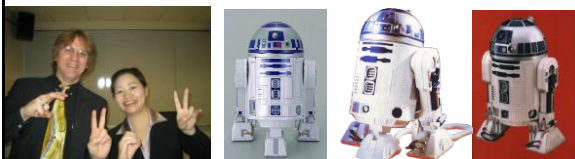
Image adapted from Bonk, C.J. & Zhang, K. (2008). Empowering online learning: 100+ activities for reading, reflecting, displaying, & doing. San Francisco, CA: Jossey-Bass.

Southern Illinois University, Carbondale, Illinois
Heidi Jung and Cheryl L Bosarge
Instructional Designer
Center for Teaching Excellence
Heidi Lynn Jung hjung@siu.edu
Cheryl L Bosarge cbosarge@siu.edu



The R2D2 Method

1. Read (Auditory and Verbal Learners)
2. Reflect (Reflective Learners)
3. Display (Visual Learners)
4. Do (Tactile, Kinesthetic, Exploratory Learners)



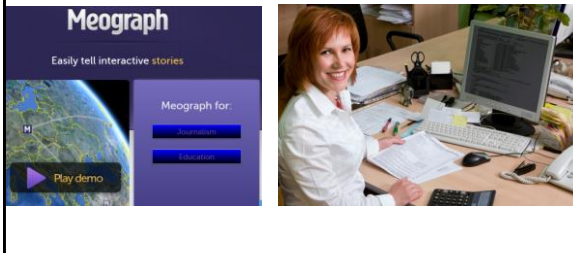
1. Auditory or Verbal Learners

- Auditory and verbal learners prefer words, spoken or written explanations.



Read 1a. Collect and Listen to Interactive Stories

(e.g., Meograph: <http://www.meograph.com/>)



Read 1b.

Exploring the Life of a Prominent People (Wikipedia)

http://en.wikipedia.org/wiki/Vannevar_Bush

JULY 1945

As We May Think

VANNEVAR BUSH | JUL 1 1945, 12:00 PM ET



Read 1c. Grammer Checkers (e.g., Grammarly, Ginger, GrammarCheck, PaperRater, and SpellCheckPlus)

<http://www.grammarly.com/>



January 20, 2016

Read 1d. Podcasts

IU Bloomington podcast series to launch Jan. 24, Steve Hinnefeld, IU Newsroom

http://inside.iu.edu/bloomington/2016-01-20-iu-bloomington-podcast-series-launch_snewsroom-2016-01-20&utm_medium=newsletter&utm_content=Something-in-the-air&utm_campaign=2016-inside-sub-distribution



IU's Media School dean James Shanahan, at left, will host a new campus podcast. Senior Luqmann Ruth will read the news for the inaugural podcast.
| PHOTO BY JENNIFER PIUREK, OFFICE OF THE PROVOST

January 28, 2015 Read 1e. Twitter Fed Class Discussions

Live-Tweeting Assignments: To Use or Not to Use?

he Chronicle of Higher Education, Adeline Koh

<http://chronicle.com/blogs/profhack/live-tweeting-assignments-to-use-or-not-to-use/58949>

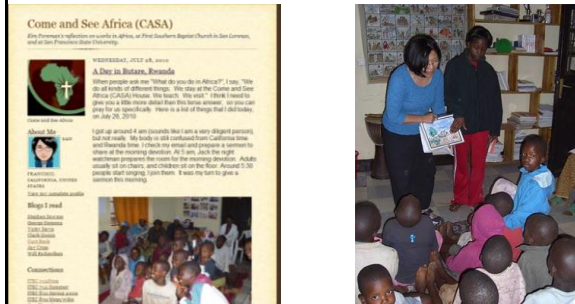


2. Reflective and Observational Learners

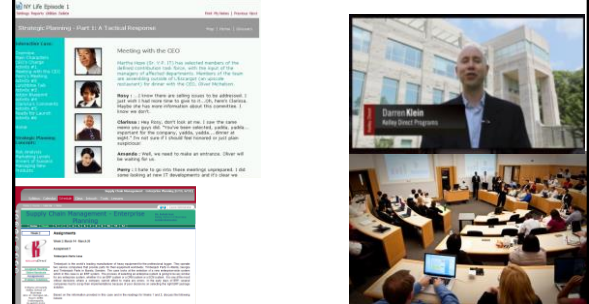
- Reflective and observational learners prefer to reflect, observe, view, and watch learning; they make careful judgments and view things from different perspectives



Reflect 2a. Cultural Blogs (e.g., Dr. Kim Foreman, San Fran State Univ, Come and See Africa Blog; <http://comeandseeafrica.blogspot.com/>)



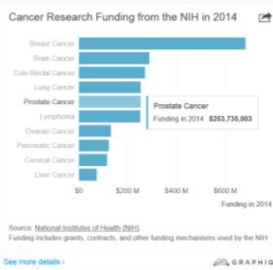
Reflect 2b. Case and Online Discussion (Kelley Direct, IU)



April 13, 2016 Reflect 2c. Interactive Graphs

Tech billionaire announces \$250 million in cancer immunotherapy funding, Jayne O'Donnell, USA Today

<http://www.usatoday.com/story/news/2014/04/13/millionaire-announces-250-million-cancer-immunotherapy-funding/82821198/>



Dr. Jedd D. Wolchok, Chief, Melanoma and Immunotherapeutics Service at Memorial Sloan Kettering Cancer Center in Photo by John OBoyle, Freelance ORG XMIT:10 134700 sepanker 4/7/2016 (Via MerlFTP Drop)

3. Visual Learners

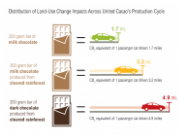
- Visual learners prefer diagrams, flowcharts, timelines, pictures, films, and demonstrations.



Display 3a. More Interpreting Infographics August 5, 2015

How much rainforest in that chocolate bar?
Global Forest Watch, Nancy Harris, Octavia Payne and Sarah Mann
<http://blog.globalforestwatch.org/2015/08/how-much-rainforest-is-in-that-chocolate-bar/>

Land-Use Change Emissions in Miles Driven



Display 3b. Virtualize Words Used (e.g., Wordle, Taggedo, Tagul, WordSift, Word It Out)



Display 3c. Map Animations

Yes, Mr. President, We Remade Our Atlas to Reflect Shrinking Ice

Christine DelfAmore, National Geographic, August 3, 2015
<https://www.nationalgeographic.com/2015/08/03/2015-08-03-the-ice-atlas-map-animation/>
<https://www.nationalgeographic.com/2015/08/03/2015-08-03-the-ice-atlas-map-animation/>

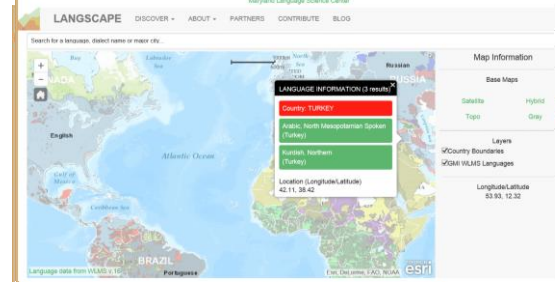


March 24, 2015

Display 3d. Maps of Languages

Langscape, Language at Maryland

<https://languagescience.umd.edu/beyond-umd/langscape>
<http://theweek.com/articles/545768/cool-interactive-map-lets-explore-worlds-languages>
<http://langscape.umd.edu/map.php>

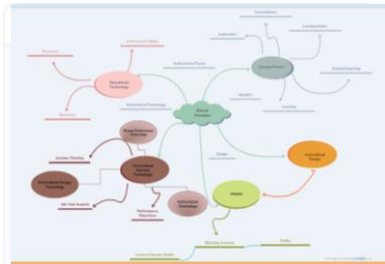


Display 3e. (April 28, 2015)

Concept Mapping and Timeline Tools

(Bubbl.us, Cmap, Gliffy, Spicynodes, or Mindomo)

<http://www.spicynodes.org/index.html>

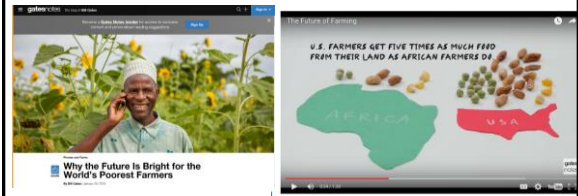


January 20, 2016

Display 3f. Embedded Videos

Why the Future Is Bright for the World's Poorest Farmers, Gates Notes, the blog of Bill Gates

https://www.gatesnotes.com/Development/The-Future-of-Farming?mc_id=01_20_2016_20_FutureofFarming_BG-IT_&WT.bsrc=BGLI

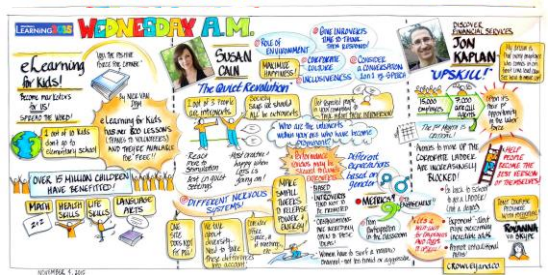


December 17, 2015

Display 3g. Conference Resource

Visuals

Elliott Masie's Learning 2015, Nov 1-4, 2015
<http://learningtalks.com/learning-2015/videos/sabrina-kay-the-learner/>



Display 3h.

Tracking the Life of a Scientist

(e.g., Brian J. Ford, independent scientist)

<http://www.youtube.com/user/tellymonitor#p/a/u/1/LhGeApsKjaar>
<http://www.labnews.co.uk/news/prehistoric-revolution/>



December 8, 2015

Do 4b. Student Final Project Videos

P540 Final Assignment: Learning Theories and Psychotherapy ,
Shu-Yi Wang

<https://www.youtube.com/watch?v=PNMpGjnXAJM>



Do 4c. Student Music Recordings of Course Content

April 26, 2015

IST Groove Song, Jeffrey Jenkins, R511: <https://soundcloud.com/jeffjenkins25/ist-groove>
The World is Open, Jill Kaufman, R678: <https://www.youtube.com/watch?v=Z8Gy0Mg5Vmw&feature=youtu.be>
Daniel Halluska, P540: <http://www.youtube.com/watch?v=tQL7irGsqnw>



March 12, 2016

Do 4d. Timeline

R678 John Falchi, Timeglider, An Abbreviated History of
Distance Education

http://timeglider.com/?/50843d8903a48008?min_zoom=1&max_zoom=100



Do 4f. Website Development

R511 Final Projects, April 2016

IT and HPT Comparison (Website)
Doug Hsu

<http://dougandindira.wix.com/r511finalproject>



Poll #2: 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.
7. More than 10.



Any Questions or Comments?

Slides at: TrainingShare.com

Papers: PublicationShare.com

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

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