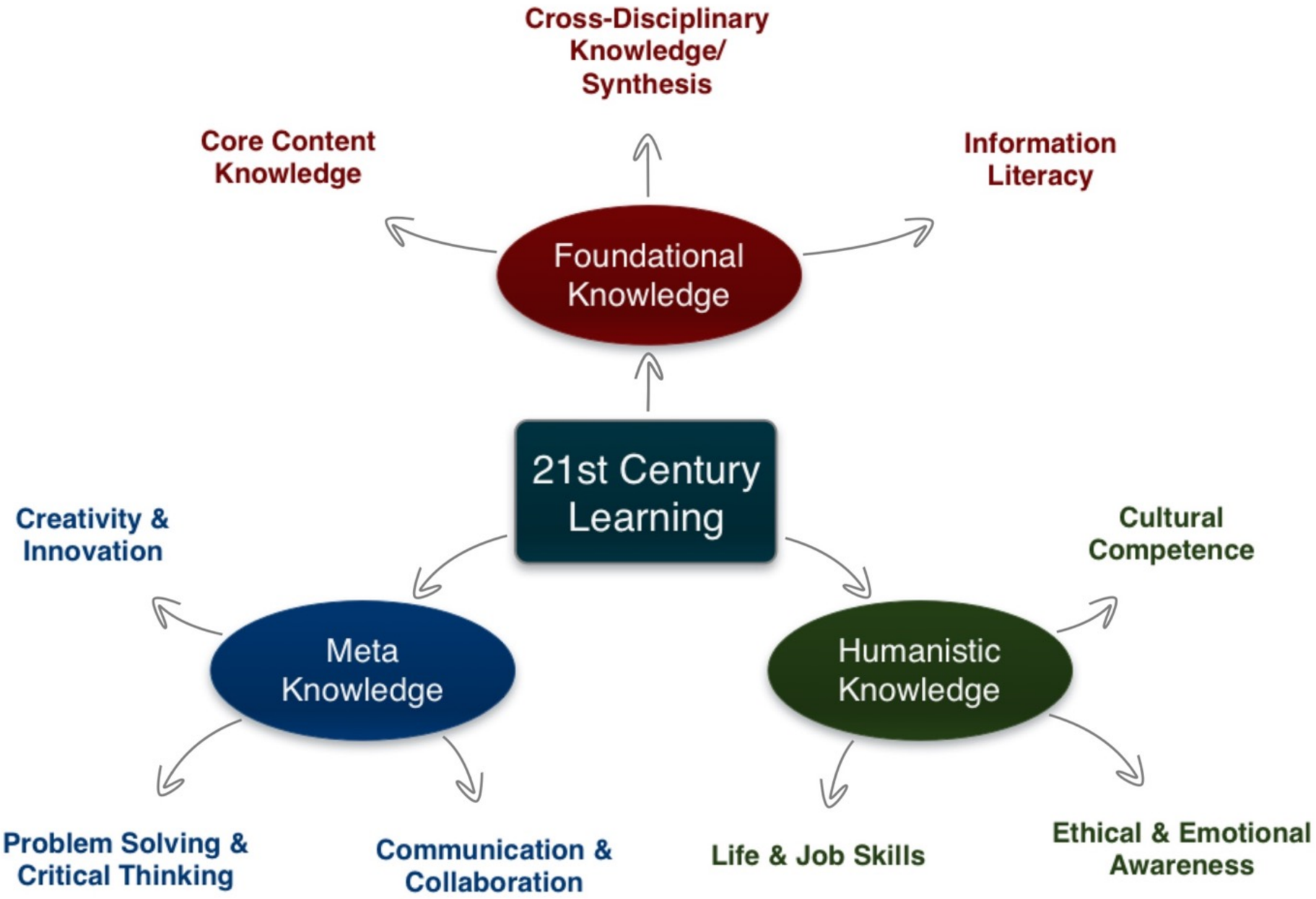
SAMR: Approaches to Implementation

Ruben R. Puentedura, Ph.D.



Kristen Kereluik, Punya Mishra, Chris Fahnoe, and Laura Terry, “What Knowledge Is of Most Worth: Teacher Knowledge for 21st Century Learning”. *Journal of Digital Learning in Teacher Education (29)* 4 (2013)

Key Trends Driving Ed Tech Adoption

Fast (1-2 yrs.)	Rethinking the Roles of Teachers Shift to Deeper Learning Approaches
Mid-Range (3-5 yrs.)	Increasing Focus on OER Increasing Use of Hybrid Learning Designs
Long-Range (5+ yrs.)	Rapid Acceleration of Intuitive Technology Rethinking How Schools Work

Important Ed Tech Developments

Adoption: 1 yr. or less	BYOD Cloud Computing
Adoption: 2-3 yrs.	Games and Gamification Learning Analytics
Adoption: 4-5 yrs.	The Internet of Things Wearable Technology

Significant Challenges Impeding Ed Tech Adoption

Solvable *understand and know how to solve*	Difficult *understand but solutions are elusive*	Wicked *complex to define, much less address*
Authentic Learning Opportunities Integrating Personalized Learning	Complex Thinking & Communication Safety of Student Data	Competition from New Models of Ed Keeping Formal Education Relevant

Johnson, L., Adams Becker, S., Estrada, V., and Freeman, A. (2014). *NMC Horizon Report: 2014 K-12 Edition.* Austin, Texas: The New Media Consortium.

Redefinition

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Enhancement

Ruben R. Puentedura, *As We May Teach: Educational Technology, From Theory Into Practice*. (2009)

ART & DESIGN

At the Museum of London, the City That Sherlock Holmes Knew

By ROSLYN SULCAS FEB. 9, 2015

LONDON — A riveting exhibition here at the Museum of London has capitalized on the full-blown Sherlockmania that seems to have seized the Western world, judging by a new spate of movies, television shows and books.

John O'Connor's "From Pentonville Road Looking West: Evening," in a show at the Museum of London. Museum of London

Unexpectedly, the show, "Sherlock Holmes: The Man Who Never Lived and Will Never Die," which has drawn record numbers to the museum and continues until April 12, does not focus on the stories about Holmes or his creator, Arthur Conan Doyle, though an opening section shows some early notebooks and illustrations as well as a rare portrait of the author in his 30s.

"We deliberately didn't want to make it a text- and manuscript-heavy library exhibition," said Alex Werner, the lead curator. "It's about the character, and although I had a bit of trepidation about putting on an exhibition about a fictional being, we tried to set him firmly against the real city of London in which the stories take place."

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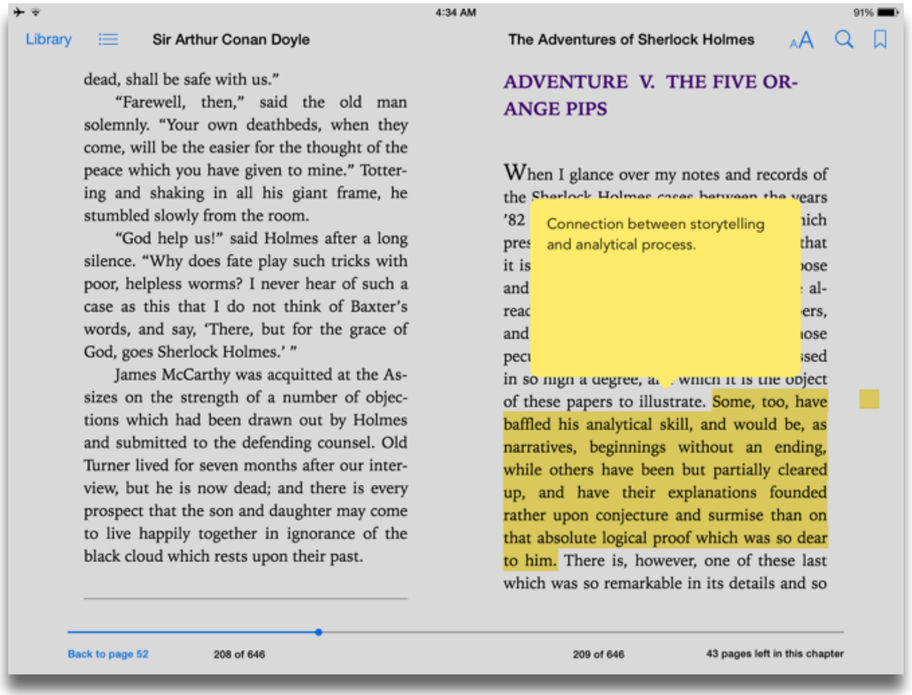

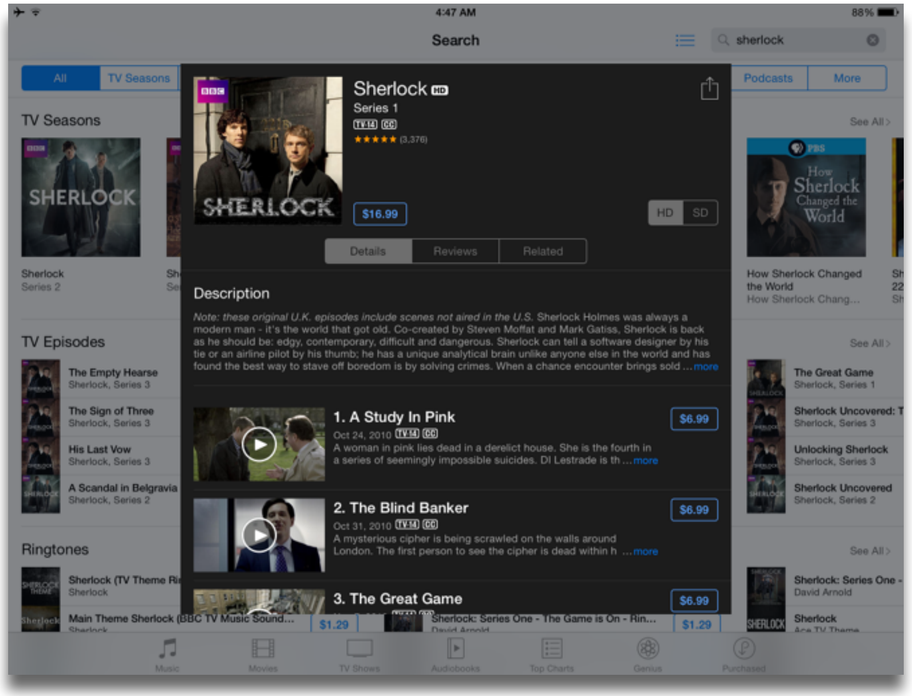

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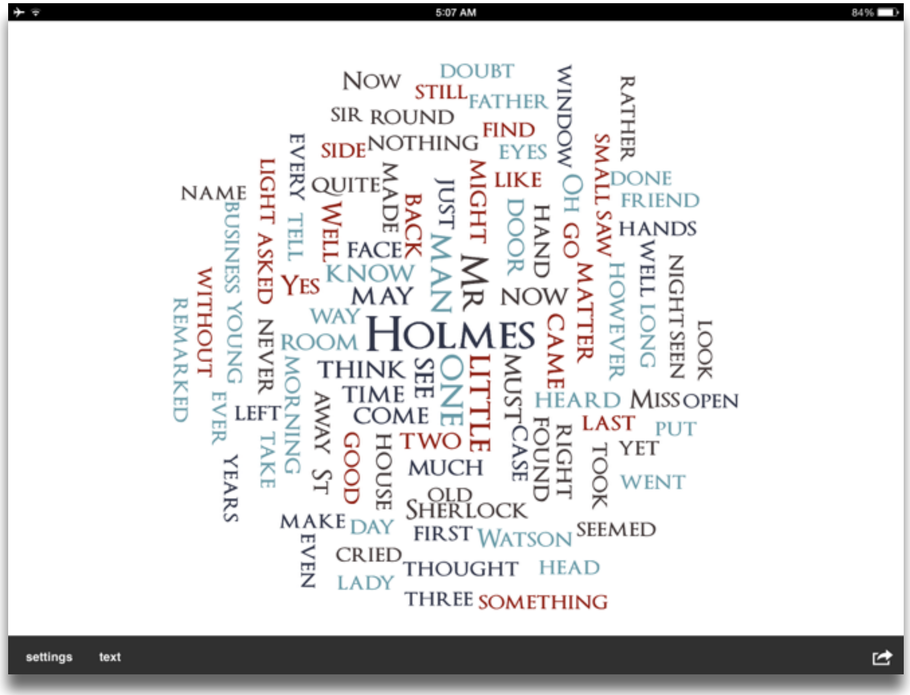

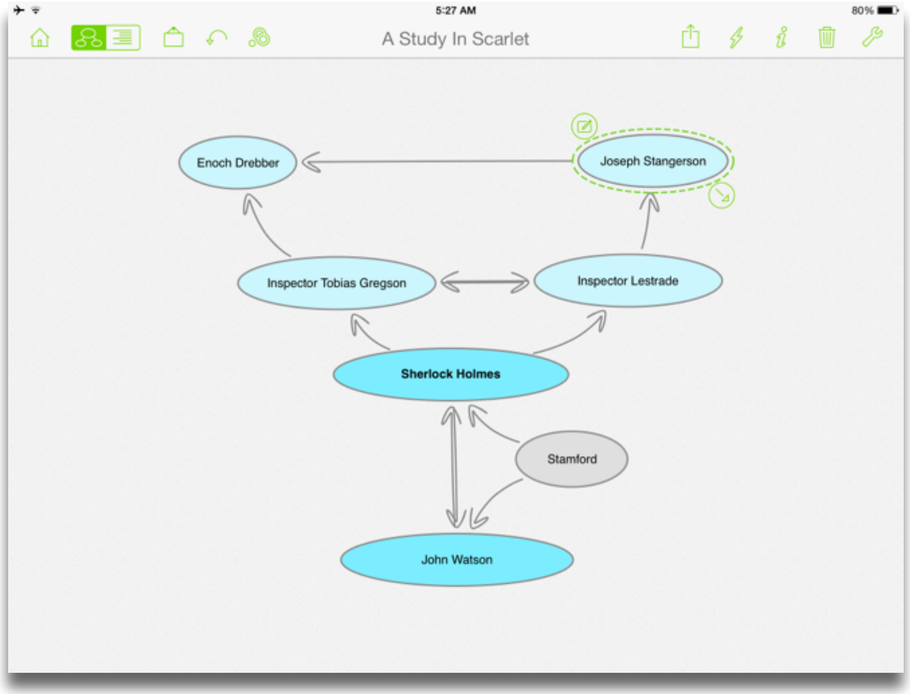

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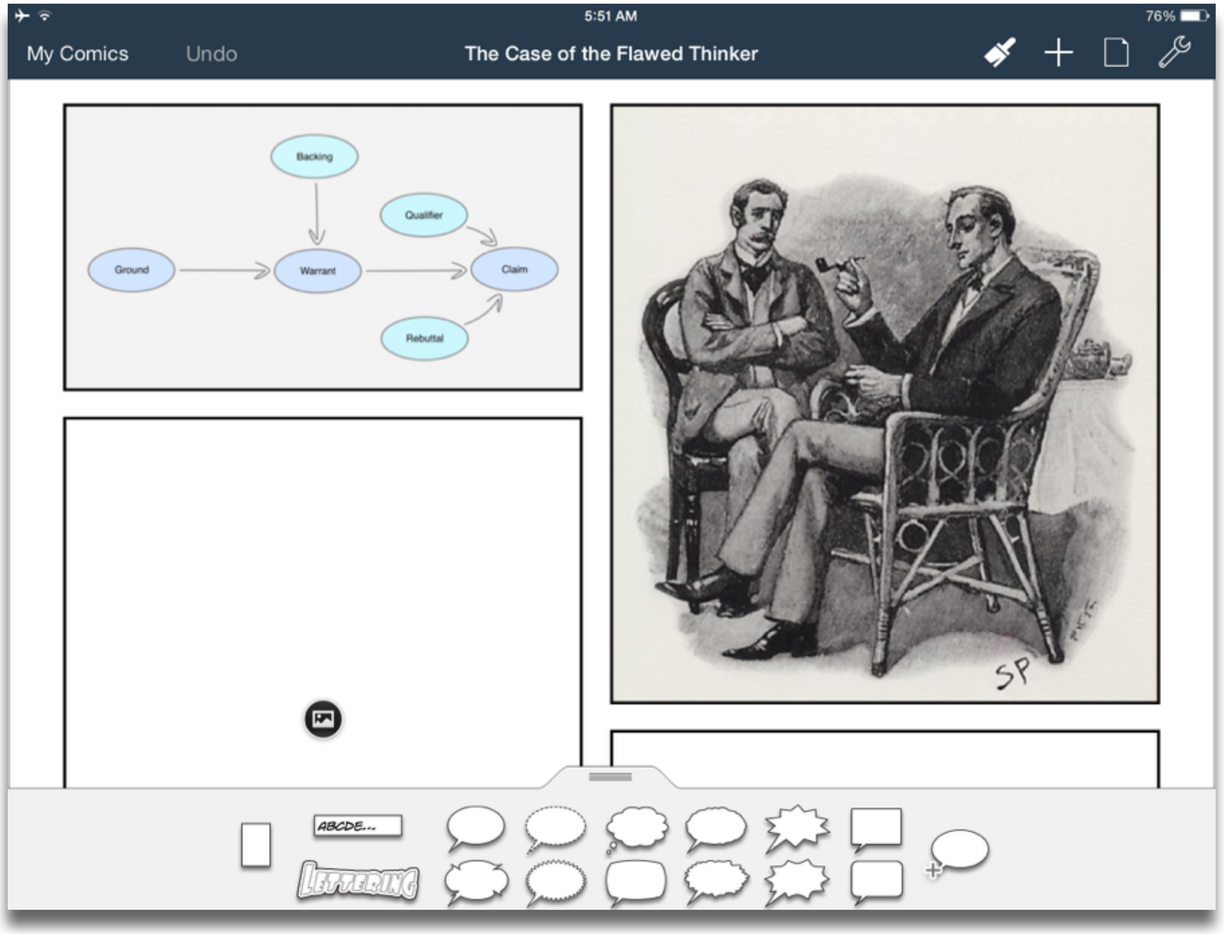

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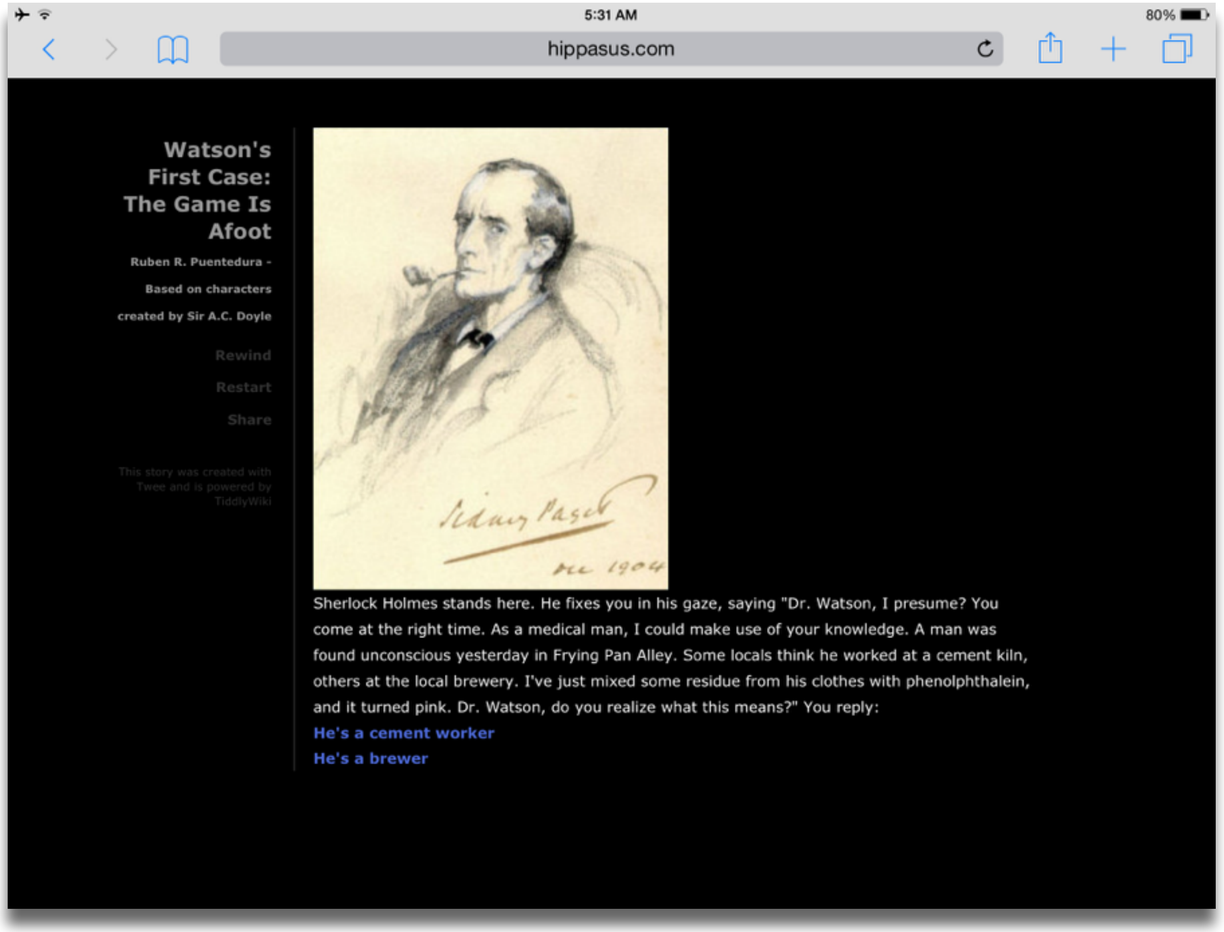

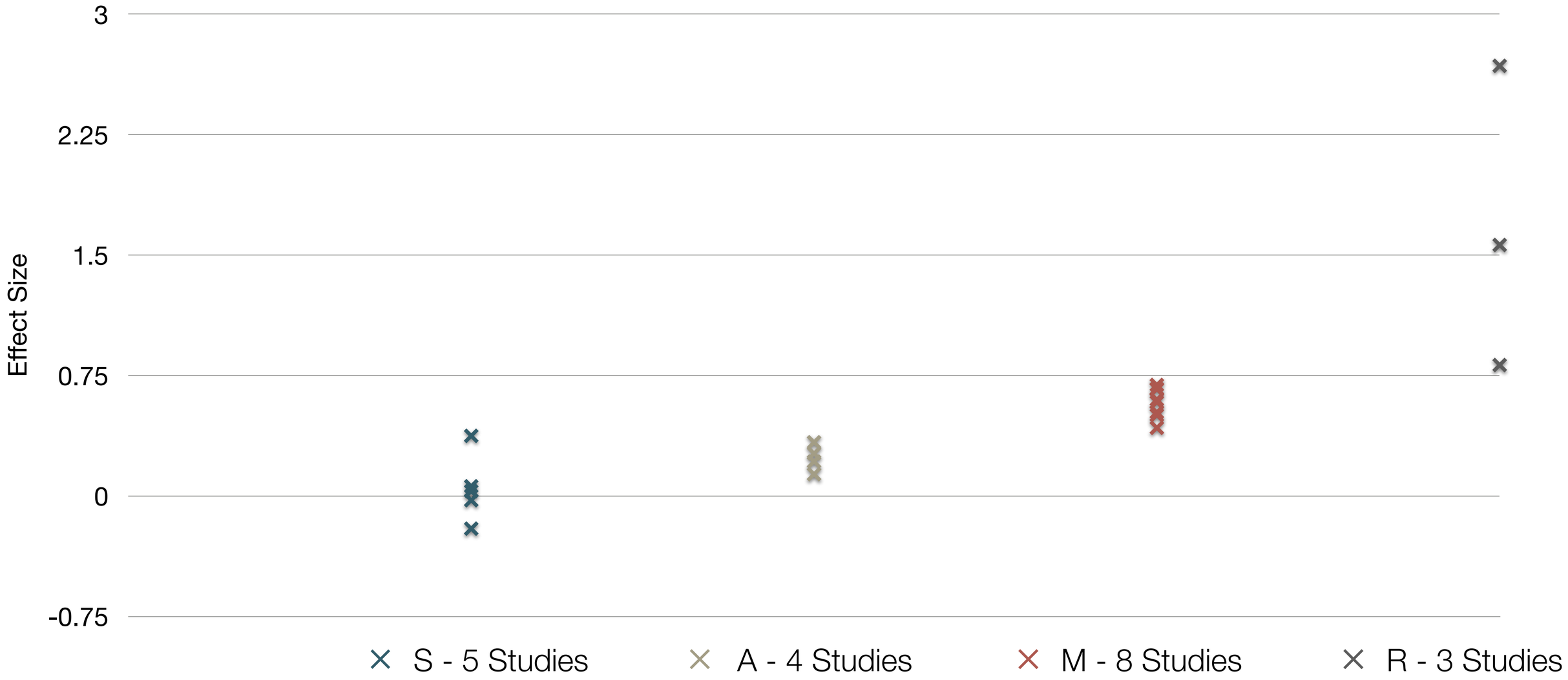

Pearson, P.D., Ferdig, R.E., Blomeyer Jr, R.L., & Moran, J. "The Effects of Technology on Reading Performance in the Middle-School Grades: A Meta-Analysis With Recommendations for Policy." *Learning Point Associates/North Central Regional Educational Laboratory (NCREL)* (2005).

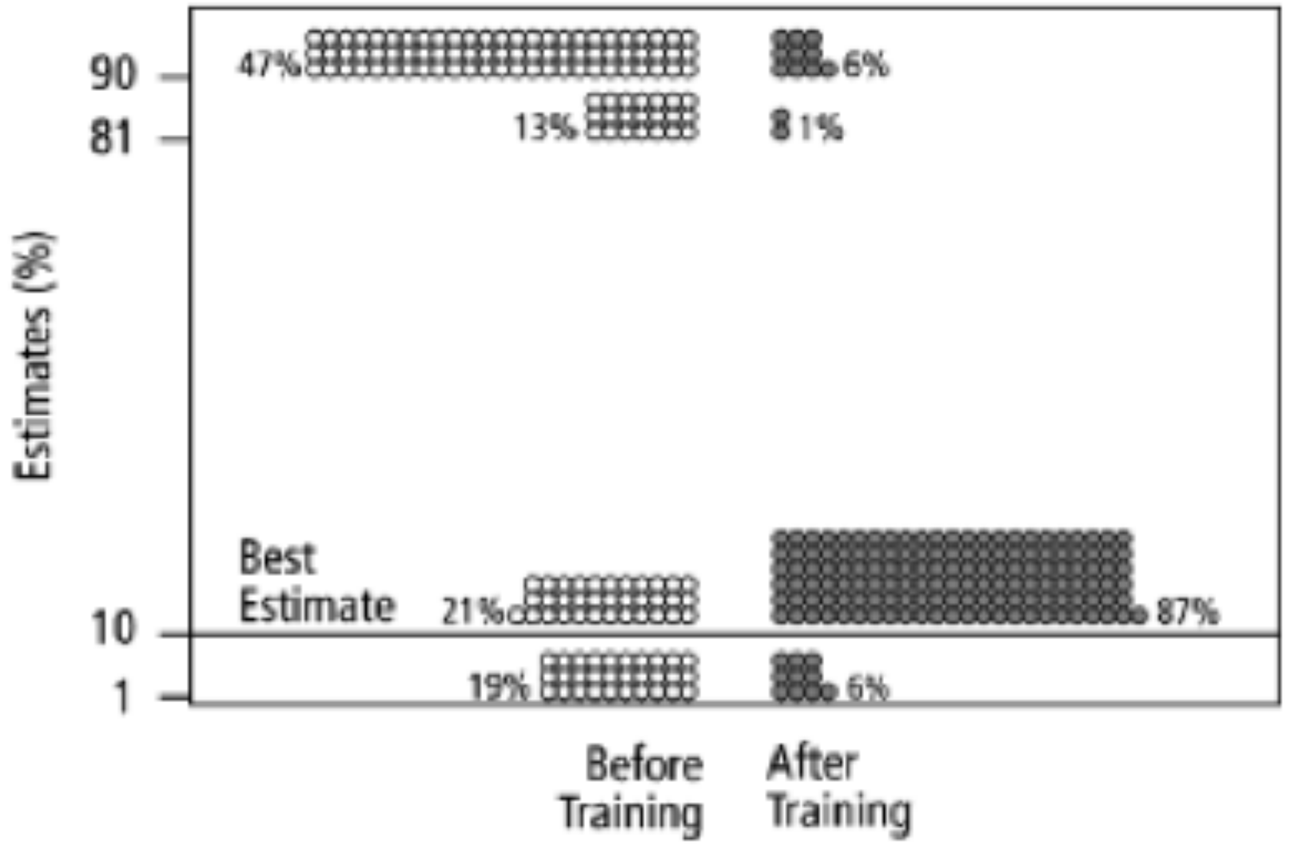

Fig. 2. Estimates by 160 gynecologists of the probability that a woman has breast cancer given a positive mammogram, before and after receiving training in how to translate conditional probabilities into natural frequencies.

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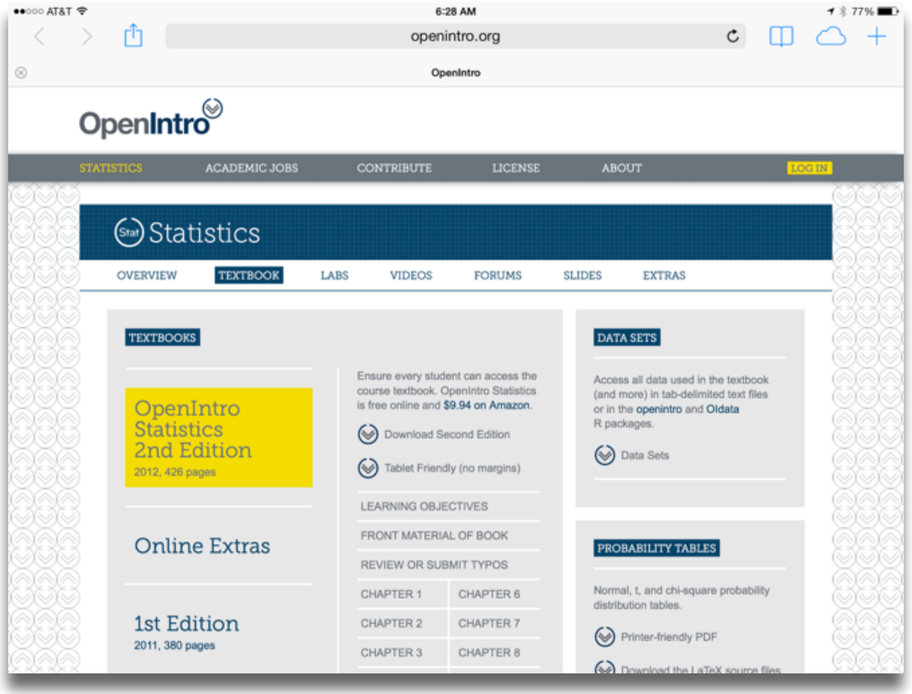

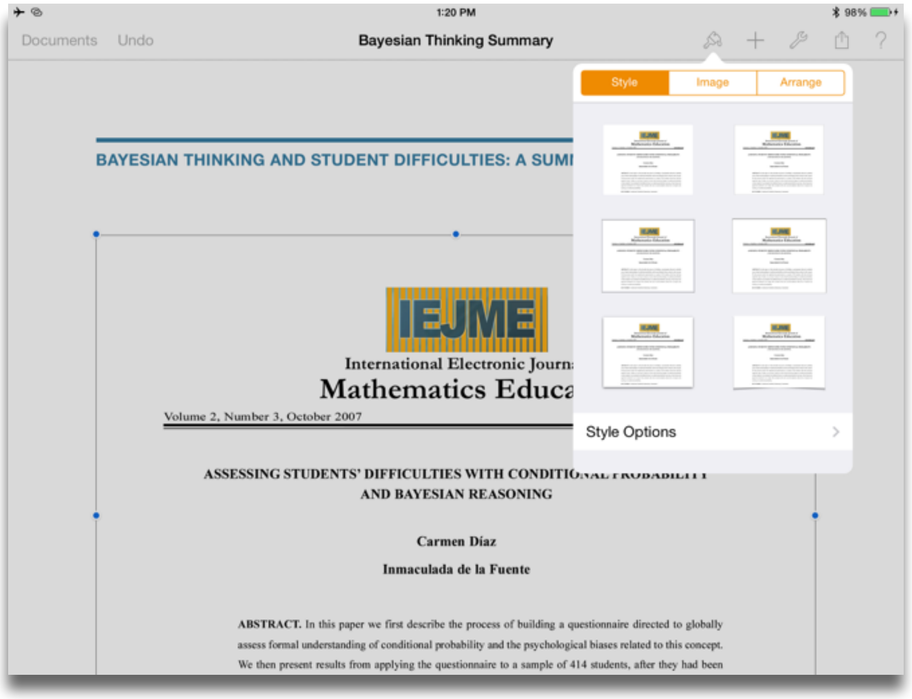

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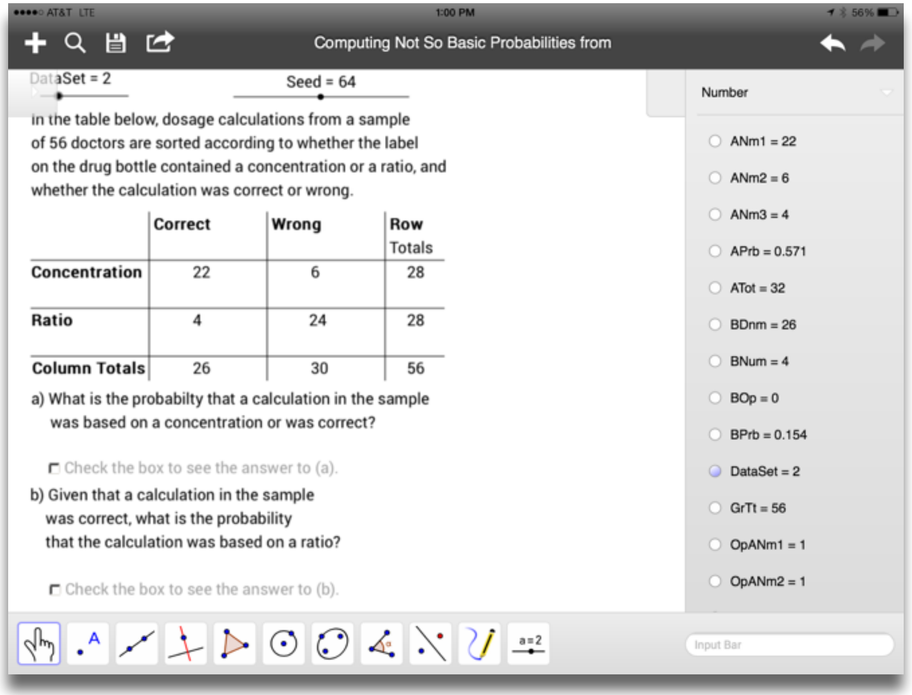

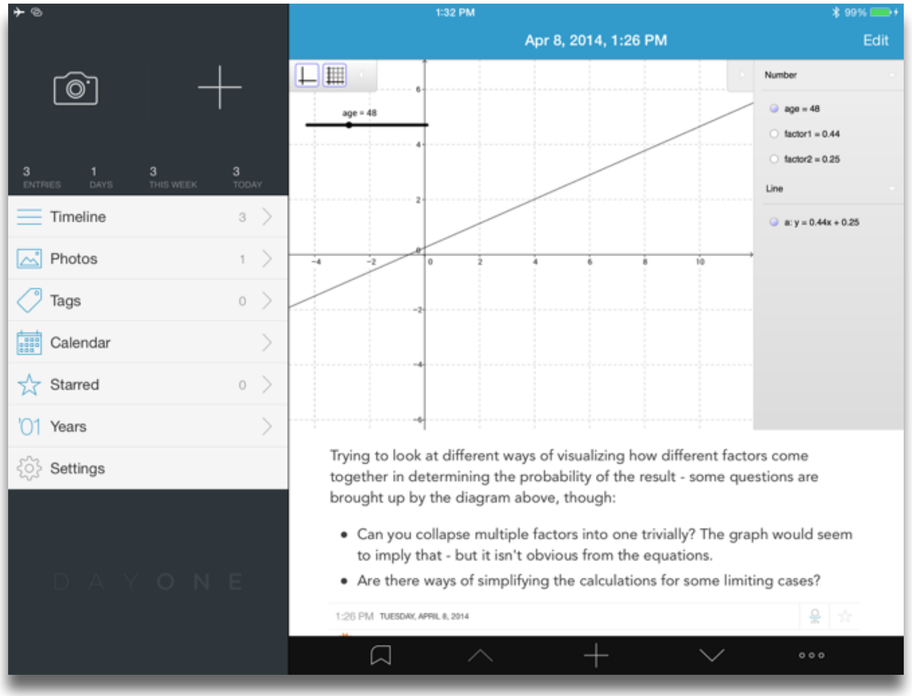

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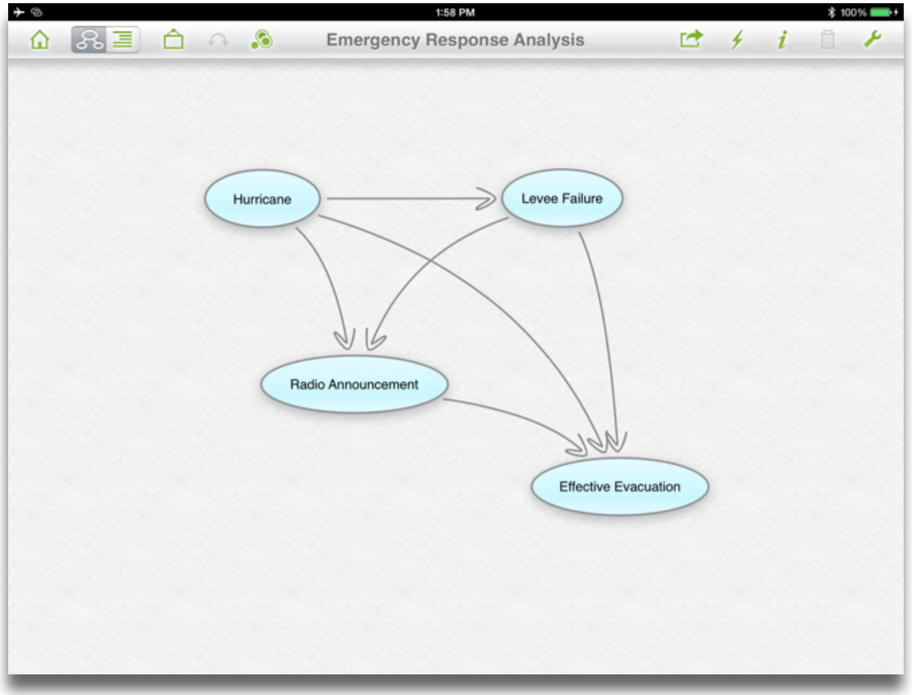

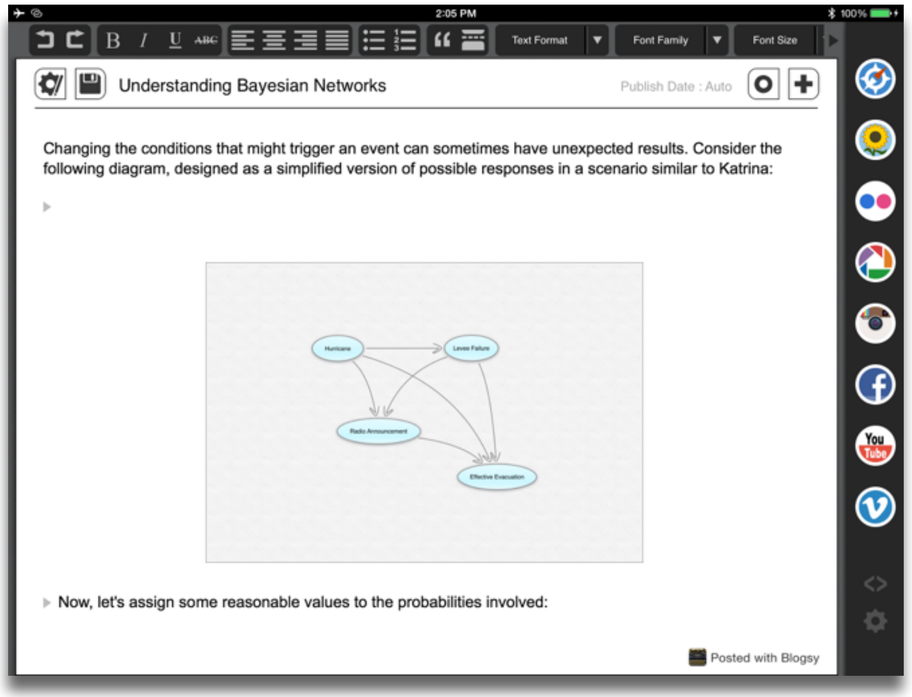

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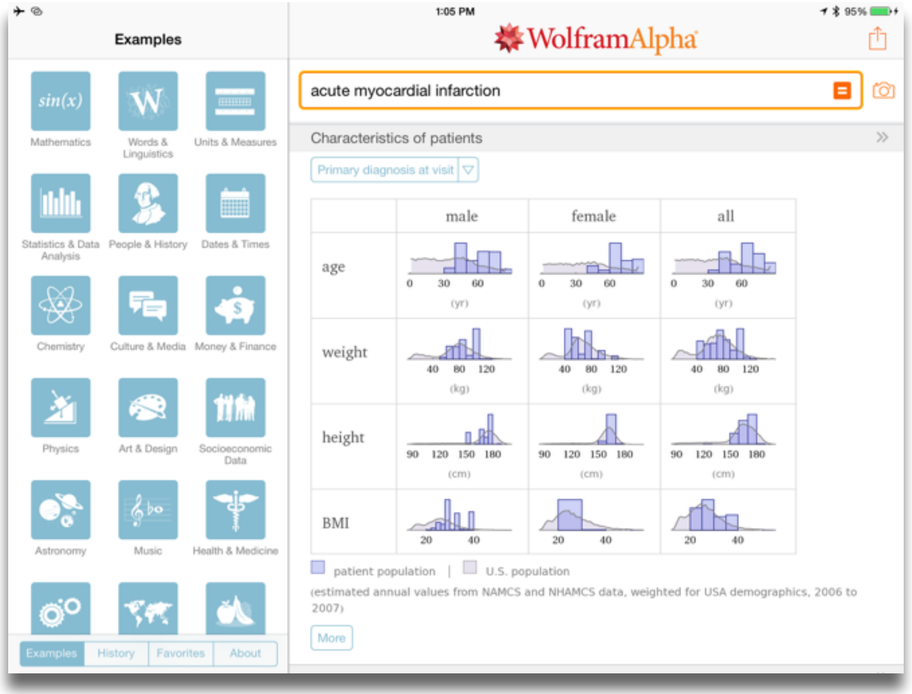

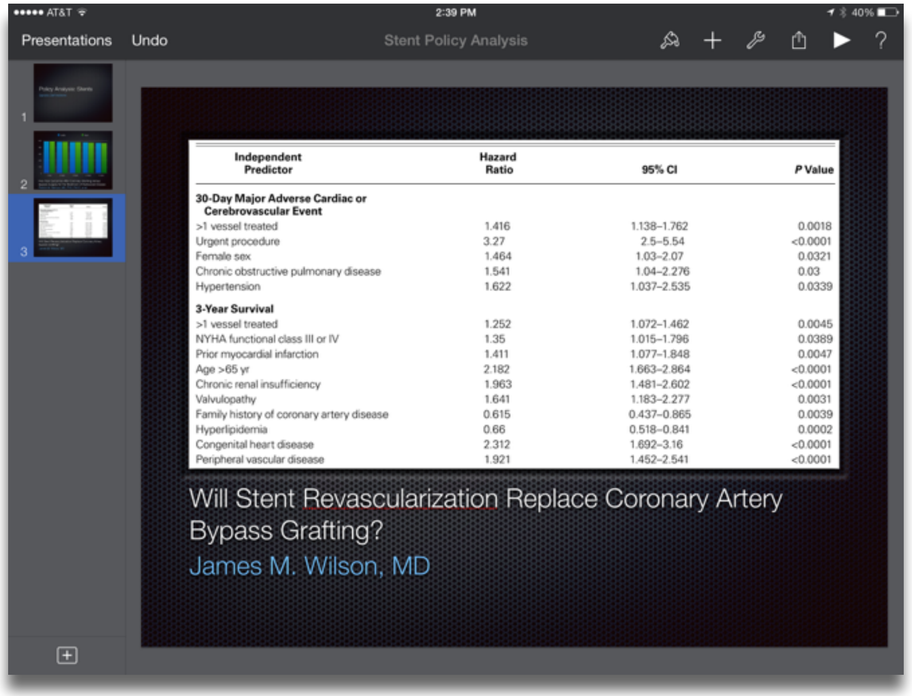

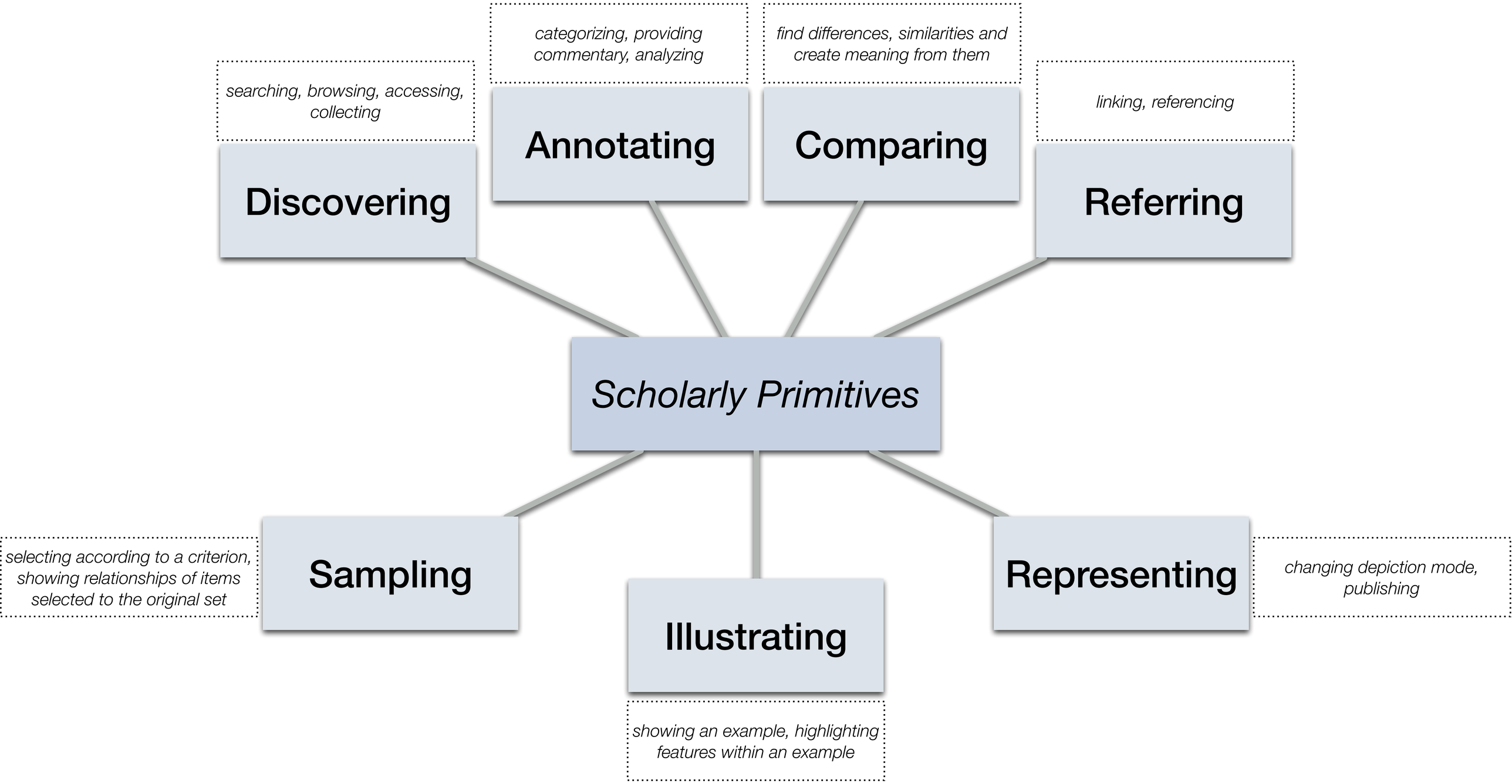

John Unsworth. *Scholarly Primitives: What Methods Do Humanities Researchers Have in Common and How Might Our Tools Reflect This?* Humanities Computing, Formal Methods, Experimental Practice Symposium, Kings College, London. (May 2000)

Bloom's Taxonomy: Cognitive Processes

Anderson & Krathwohl (2001)	Characteristic Processes	
Remember	• Recalling memorized knowledge • Recognizing correspondences between memorized knowledge and new material	
Understand	• Paraphrasing materials • Exemplifying concepts, principles • Classifying items • Summarizing materials	• Extrapolating principles • Comparing items
Apply	• Applying a procedure to a familiar task • Using a procedure to solve an unfamiliar, but typed task	
Analyze	• Distinguishing relevant/irrelevant or important/unimportant portions of material • Integrating heterogeneous elements into a structure • Attributing intent in materials	
Evaluate	• Testing for consistency, appropriateness, and effectiveness in principles and procedures • Critiquing the consistency, appropriateness, and effectiveness of principles and procedures, basing the critique upon appropriate tests	
Create	• Generating multiple hypotheses based on given criteria • Designing a procedure to accomplish an untyped task • Inventing a product to accomplish an untyped task	

Lorin W. Anderson and David R. Krathwohl (Eds.), *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives, Complete Edition*. Longman. (2000)

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Create

Evaluate

Analyze

Apply

Understand

Remember

Location

Position in space

Condition

Mix of natural & artificial features that give meaning to a location

Links

Connections between places

Formal Region

Group of places with similar conditions

Functional Region

Group of places linked together by a flow

Phil Gersmehl. *Teaching Geography*. The Guilford Press. (2005)

Spatial Thinking Skills	
Comparison	How are places similar or different?
Aura	What is this place’s influence on nearby places?
Region	What nearby places are similar to this one?
Transition	How do things change between two places?
Hierarchy	What larger area is this area inside? What smaller areas are inside it?
Analogy	What places have similar conditions?
Pattern	What distinctive arrangements can you see on a map?
Association	Are these patterns similar?

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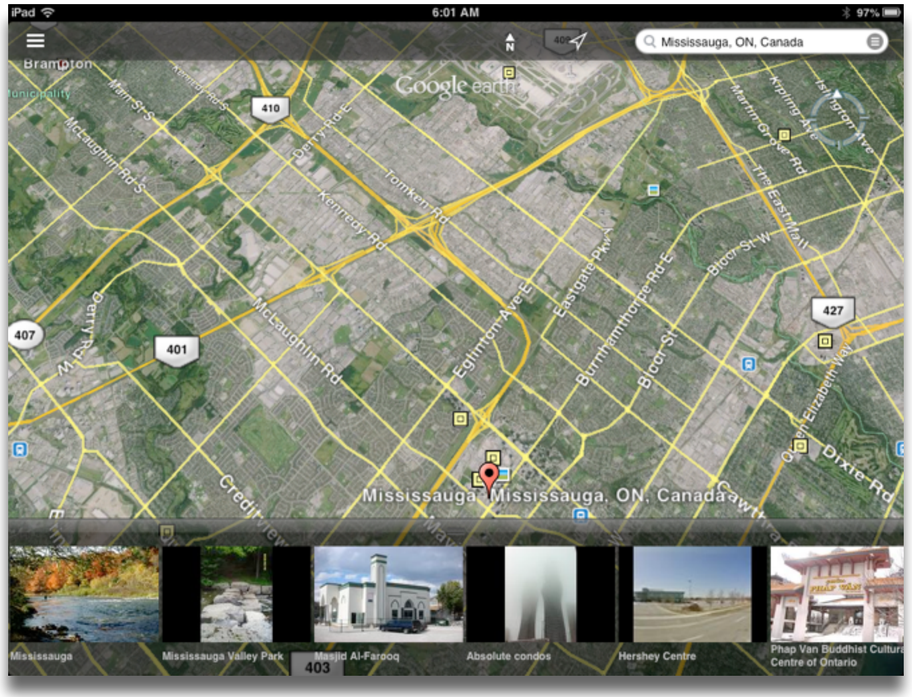
Remember



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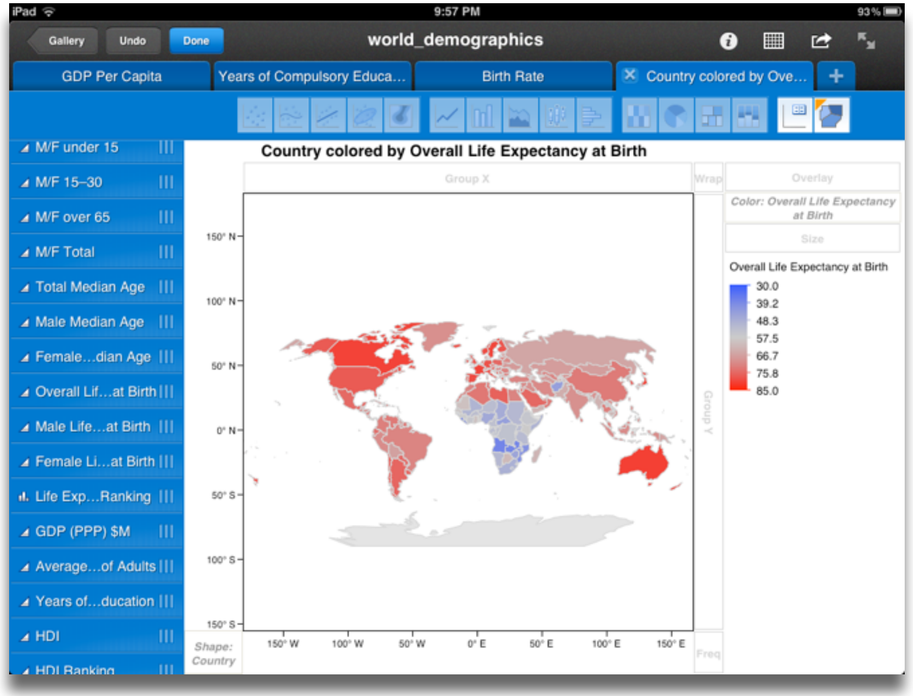

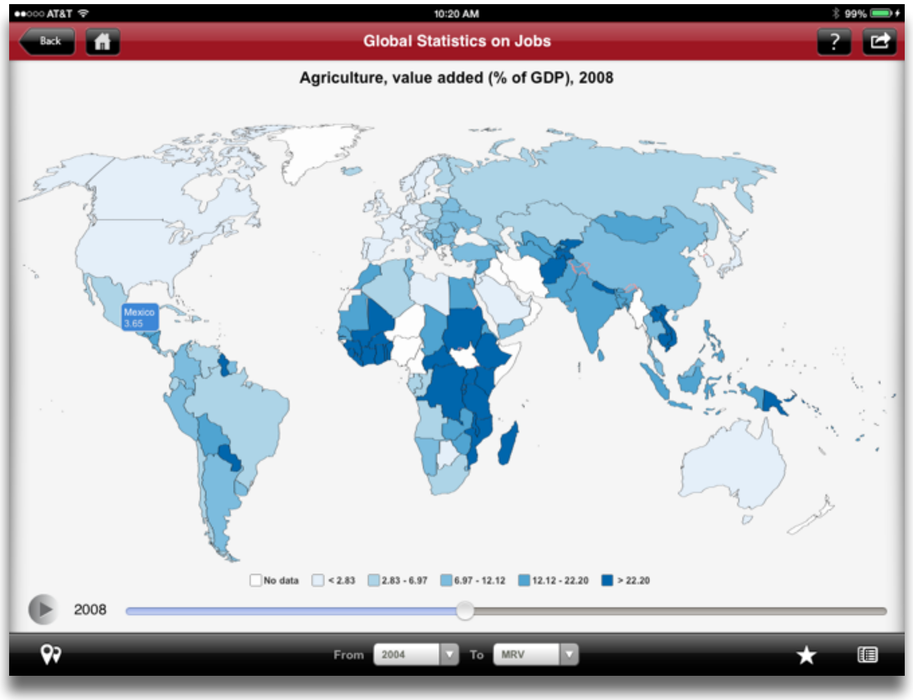

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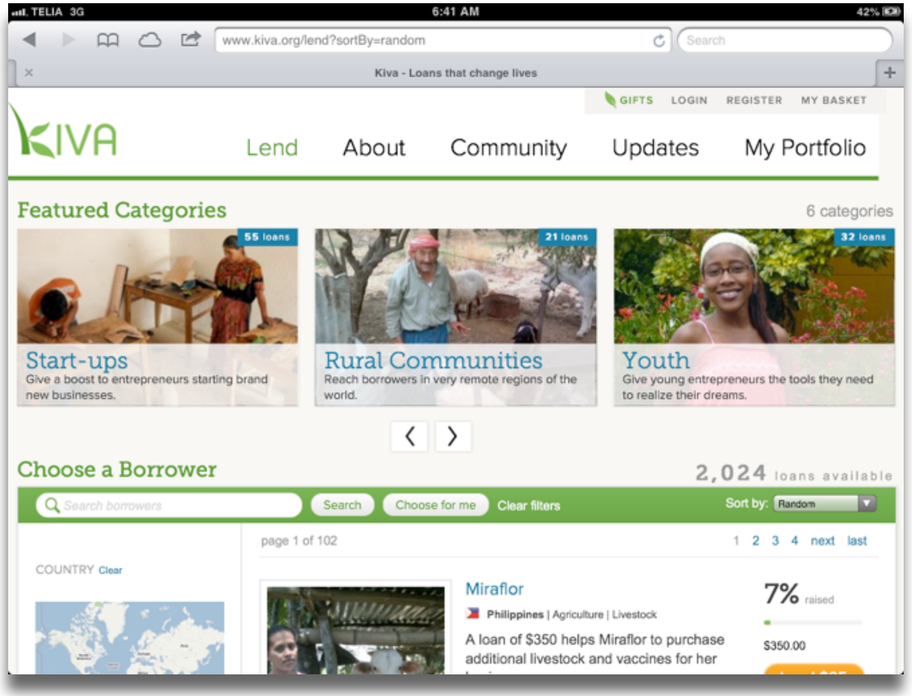
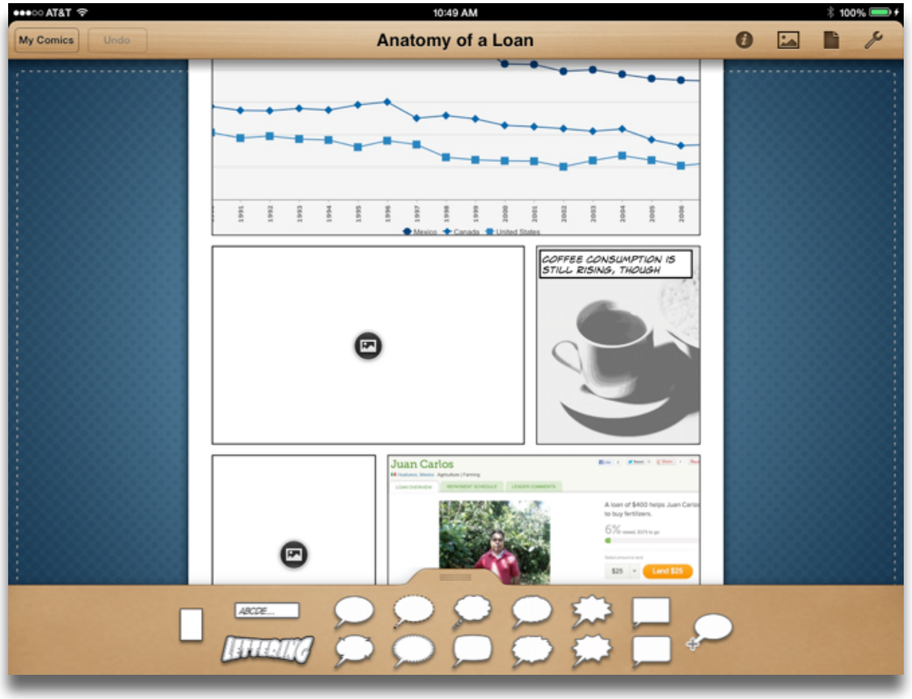
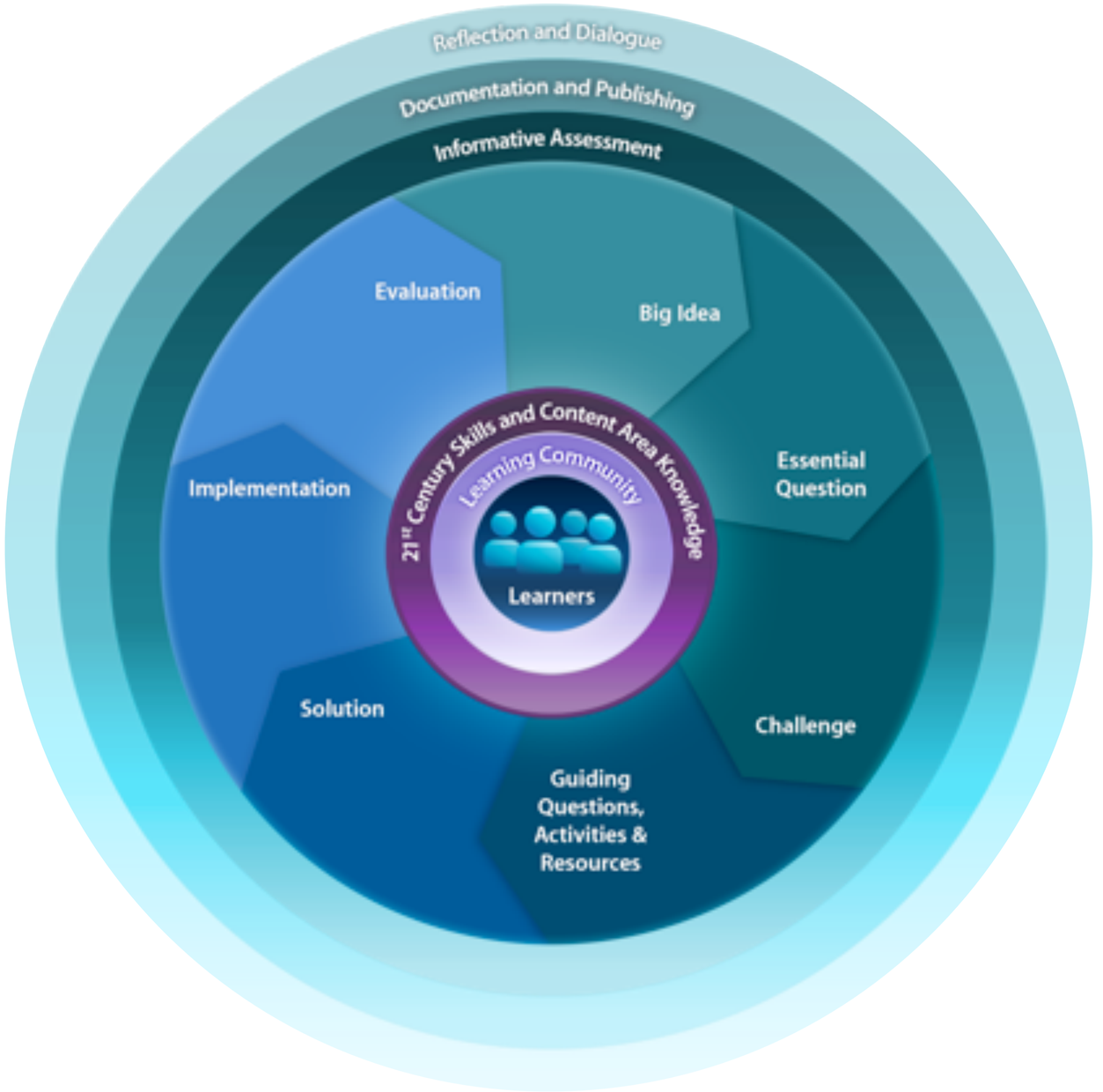
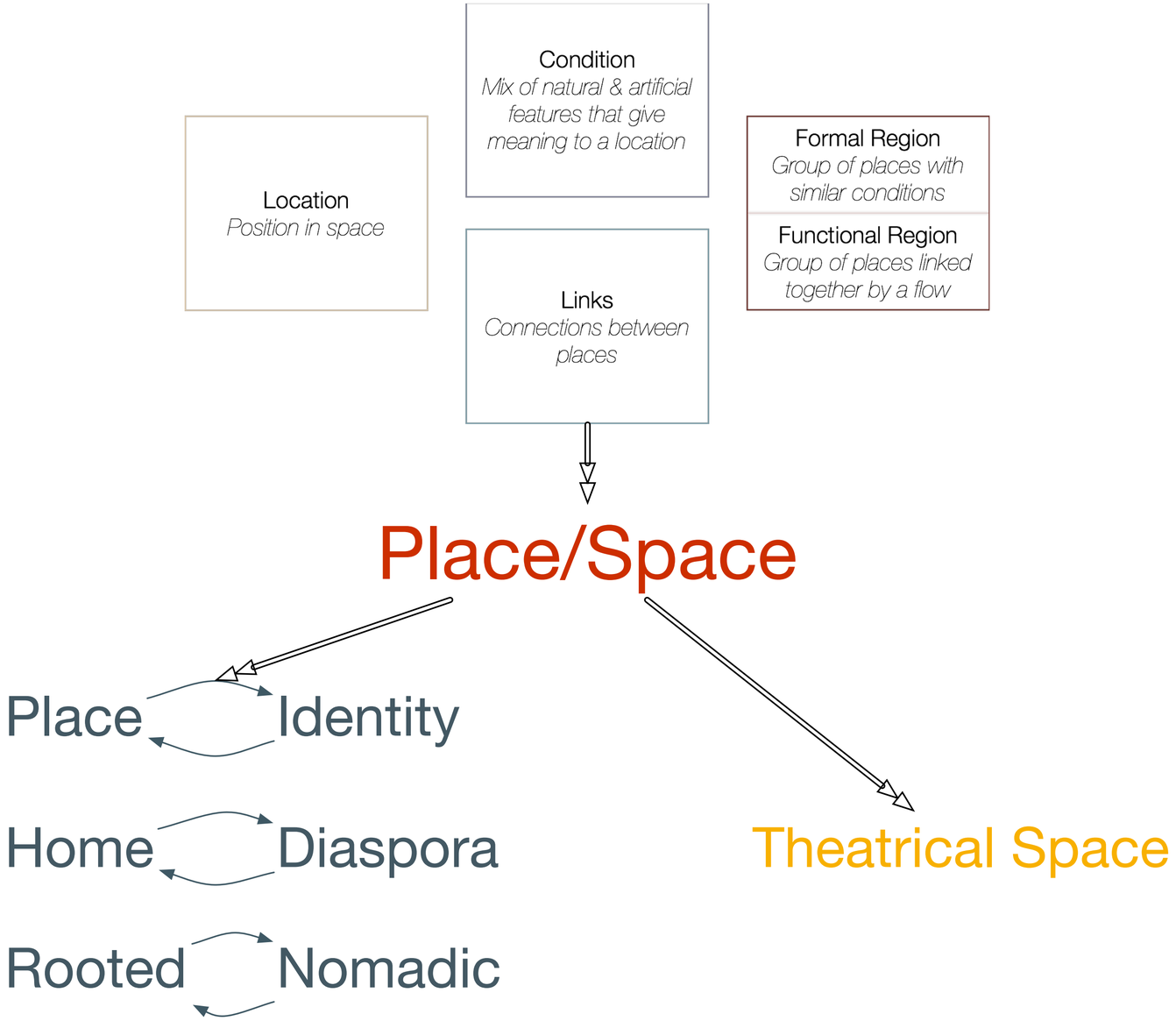






Challenge Based Learning - About CBL (2011)



Phil Gersmehl. *Teaching Geography*. The Guilford Press. (2005)

Helen Nicholson. *Theatre & Education*. Palgrave Macmillan. (2009)

Shigeru Ban - Log House, Kobe – Photo by Forgemind ArchiMedia

Shigeru Ban - The Nomadic Museum – Photo by weird tramp

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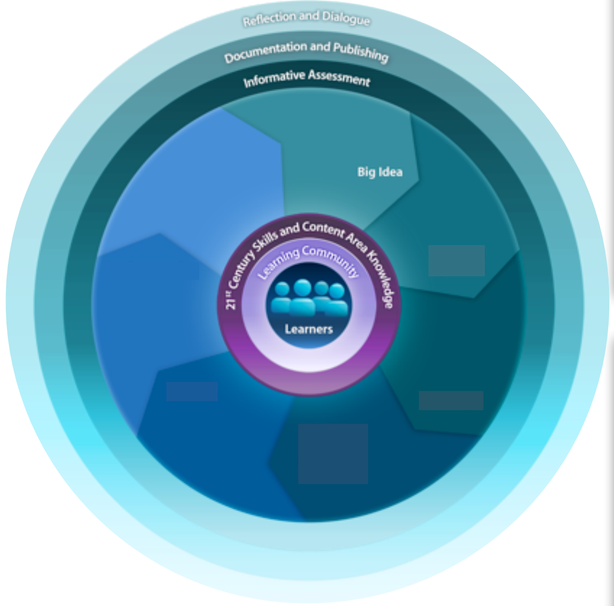

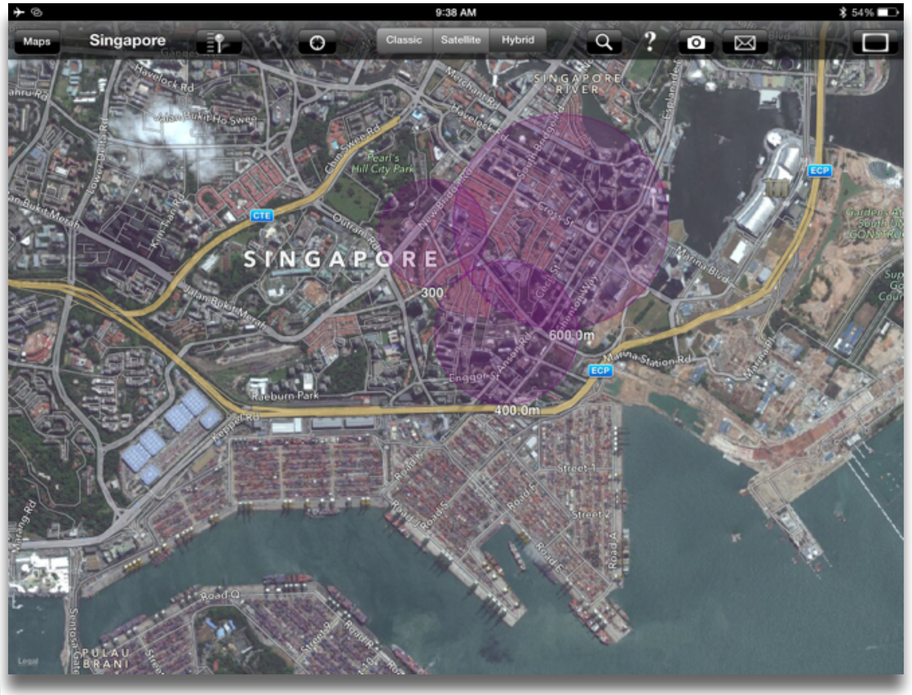

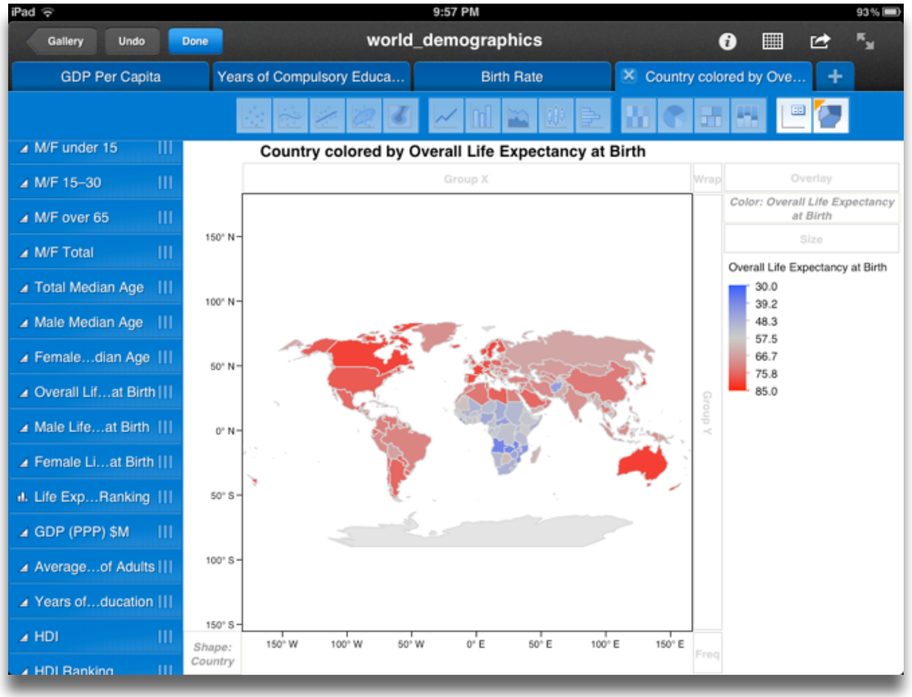

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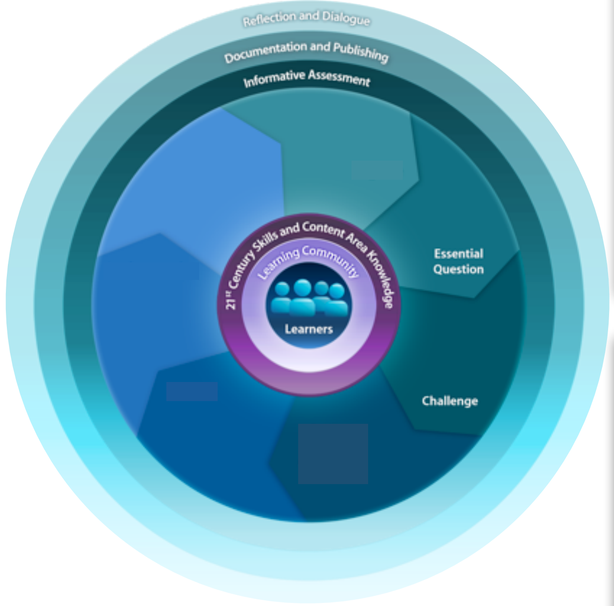

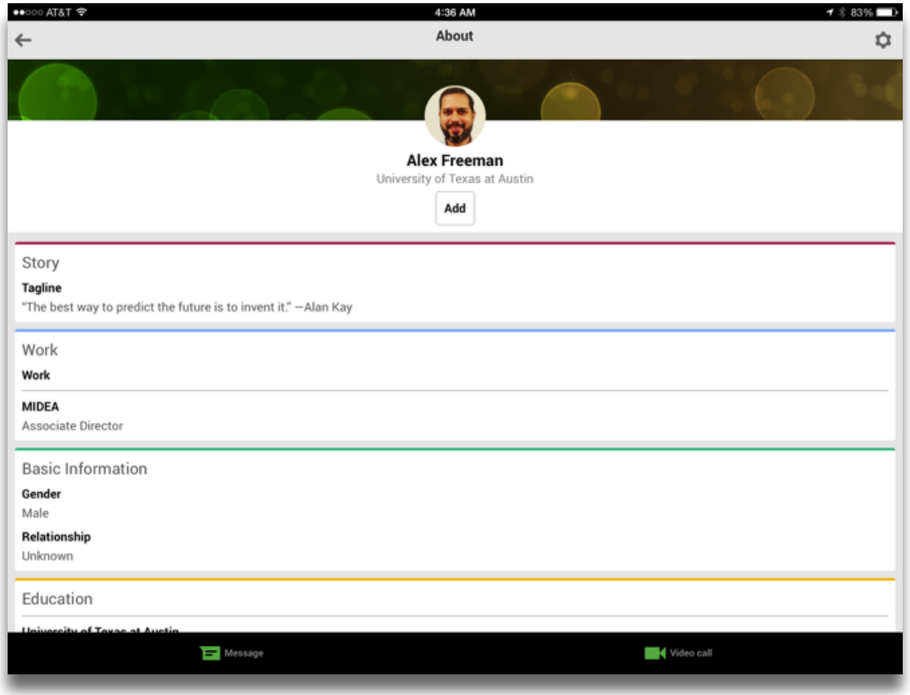

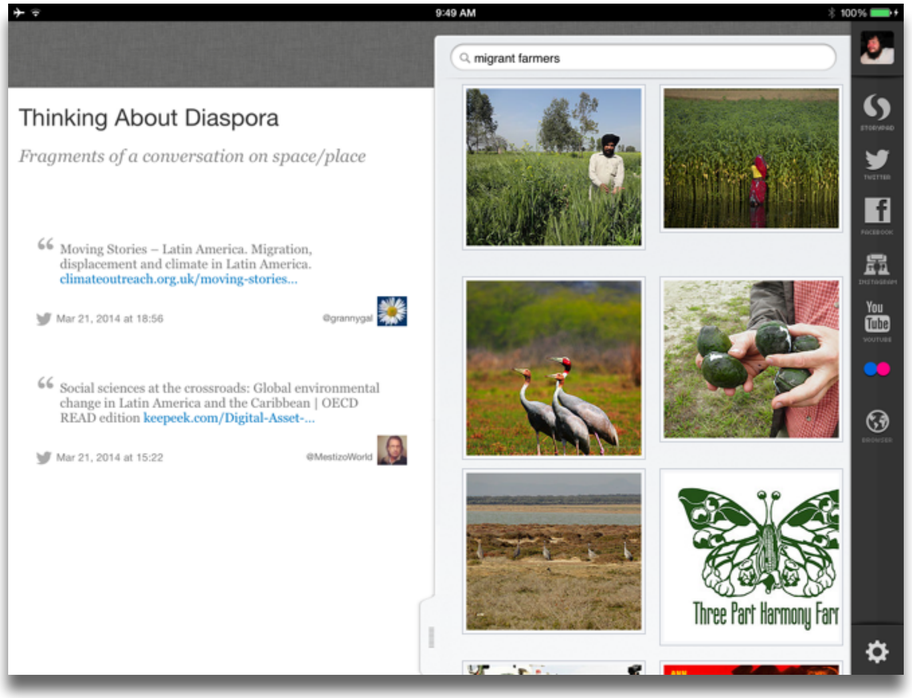

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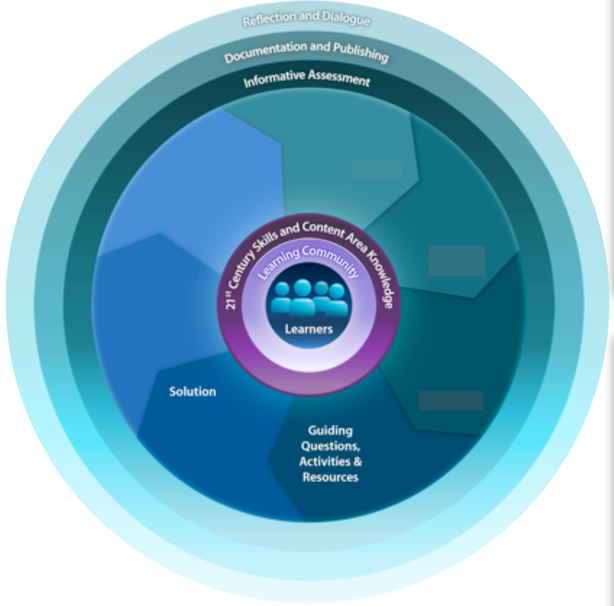

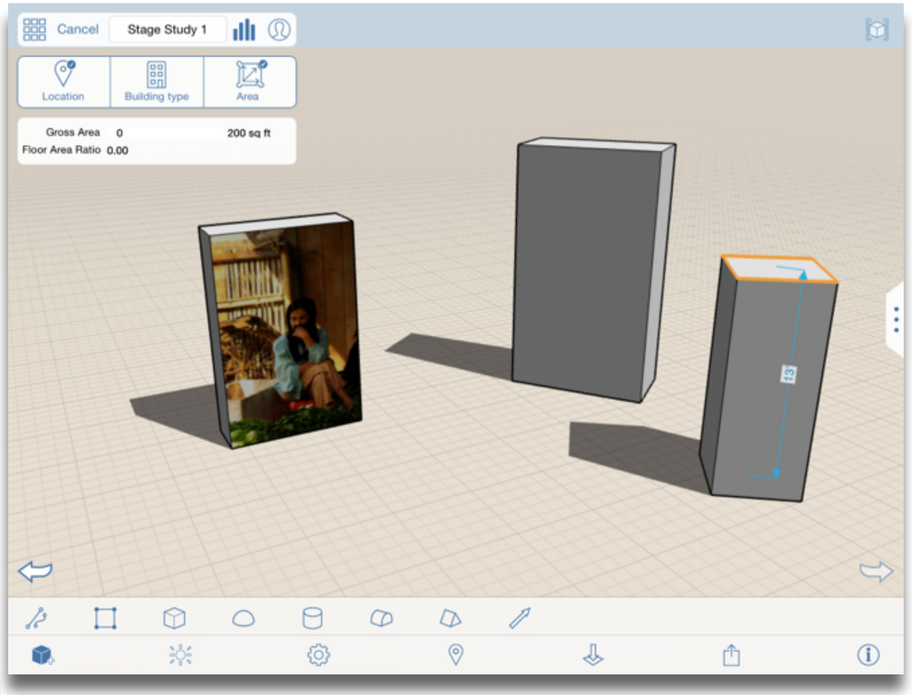

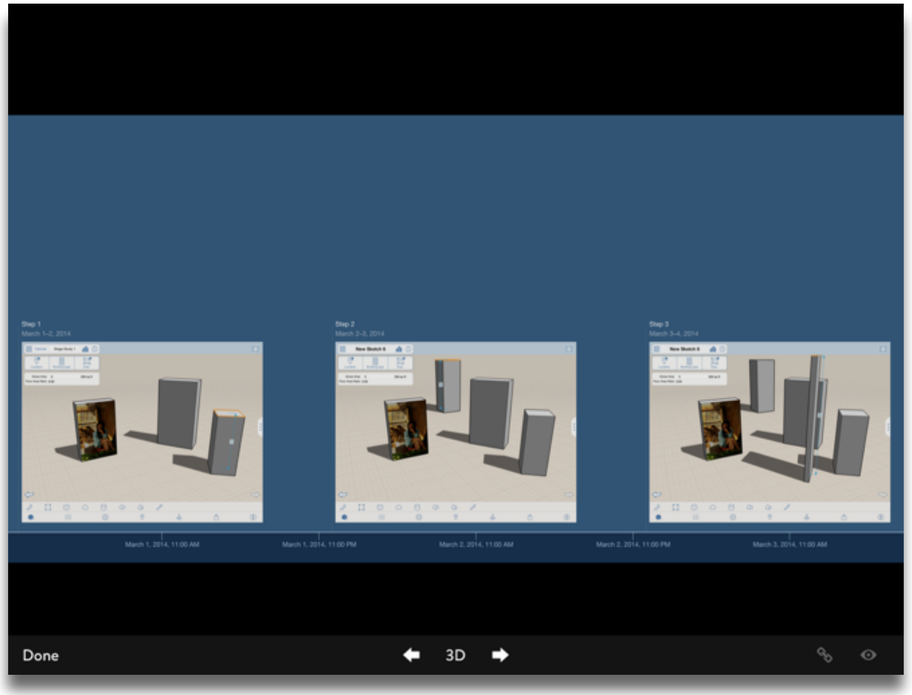

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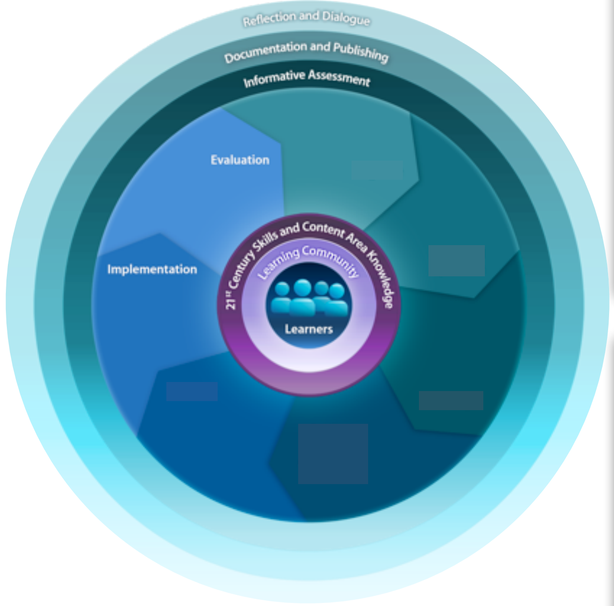

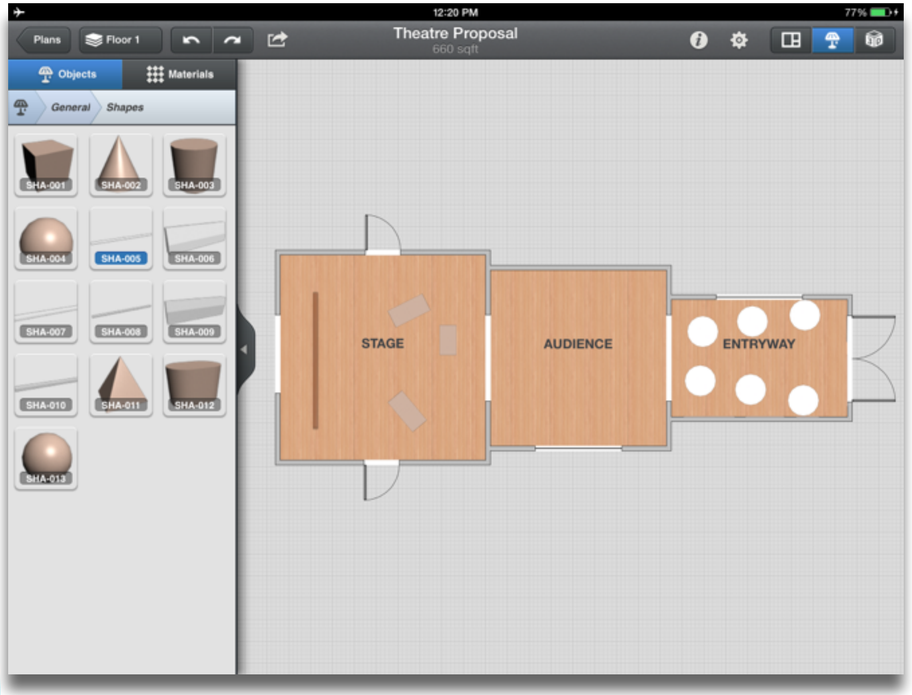

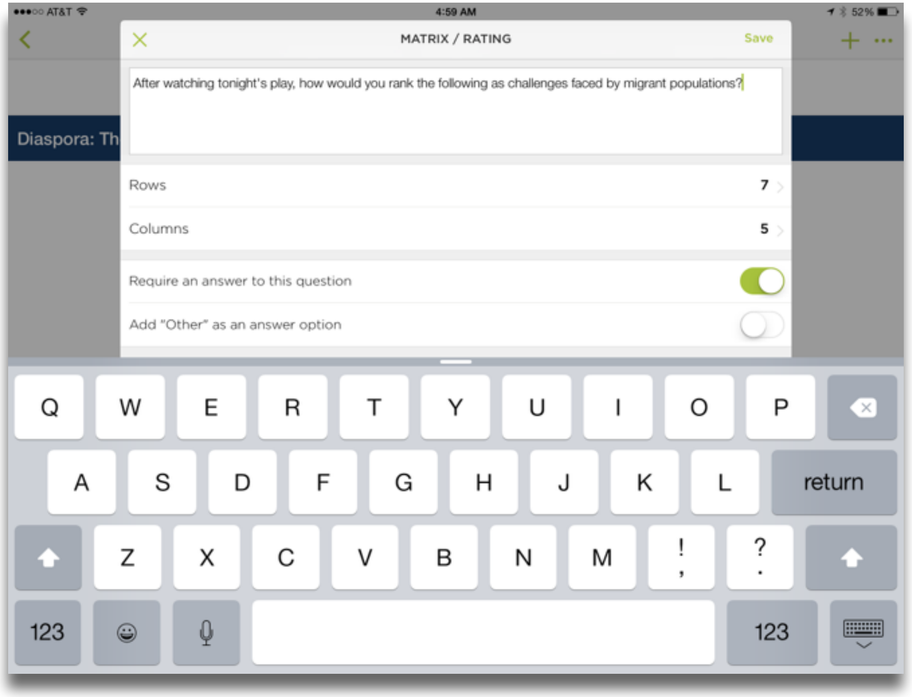

Research Article

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1–10

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The Pen Is Mightier Than the Keyboard: Advantages of Longhand Over Laptop Note Taking

Pam A. Mueller[1] and Daniel M. Oppenheimer[2]
[1]Princeton University and [2]University of California, Los Angeles

Abstract

Taking notes on laptops rather than in longhand is increasingly common. Many researchers have suggested that laptop note taking is less effective than longhand note taking for learning. Prior studies have primarily focused on students' capacity for multitasking and distraction when using laptops. The present research suggests that even when laptops are used solely to take notes, they may still be impairing learning because their use results in shallower processing. In three studies, we found that students who took notes on laptops performed worse on conceptual questions than students who took notes longhand. We show that whereas taking more notes can be beneficial, laptop note takers' tendency to transcribe lectures verbatim rather than processing information and reframing it in their own words is detrimental to learning.

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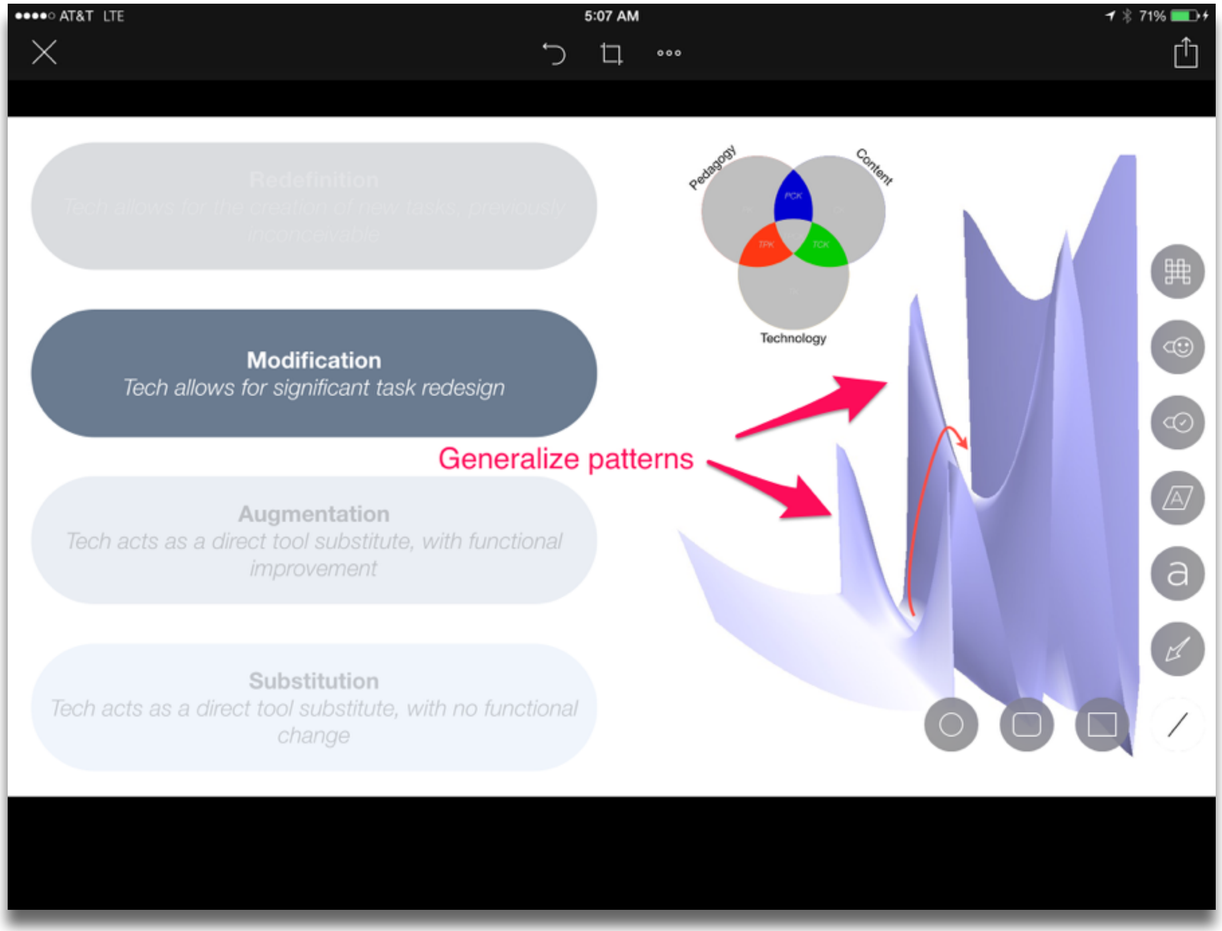

Kenneth A. Kiewra, “Students’ Note-Taking Behaviors and the Efficacy of Providing Instructor’s Notes for Review”. *Contemporary Educational Psychology,* v10 n4. (1985)

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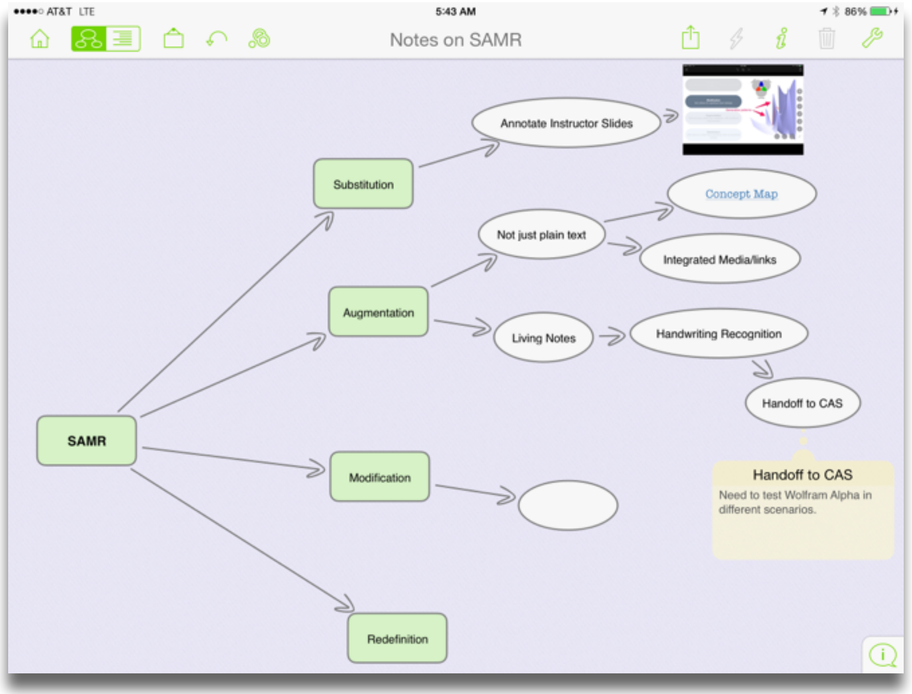

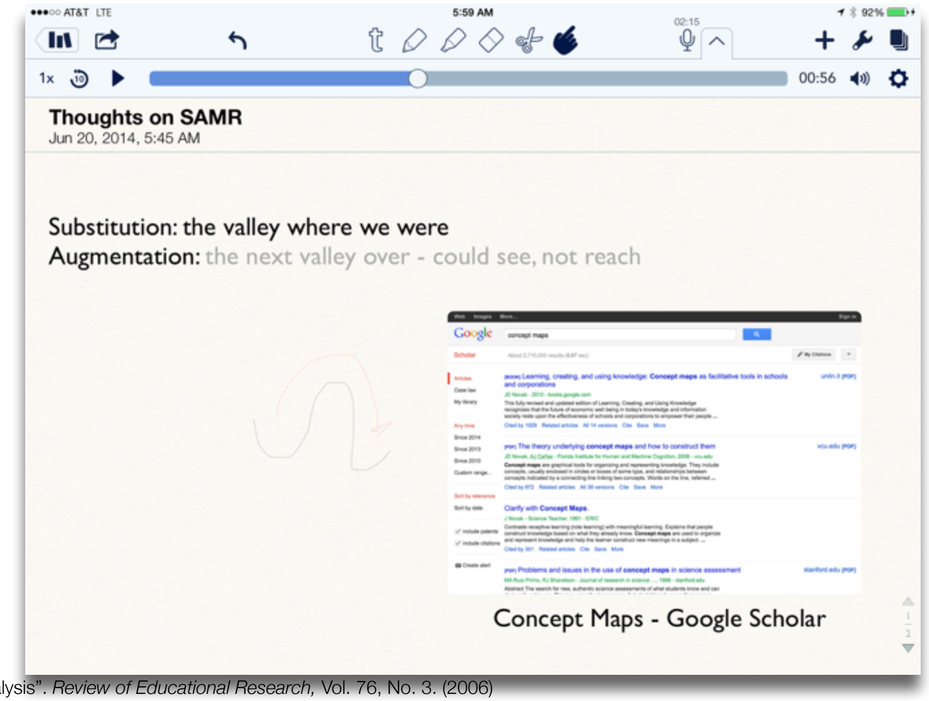

John C. Nesbit and Olusola O. Adesope, "Learning With Concept and Knowledge Maps: A Meta-Analysis". *Review of Educational Research,* Vol. 76, No. 3. (2006)

Redefinition

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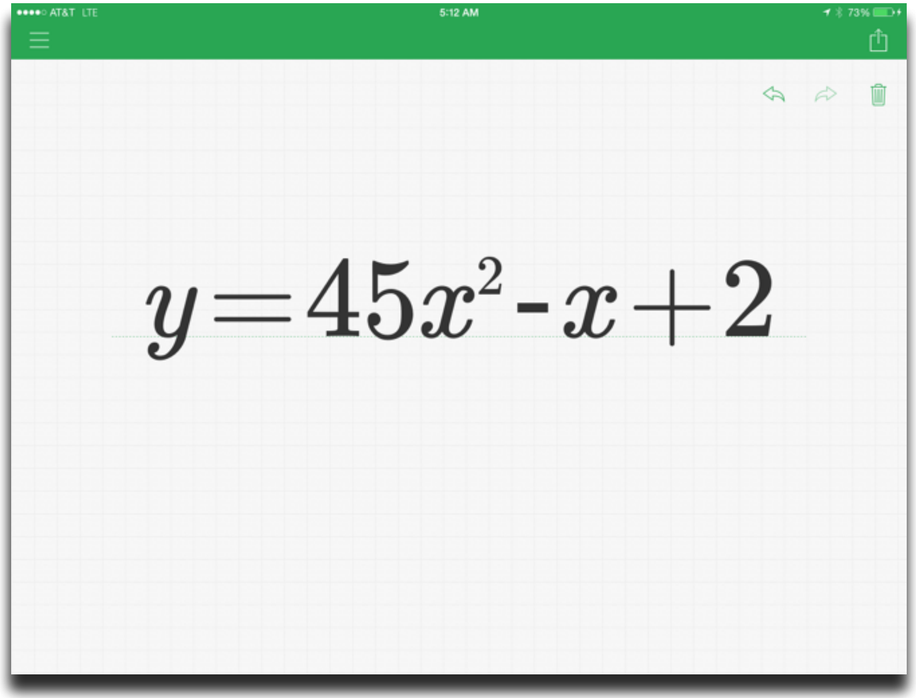

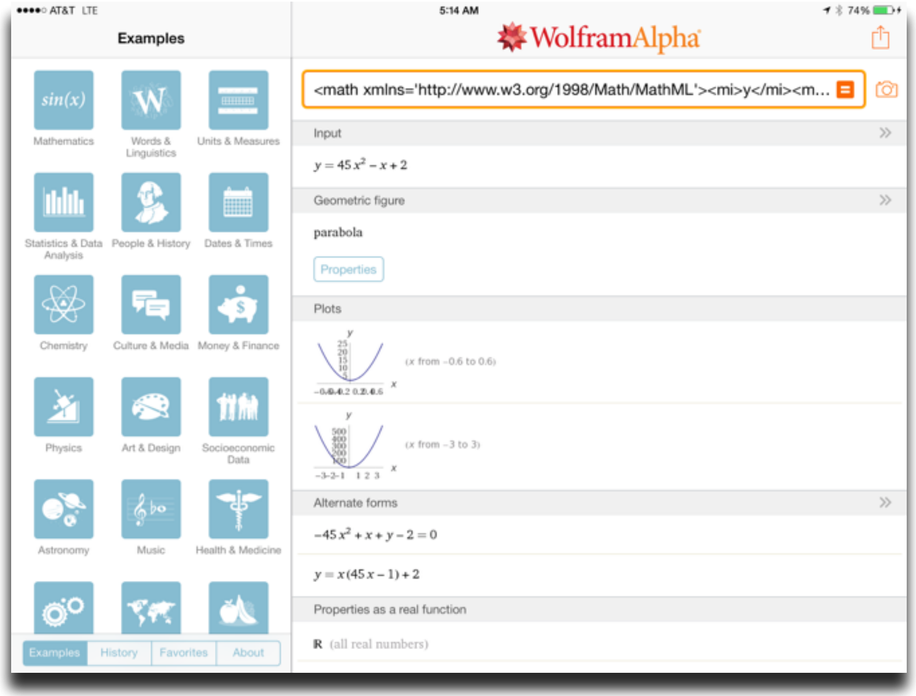

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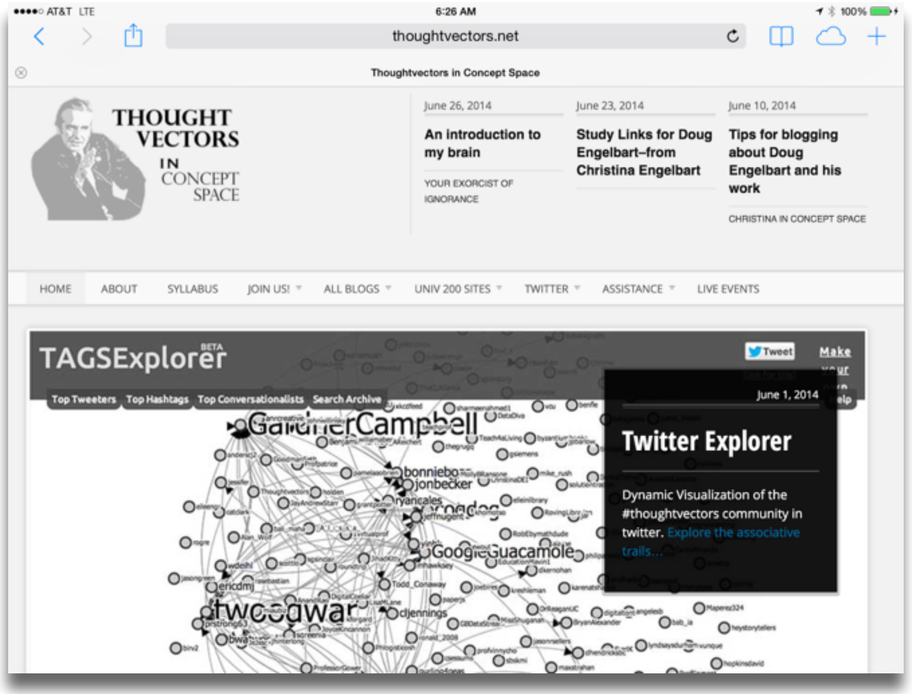

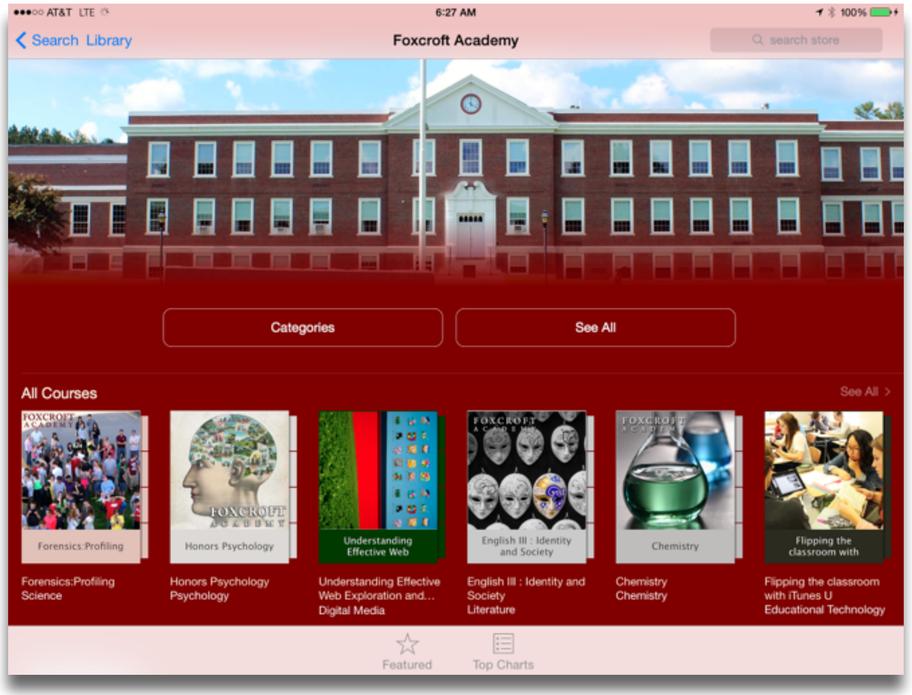

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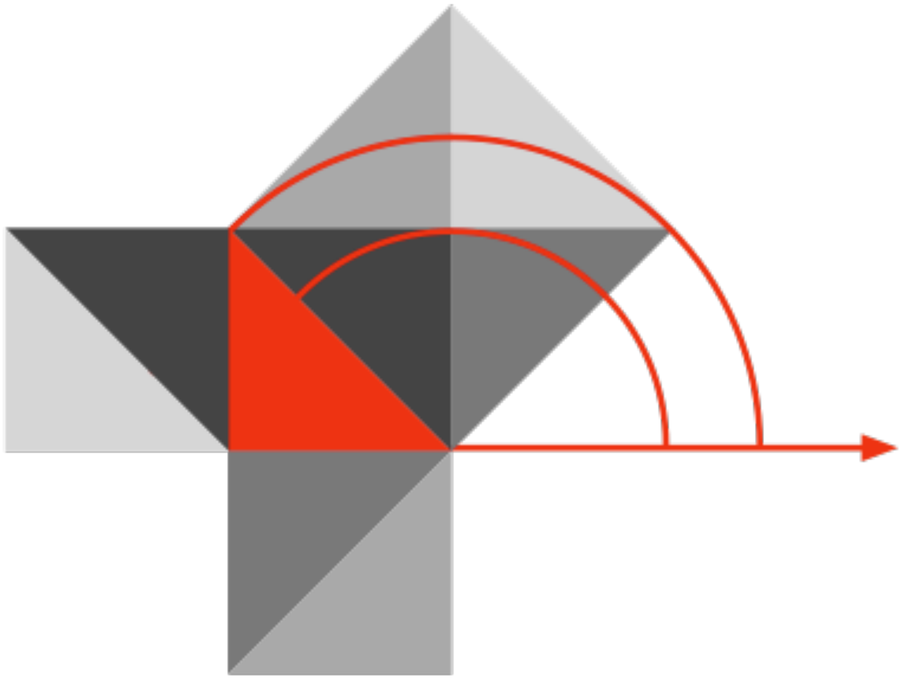

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