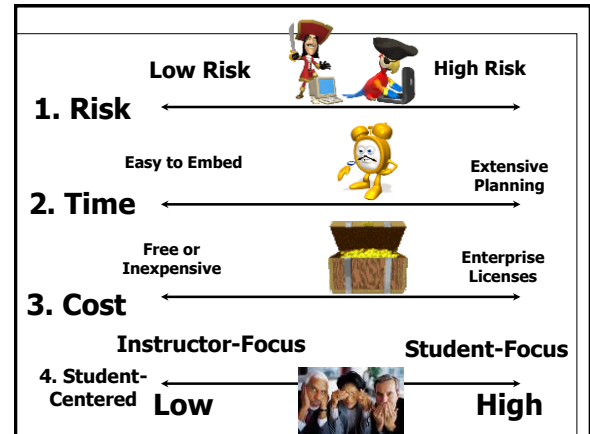


From R2D2 to the Matrix:

Addressing Diverse Learner Needs with the Read, Reflect, Display, and Do Model

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



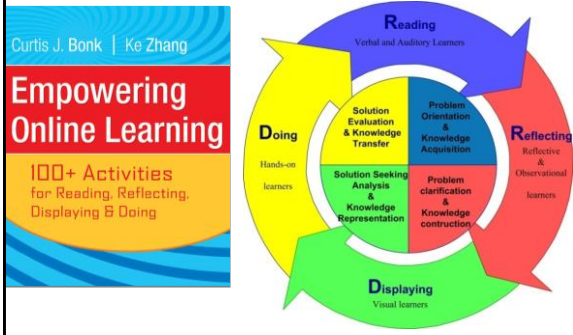
Addressing Learning Styles



Question: How can technology address diverse learner needs?



Framework: The R2D2 Model



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.

Online Article Portals and Databases

<http://r685articledatabase.weebly.com/>



Read 1b. Online Crossword Puzzles

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

Create Online Crossword Puzzles!



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

Read 1c. Interactive Flashcards

(e.g., Study Stack)

<http://www.studystack.com/flashcard-136259>



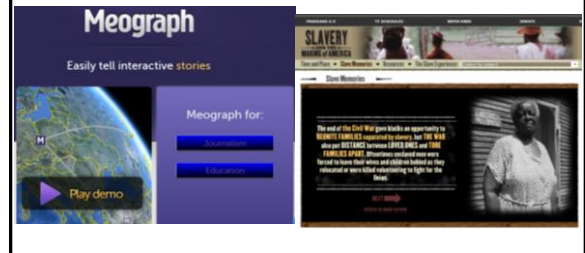
Read 1d. Grammar Checkers (e.g., Grammarly, Ginger, GrammarCheck, PaperRater, and SpellCheckPlus)

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



Read 1e. Collect and Listen to Interactive Stories

(e.g., Meograph: <http://www.meograph.com/>)
Timelines with Oral Histories, Slavery and the Making of America
Time and Place, PBS
<http://www.pbs.org/wnet/slavery/timeline/1857.html>

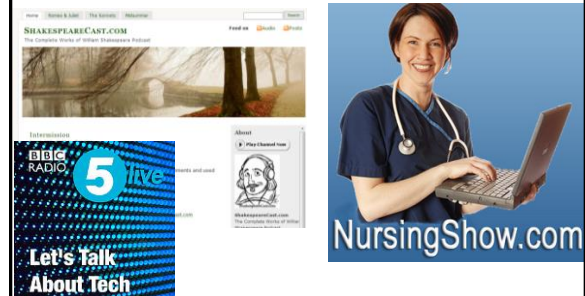


Read 1f. Follow on Twitter

<http://venture-lab.org/education>
<https://twitter.com/electricians>



Read 1g. Listen to Open Access Audio Files and Podcast Shows



Read 1h. Talking Dictionaries for Rare Languages

The Wall Street Journal, February 18, 2002

<http://online.wsj.com/article/SB1000142405297020488040457728982976760026.html?articleTabs%3Dvideo>



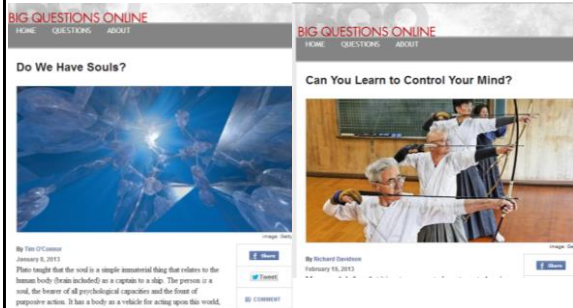
2. Reflective and Observational Learners

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



Reflect 2a. Big Issue Reflections (Big Questions Online (BQO)), January 8, 2013 (e.g., Do We Have Souls?)

<https://www.bigquestionsonline.com/content/do-we-have-souls>



Reflect 2b.

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-5062977/>
<http://www.usatoday.com/tech/news/story/2011-09-22/steve-jobs-dies/50672498/1>
<http://www.usatoday.com/news/obituaries/story/2011-08-25/Martin-Luther-King-3-Memorial-in-Washington-8-closer-look/501364701?top=34news>
<http://www.usatoday.com/story/life/movies/2013/04/10/harrison-ford-jackie-robinson/2001783/>



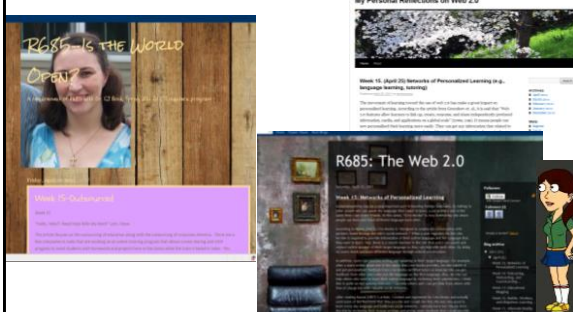
Reflect 2c. Expert and Domain Specific Blog Reflections (English, Health, Business, etc. blogs)



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



Reflect 2e. Critical Friend Blog Postings (Kristen and Susan)



3. Visual Learners

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



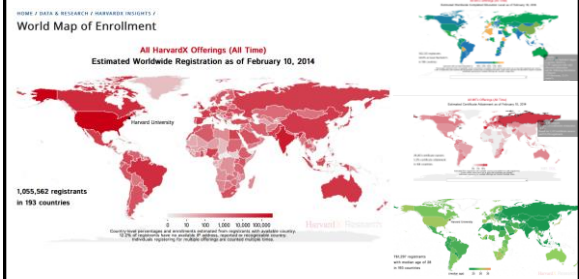
Display 3a. Virtualize Words Used (e.g., Wordle, Taggedo, Tagul, WordSift, Word It Out)

<http://shellyterrell.com/2010/02/14/12-word-cloud-resources-tips-tools/>



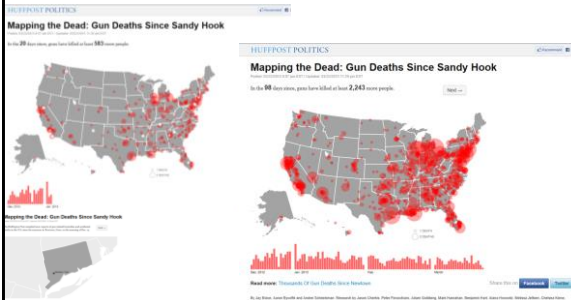
Display 3b. Data Visualization Tools (Harvard and MIT MOOCs) Lawrence Biemiller, February 20, 2014, Chronicle of Higher Education

<http://chronicle.com/blogs/learningcampus/harvard-and-mit-release-visualization-tools-for-track-of-mooc-data/2014-02-20>



Reflect 2c. Reflections on Interactive Maps Mapping the Dead: Gun Deaths Since Sandy Hook, Huffington Post, March 22, 2013

<http://data.huffingtonpost.com/2013/03/gun-deaths>

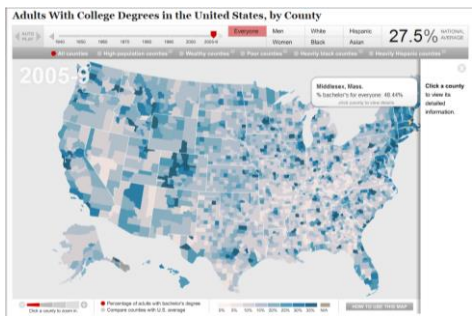


Display 3d. Videos for clinical education (Sungkyunkwan University School of Medicine, www.mededu.or.kr)

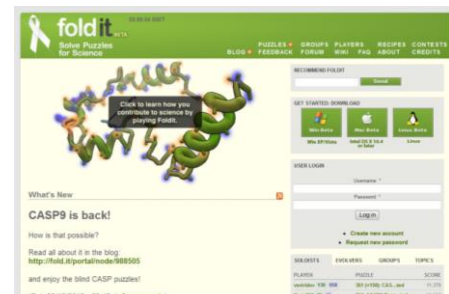


Display 3e. Interactive Map Timelines (adults with college degrees by county, May 7, 2012)

http://todayscampus.com/article/tech_tension_interview_tech_teller_on_interactive_graphics_for_higher_education



Display 3f. Video Animations and Simulations

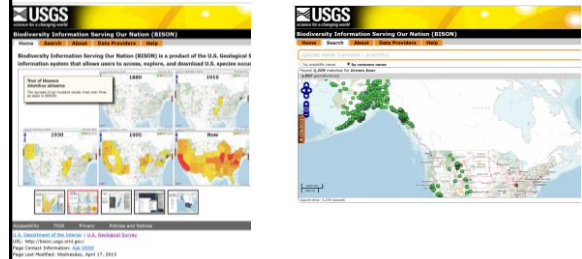


Display 3g. Virtual Microscopes



Display 3h. Interactive Species Maps USGS (US Geological Survey) (Biodiversity Serving Our Nation or BISON)

<http://bison.usgs.ornl.gov/>



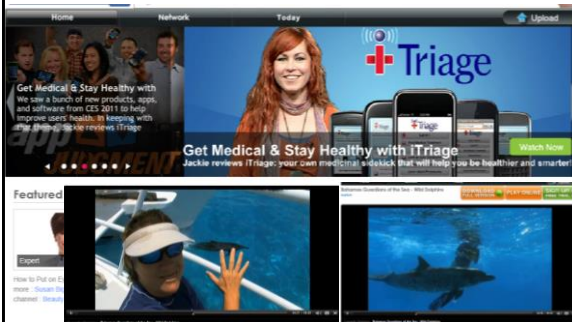
Display 3i. Visual Library Search DPLA (Digital Public Library Of America) <http://dp.la/>



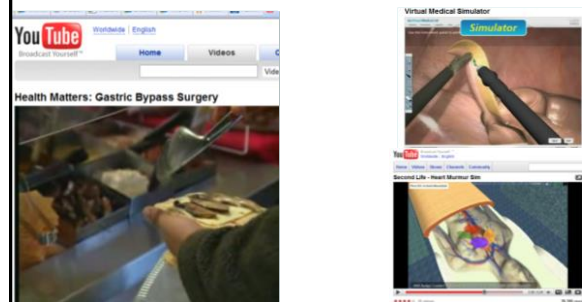
Display 3j. Online Timelines (US Presidents)



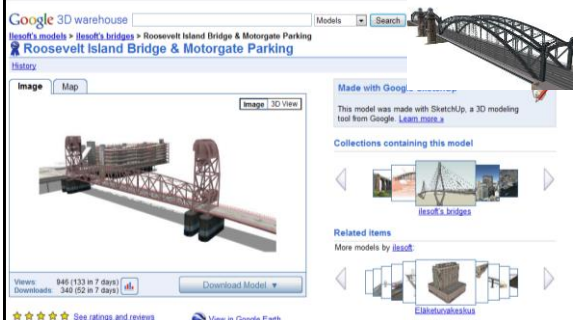
Display 3k. TV Lesson (expert videos)



Display 3L. Medical Animations (e.g., YouTube, CNN, BBC)



Display 3m. Download and Use Online 3D Sketches (Google SketchUp; download <http://sketchup.google.com/3dwarehouse>)



Display 3n. Video Art Tutorials ArtMaker.com <http://artmaker.com>

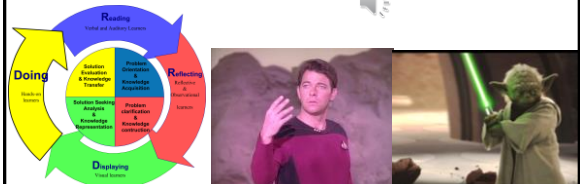


Display 3o. Online Art Google Art Project, NBC Nightly News, April 3, 2012 <http://www.msnbc.msn.com/id/3032619/vp/46945508#46945508>



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.



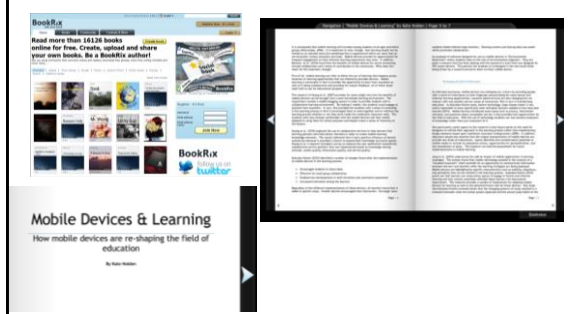
Do 4a. Survey Research and Market Analysis (e.g., Mister Poll, MicroPoll, Zoomerang, SurveyShare)



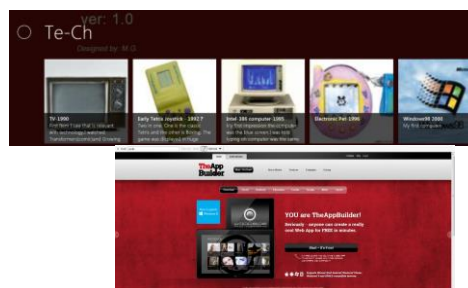
Do 4b. Student Class Documentaries Umida's R546 Documentary Project http://www.youtube.com/watch?v=EMLTzqCV_5A



Do 4c. Uploading Mobile Books (e.g., BookRix, <http://www.bookrix.com/>)

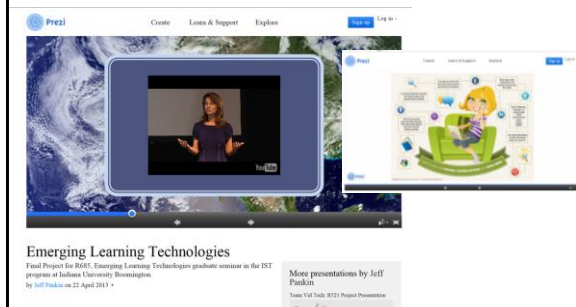


Do 4d. Student Mobile App Creation The App Builder: <http://www.theappbuilder.com/> Mintian Guo (April 2013): <http://myapp.is/r685final>



Do 4e. Course Recap Prezi Presentations

Jeff Pankin, MIT, Prezi, Emerging Learning Technologies
<http://prezi.com/tdm9g7mf/emerging-learning-technologies/>
 Jeffrey Barnette, Today's World
<http://prezi.com/-iqzyothst-r/r685-final-project>



Do 4f. 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/>



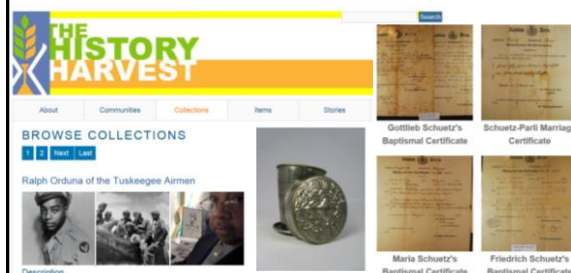
Do 4g. Singing YouTube Summaries

Daniel Halluska, P540, Fall 2011
<http://www.youtube.com/watch?v=tOL7lR6sqnw>



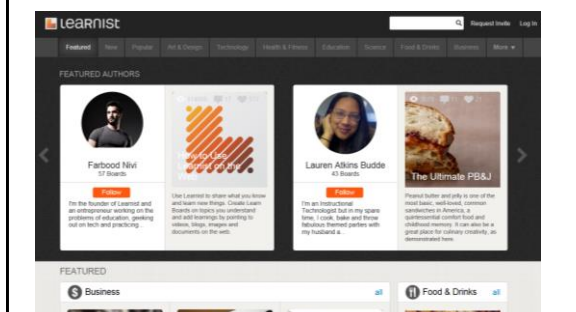
Do 4h. Class or Community Oral Histories

(e.g., The History Harvest, December 21, 2012)
<http://historyharvest.unl.edu/collections>



Do 4i. Student Expertise (e.g., Learnist)

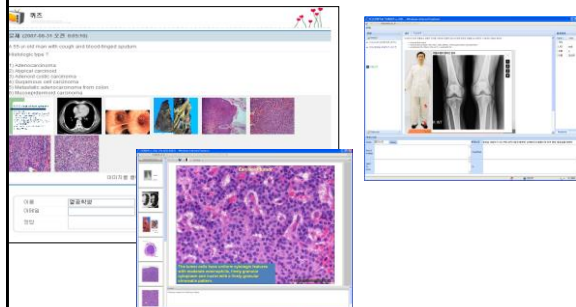
<http://learnist.org/category/featured#/category/featured>



Do 4j. Podcast Productions and Shows

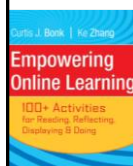


Do 4k. Virtual Quizzes (Sungkyunkwan (SKKU) University School of Medicine, www.mededu.or.kr)



Poll: What phase of the R2D2 Method do you like best?

- A. Read (Auditory and Verbal Learners)
- B. Reflect (Reflective Learners)
- C. Display (Visual Learners)
- D. Do (Tactile, Kinesthetic, Exploratory Learners)



Next up: The MATRIX!!!!!!!!!!!!

- Mobile
- Auditory
- Thought-stimulating
- Reflective/Real-World
- vIsually Interactive
- eXtremely Hands-on



Any Questions?

Try the R2D2 Model!

Slides at: TrainingShare.com

Papers: PublicationShare.com

Book: <http://worldisopen.com/>

Dr. Curt Bonk – CJBonk@Indiana.edu

