

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

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Seven Overarching Goals

- Build capacity of Ohio schools in BL;
- Increase academic performance of BL students;
- Document fiscal changes of BL model;
- Expand use of online learning in Ohio;
- Create a program using six models of BL;
- Generate models for 21st Century Learning;
- Create replicable BL models and best practices across Ohio.



February 9, 2012

A first-hand look inside a flipped classroom,
eSchool News, Meris Stansbury

<http://www.eschoolnews.com/2012/02/09/a-first-hand-look-inside-a-flipped-classroom/>

Watch Lake Elmo Elementary's experience:



Watch Lake Elmo Elementary's experience:



February 21, 2012

Rethinking Learning with Salman Khan, Stanford Graduate
School of Business

<http://www.youtube.com/watch?v=Ww08hDg5w>

Khan Academy Founder Finds Simplicity Appeals in Online Education Experimentation

<http://www.gsb.stanford.edu/news/headlines/sal-khan-academy.html>

Let's use video to reinvent education, TED, March 2011

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



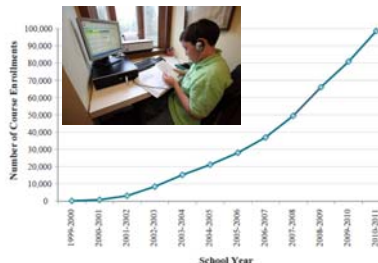
February 20, 2012

Michigan Virtual University

<http://www.mivu.org/LinkClick.aspx?fileticket=4FUrgNmtLm%3d&tabid=373>

Figure 6
Cumulative Frequency of
MVS Course Registrations
Since 1999-2000

Figure 3
2010-11 MVS Course Enrollments by County (sortable view)



March 12, 2012

Single-District Virtual Ed. Seen Growing Fastest

Education Week, Katie Ash

http://www.edweek.org/ew/articles/2012/03/15/25edpby_h31.html?hpid=hp%2Fstory%2Fstory%2Fsingle-district-virtual-ed-seen-growing-fastest%3Fstory%3D%2Fsingle-district-virtual-ed-seen-growing-fastest%3Fstory%3D%2Fsingle-district-virtual-ed-seen-growing-fastest




Roma Chokshi, a junior at Springfield High School in Springfield, Ohio, works at home on an online course she is taking as part of a program that gives more advanced students the opportunity to take virtual classes for additional credits.


April 25, 2012
MIT+K-12
Making Video to Make a Difference
<http://k12videos.mit.edu/>



Poll #1: Is there a revolution in education today?
A. Yes...
B. No...




Blending Learning Is part of the answer!




What I will discuss...

1. Definitions of blended learning
2. Advantages and disadvantages
3. Models of blended learning
4. Examples of blended learning
5. Two online frameworks of mine

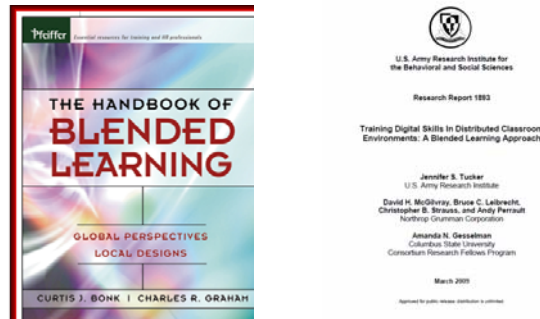


Myth #1: If you read the enough research you will be able to know the impact of blended learning.

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




Recent Reports on Blended
<http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA495731>



The Rise of K-12 Blended Learning,
 Heather Staker and Michael B. Horn,
 Innosight Institute, January 2011
<http://www.projectred.org/uploads/The-Rise-of-K-12-Blended-Learning.pdf>


THE RISE OF K-12 BLENDED LEARNING
 By Michael B. Horn and Heather Staker



About the authors
 MICHAEL B. HORN is co-founder and Executive Director of Education at Innosight Institute, a non-profit think tank devoted to applying the theories of disruptive innovation to problems in the social sector. Blended Learning magazine named Horn as its list of the 100 most important people in the creation and advancement of the use of technology in education.
 HEATHER CLAYTON STAKER is a Senior Research Fellow for the Education Practice at Innosight Institute. Under professional regimes from Teachers' Unions and Colleges and worked in K-12 with students from Harvard Business School. She has experience as a strategy consultant for McKinsey & Company and is a member of the California State Board of Education.

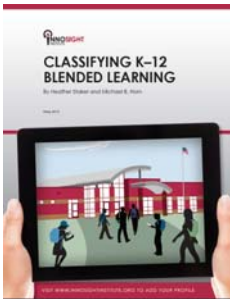
With contributions from Alex Hernandez, Bryan Hassel, and Joe Alesi-Bergin
 January 2011

**The Rise of K-12 Blended Learning:
 Profiles of Emerging Models**
 (Heather Staker, Innosight Institute, May 2011)
<http://www.innosightinstitute.org/innosight/wp-content/uploads/2011/05/The-Rise-of-K-12-Blended-Learning.pdf>




THE RISE OF K-12 BLENDED LEARNING
 Profiles of emerging models
 By Heather Staker
 With contributions from Alex Hernandez, Bryan Hassel, and Joe Alesi-Bergin
 May 2011

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




CLASSIFYING K-12 BLENDED LEARNING
 By Heather Staker and Michael B. Horn
 May 2012

Blended Learning Defined and Explained



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.”

Figure 2. Definition of blended learning

Blended learning is...

- a formal education program in which a student learns at least in part through online delivery of content and instruction with some element of student control over time, place, path, and/or pace
- and
- at least in part of a supervised brick-and-mortar location away from home.

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://digitallearningnow.com/wp-content/uploads/2011/10/Roadmap-for-Reform.pdf>

Historical Emergence of Blended (Graham, 2006)

The diagram illustrates the historical emergence of blended learning. It shows two main categories: Traditional face-to-face Learning Environment and Distributed (computer-mediated) Learning Environment. The progression is shown in three stages: Past (largely separate systems), Present (increasing implementation of blended systems), and Future (maturity of blended systems). A small photo of a man is in the bottom right corner.

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

The diagram shows a spectrum from Face-to-Face Learning Environment to Computer-mediated Learning Environment. It includes a key for Technology enhanced (black circle), Reduced F2F contact time (black triangle), Entirely Distributed (white square), and Optional F2F sessions (white triangle). The spectrum is divided into segments: 2/3-1/3 blend, even blend, and 1/3-2/3 blend.

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.

Ok, Million Dollar Question: Where/when might you use blended?

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

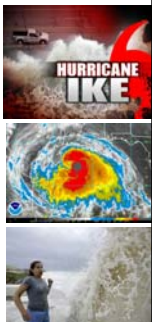
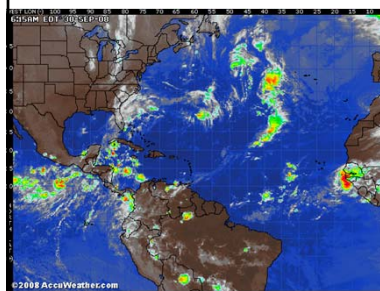


Who Needs Blended Learning? Athletes and Performers

Going the Distance, Elizabeth Millard, University Business, March 2011



Those in hurricanes!



Those where there are diseases and outbreaks...



Those in blizzards and ice storms...



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:

Activity Level
Course Level
Dept/Program Level
District/Institutional Level

Instructor stakeholders
Administrator stakeholders

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

AMA at Work: lifelong learning. lifelong growth

Source: American Management Association, AMA at Work

10 Blended Models

Classifying K-12 Blended Learning,
Heather Staker and Michael B. Horn, May 2012
http://www.arnoldinstitute.org/monograph/wp-content/uploads/2012/05/Classifying_K-12_Blended_Learning2.pdf

Figure 7. Blended-learning taxonomy

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

Mooreville's Shining Example
(It's Not Just About the Laptops)
By ALAN SCHWARZ, New York Times. February 12, 2012
http://www.nytimes.com/2012/02/12/us/politics/mooreville-schools-try-to-reduce-the-digital-divide.html?_r=1&hp&page=1

BREAK TIME Matthew Ward regroups during class, where each student has a school-issued laptop.

Blended Model #1. Face-to-Face Primary

(Leadership Public Schools allows Hispanic students who are struggling to learn English to sit at computers in the back of the classroom and catch up with the traditional class at their own pace by using an online textbook that provides Spanish-English translations.)

The screenshot shows the Leadership Public Schools website. On the left, there's a news article titled "OUR OPPORTUNITY: 85% of LPS graduates will be first-generation college students". On the right, there's a circular diagram titled "LPS Collaborative Innovation Process" with stages: "Blended Teaching", "Blended Learning", "Dissemination & Impact", "Evaluate", "Prototype", and "Scale".

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

A globe showing the North Pole and South Pole. A green circular arrow around the globe indicates a rotation or cycle.

Blended Model #2. Rotation

(Class periods at Carpe Diem Collegiate High School are 55-minutes long. For each course, students spend one period in an online-learning room for concept introduction and one period in a traditional classroom for application and reinforcement; 2-3 rotations per day.)

The screenshot shows the Carpe Diem Schools website with a banner for "THE POWER TO CHOOSE" and "OUR PLACE". Below it is a photo of students in a classroom setting, some using laptops.

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 6. Station-Rotation model, KIPP LA Empower Academy

The diagram shows a cycle of three stations: "Online instruction" (represented by computer icons), "Teacher-led instruction" (represented by a teacher icon), and "Collaborative activities and stations" (represented by group icons). Arrows indicate a clockwise rotation between these stations. A legend at the bottom identifies icons for Online learning, Offline learning, Teacher, and Paraprofessional.

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 7. Lab-Rotation model, Rocketship Education

The diagram is a 2x2 grid. The top-left and bottom-left quadrants are labeled "Direct instruction literacy/social studies". The top-right and bottom-right quadrants are labeled "Learning lab reading/math". A legend at the bottom identifies icons for Online learning, Offline learning, Teacher, and Paraprofessional.

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http://www.innosightinstitute.org/innosight/wp-content/uploads/2012/05/Classifying_K-12-blended-learning2.pdf

Figure 8. Flipped-Classroom model, Stillwater Area Public Schools

The diagram shows two locations: "School" and "Home". At "School", there are icons for "Practice and projects" and a teacher icon. At "Home", there are icons for "Online instruction and content" and a teacher icon. A legend at the bottom identifies icons for Online learning, Offline learning, and Teacher.

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: Individual-Rotation model. Core: Dism Collegiate High School and Middle School

Central learning lab

Individual 51

Direct Instruction 123

Group projects

Personal

273 students

Lessons on iPad

(e.g., ShowMe: <http://www.showme.com/>)

Educational Videos: TED-Ed

<http://education.ted.com/>

TED Ed LESSONS WORTH SHARING

mid•den

TED-Ed Launches on YouTube

Shared Online History Videos

(e.g., "History for Music Lovers" with over 50 songs including: Trojan War "Tainted Love" by Soft Cell; Charlemagne "Call Me" by Blondie, Cleopatra, Napoleon, Shakespeare, the Vikings)
<http://www.youtube.com/user/historyteachers>

Amy Burvall & Herb Mahelona - What I Learned from Napoleon and MTV - TEDxHonolulu 2011

Online Art

Google Art Project,
 NBC Nightly News, April 3, 2012
<http://www.msnbc.msn.com/id/3032619/vp/46945508#46945508>

NIGHTLY NEWS with BRIAN WILLIAMS

STATE of the Art

Online Encyclopedias

(e.g., the Encyclopedia of Earth:
<http://www.eoearth.org/>
http://en.wikipedia.org/wiki/Encyclopedia_of_Earth)

The Encyclopedia OF EARTH

Climate Change

Online Portals of Rich Data

United Nations Opens World Digital Library, Turning the Pages from the British Library, etc. (history, culture, literature, writing, art, etc.)

Adventure Learning and Environmental Ed

(e.g., GeoThentic, Earthducation, Polar Husky, GoNorth; PenguinScience, Impossible2Possible, EARTHducation)

Live Science

(Nautilus Live allows people to watch expeditions live & listen to scientists in control rooms a discoveries made)

Virtual field trips

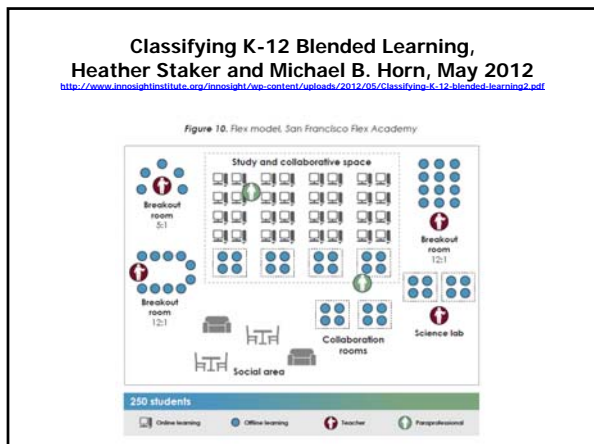
(e.g., teach the history of immigration in America, eSchool News, March 21, 2012)

Blended Model #3. Flex

(curriculum primarily online with instructors available FTF)

Blended Model #3. Flex

(Each of AdvancePath Academics' dropout-recovery academies features a computer lab, where students spend most of their time learning online. But face-to-face, certified teachers also call the students into an offline reading and writing zone or small-group instruction area for flexible, as-needed help.)



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

Blended Model #4. Online Lab
 (Faced with a teacher shortage, Miami-Dade County Public Schools turned to Florida Virtual School's Virtual Learning Labs for help. Students complete courses online at their traditional school under adult supervision, but with no face-to-face instruction.)

Interactive Biology and Physics Simulations and Labs
<http://phet.colorado.edu/en/simulation/energy-skate-park>

Online Chemistry and Psychology Experiments

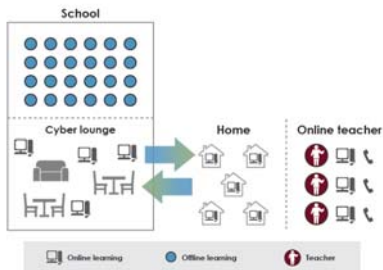
PSYCHEXPERIMENTS
 Psychology Experiments on the Internet

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

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 Heather Staker and Michael B. Horn, May 2012

<http://www.innossightinstitute.org/innossight/wp-content/uploads/2012/05/Classifying-K-12-blended-learning2.pdf>

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



Blended Model #5. Self-Blend

(Alison Johnson, an eleventh grader in Detroit, Mich., self blends by completing a Michigan Virtual School AP Computer Science course in the evenings after she gets home from her traditional high school, which does not offer this course.)



Blended Model #6. Online Driver
 (now: "Enriched Virtual Model")

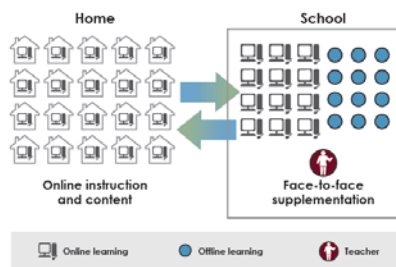
(courses primarily online and physical facilities used to supplement or as needed)



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 Heather Staker and Michael B. Horn, May 2012

<http://www.innossightinstitute.org/innossight/wp-content/uploads/2012/05/Classifying-K-12-blended-learning2.pdf>

Figure 12. Enriched-Virtual model. Albuquerque eCADEMY

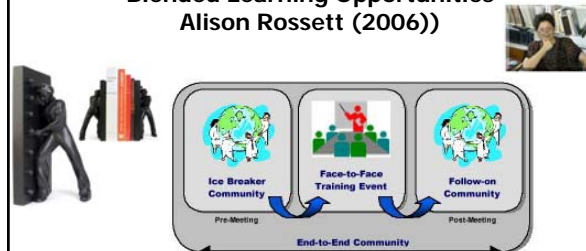


Blended Model #6. Online Driver
 now: "Enriched Virtual Model")

(Students at Albuquerque Public Schools' eCADEMY meet with a face-to-face teacher at the beginning of the course. If they maintain at least a C grade, they are free to complete the rest of the course online and remotely, although some choose to use the onsite computer labs.)



Blended Model #7. 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 #8. Anchor (start with FTF or what students are familiar with and then move to online)

Blended Model #9. Field (combine FTF and online as needed...mix and match)

Table 1. What Might Go in the Blend

Live face-to-face (formal) <ul style="list-style-type: none"> Instructor-led classroom (F2F) Workshops Coaching, mentoring On-the-job (OTJ) training Work-based problems 	Live face-to-face (informal) <ul style="list-style-type: none"> Collegial relationships Work teams Apprenticeships
Virtual collaboration/synchronous <ul style="list-style-type: none"> Live e-learning classes E-coaching, e-mentoring Instant messaging, SMS 	Virtual collaboration/asynchronous <ul style="list-style-type: none"> Email Online communities and discussion boards Listserve Blogs, wikis, podcasts
Self-paced learning (print, CD/DVD, electronic, wireless) <ul style="list-style-type: none"> Online modules Online resource links Simulations and scenarios Assessments and self-assessments Workbooks, readings 	Performance support <ul style="list-style-type: none"> Online help systems Print job aids Online knowledge databases Documentation Performance support tools

Adapted from (Rossett, Douglas, & Frater, 2003, July)

Blended Model #10. Degrees of Humanness (rely on computer-based feedback and interaction at first and switch to human feedback later on)

- 4 Learning Labs** (High-tech and low-tech)
Learning Labs, Classroom, Mentoring, Role Playing, Coaching
- 3 Collaborative Learning** (Using technology and face-to-face)
Live Virtual & Asynchronous programs, e-Labs, Communities of Interest, Practice and Purpose
- 2 Interactive Learning - Simulation** (Personalizing of Paths)
QuickCases; Simulations; Scenario based problem solving
- 1 Performance Support & Best Practice Reference** (Performance of Performance)
QuickViews; WebCasts; Web Books; Best Practice Repositories, Web Pages & Objects

Competency Assessment

Online Motivation Framework: The TEC-VARIETY Model

Tone/Climate
Encouragement, Feedback
Curiosity

Variety
Autonomy
Relevance
Interactive
Engagement
Tension
Yields Products

1. Tone/Climate: A. Video Course Intros (examples from Yun Yun Chow, Open U Malaysia, Making Art Lessons Come Alive with Web 2.0)

<http://www.youtube.com/watch?v=BO9rqJD1GXo>

2. Encouragement, Feedback: A. Poll Everywhere

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

3. Curiosity, Fun:

A. Cross-Cultural Videoconference

(e.g., Global Nomads Group, Int'l Studies for Indiana Schools (i.e., ISIS); Chinese, Niger, Sudan, Life in Eastern Europe, History/Culture of Mexico)

3. Curiosity, Fun:

B. Tracking the Life of a Scientist

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

Origin of Humans: <http://www.youtube.com/user/tellymonitor#p/u/2/sWWnVd8tU>
 Tellymonitor's Channel: <http://www.youtube.com/user/tellymonitor>
 BBC programs omit living cells: <http://www.youtube.com/watch?v=uh9TnGxey>
 Secret Weapons: <http://www.youtube.com/user/tellymonitor#u>
 Dinosaurs (Laboratory News, April 1, 2012): <http://www.labnews.co.uk/news/prehistoric-revolution>

4. Variety, Novelty:

A. Synchronous Session with Guest Expert

5. Autonomy, Choice:

A. Web Exploration Assignments

1. Complete Works of Charles Darwin Online: <http://darwin-online.org.uk/>
2. The Complete Works of William Shakespeare: <http://shakespeare.mit.edu/>
3. Edgar Allan Poe Society of Baltimore: <http://www.eapoe.org/>
4. Einstein Archives Online: <http://www.alberteinstein.info/>
5. Federal Resources for Educational Excellent project: <http://free.ed.gov/>
6. Global Text Project: <http://globaltext.org/>
7. iBerry (Open Courseware Directory): <http://iberry.com/>
8. Jane Austen: <http://www.janeausten.org/>
9. The Jane Goodall Institute: <http://www.janegoodall.org/>
10. Timeless Hemmingway: <http://www.timelesshemmingway.com/>

6. Relevance, Meaningfulness:

A. 60 Second Recap, Jenny Sawyer

<http://www.60secondrecap.com/>
 Actress to students: Lend me your earbuds!
 English major, 24, rambunctiously recaps the classics in 60-second Web videos; By Greg Toppo; USA TODAY, September 2009

7. Interactive, Collaborative:

A. Working In Virtual Teams

(e.g., Collanos, Ning, SharePoint, Google Docs)

8. Engagement, Effort:
A. Interactive Event Timeline
Arab spring: an interactive timeline of Middle East protests, The Guardian, Garry Blight & Sheila Pulham, July 12, 2011
<http://www.guardian.co.uk/world/interactive/2011/mar/22/middle-east-protest-interactive-timeline>

8. Engagement, Effort:
B. Timeline Tools
 (e.g., USA Today, August 26, 2011)
<http://www.usatoday.com/news/destinations/story/2011-08-25/Martin-Luther-King-Jr-Memorial-in-Washington-A-closer-look/101347017p-34news>

Martin Luther King Jr. Memorial in Washington: A closer look

9. Tension, Challenge:
A. Predict outcomes (May 2012)
 (e.g., Interactive Political Maps: Huffington Post)
<http://elections.huffingtonpost.com/2012/05/02/obama-vs-obama-electoral-map/#cartogram>

10. Yields Products, Goals:
A. Teacher Created Video Products
 Lorma International School, the Philippines
 (Hannah Kimberly Obar, 1st Grade teacher, 2/24/2012)
<http://www.youtube.com/watch?v=1C435UH-GzA>
<http://www.youtube.com/watch?v=1Zp1EjgAak>
http://www.youtube.com/watch?feature=player_embedded&v=UHMuTfAc6Fc (1st grade kids)

Time for Commitments:
 Which principle(s) of TEC-VARIETY will you use?

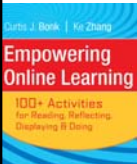


- Tone/Climate**
- Encouragement, Feedback**
- Curiosity**

- Variety**
- Autonomy**
- Relevance**
- Interactive**
- Engagement**
- Tension**
- Yields Products**

How can technology address diverse learner needs?




Framework #2: 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. Listen to Open Access Podcast Shows (and write papers)




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


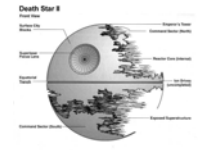






Reflect 2a. Cultural Blogs (e.g., Dr. Kim Foreman, San Fran State University, Come and See Africa Blog; <http://comeandseeafrica.blogspot.com/>)




3. Visual Learners

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

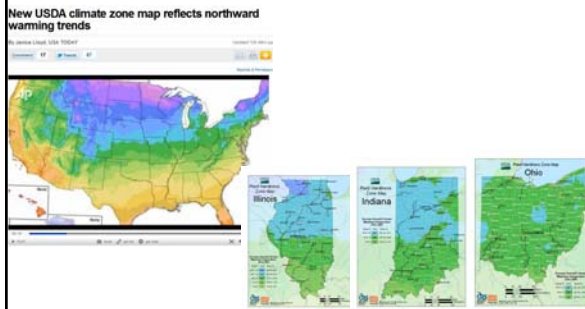




Display 3a. Concept Mapping Tools
 (Inspiration, VUE, Bubbl.us, Cmap, Freemind, Gliffy, Mindmeister, or Mindomo)



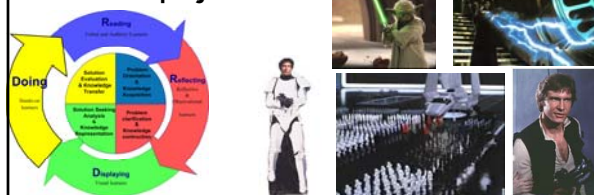
Display 3b. Interactive Weather Maps
 (e.g., New USDA climate zone map reflects northward warming trends, By Janice Lloyd, USA TODAY, January 26, 2012)

<http://www.usatoday.com/news/nation/environment/story/2012-01-26/USDA-climate-zone-map/52787142/>



4. Tactile/Kinesthetic Learners

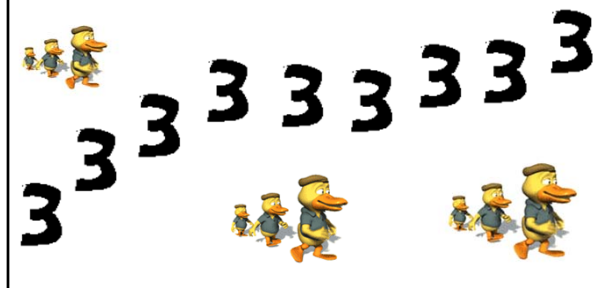
- Tactile/kinesthetic senses can be engaged in the learning process are role play, dramatization, cooperative games, simulations, creative movement and dance, multi-sensory activities, manipulatives and hands-on projects.



Do 4a. Podcast Productions and Shows



Stop and Share (on stickies?):
 Three Words or Ideas learned from Today's Session!



Any Questions?
 Try the R2D2 Model!
 Try TEC-VARIETY too...

- 😊 Slides at: TrainingShare.com
- 😊 Papers: PublicationShare.com
- 😊 Book: <http://worldisopen.com/>
- 😊 Email: curt@worldisopen.com

