New Perspectives on SAMR and the EdTech Quintet

Ruben R. Puentedura, Ph.D.

Redefinition

Tech allows for the creation of new tasks, previously inconceivable

Modification

Tech allows for significant task redesign

Transformation

Augmentation

Tech acts as a direct tool substitute, with functional improvement

Substitution

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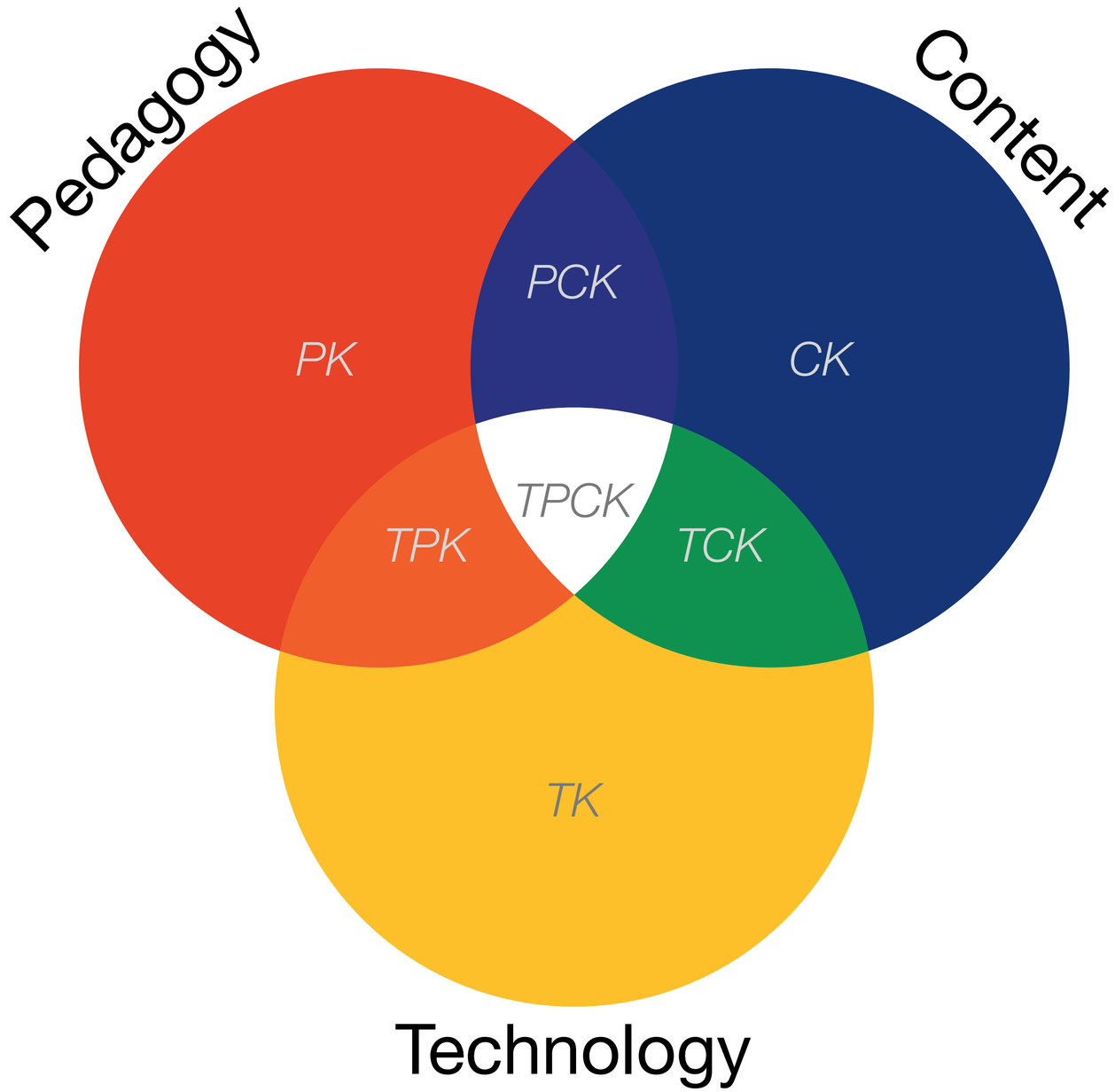
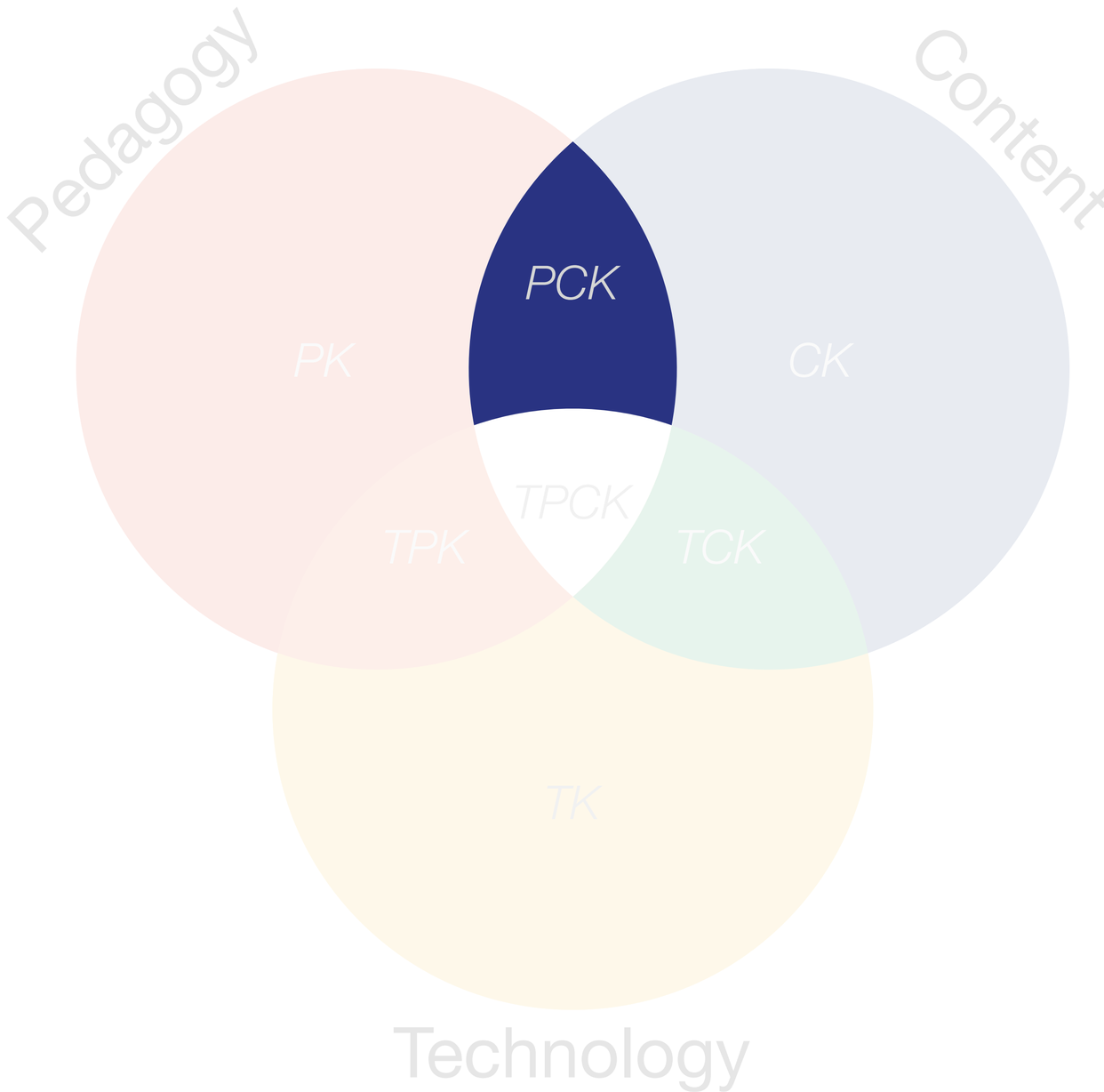
Enhancement

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



Punya Mishra & Matthew J. Koehler, “Technological pedagogical content knowledge: A framework for teacher knowledge”. *Teachers College Record, 108*(6). (2006)



Lee S. Shulman, "Those Who Understand: Knowledge Growth in Teaching." *Educational Researcher*, Vol. 15, No. 2 (Feb., 1986)

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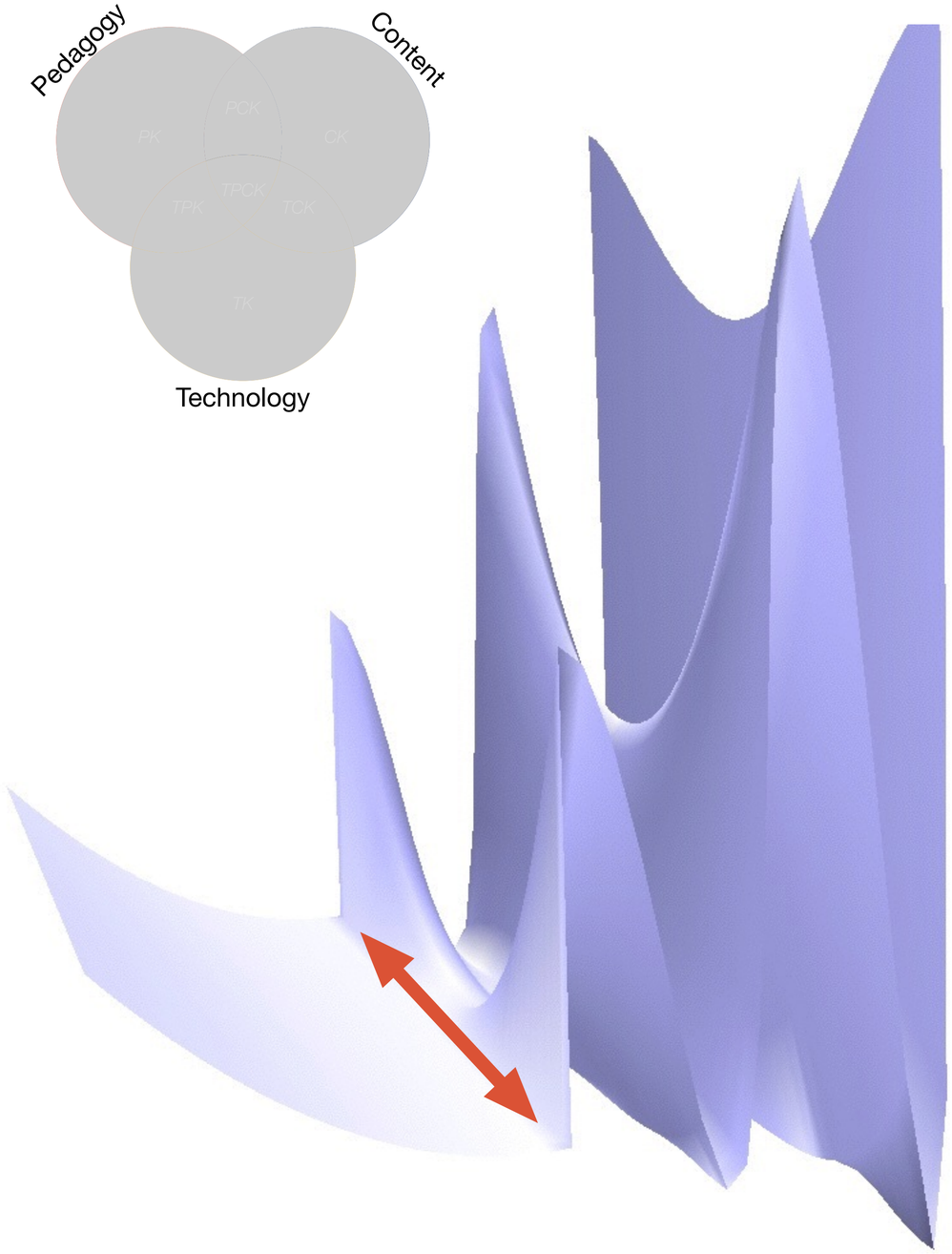

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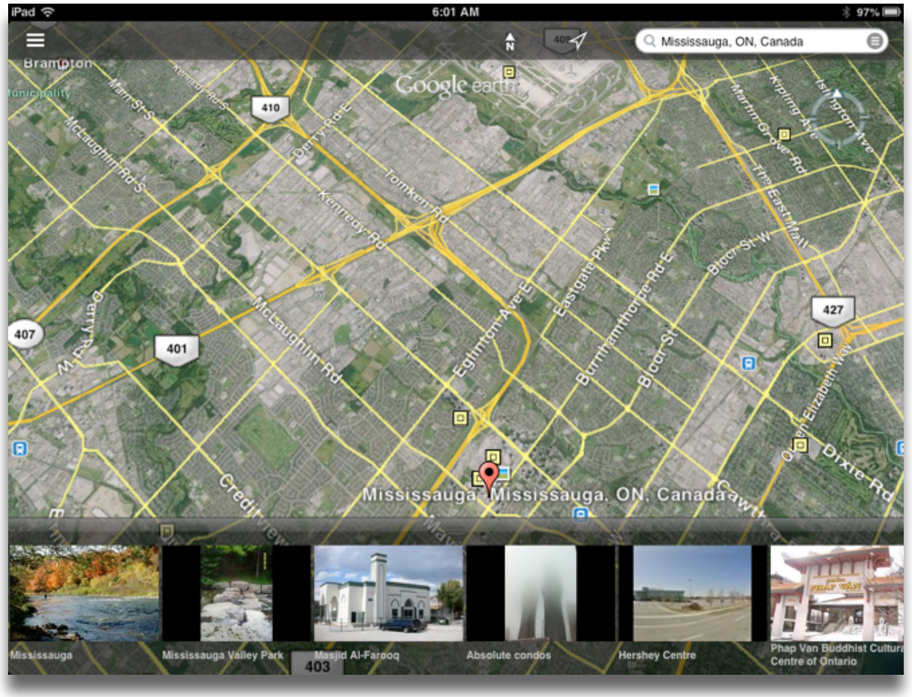

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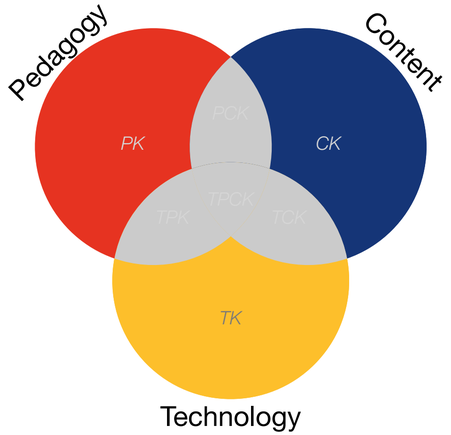

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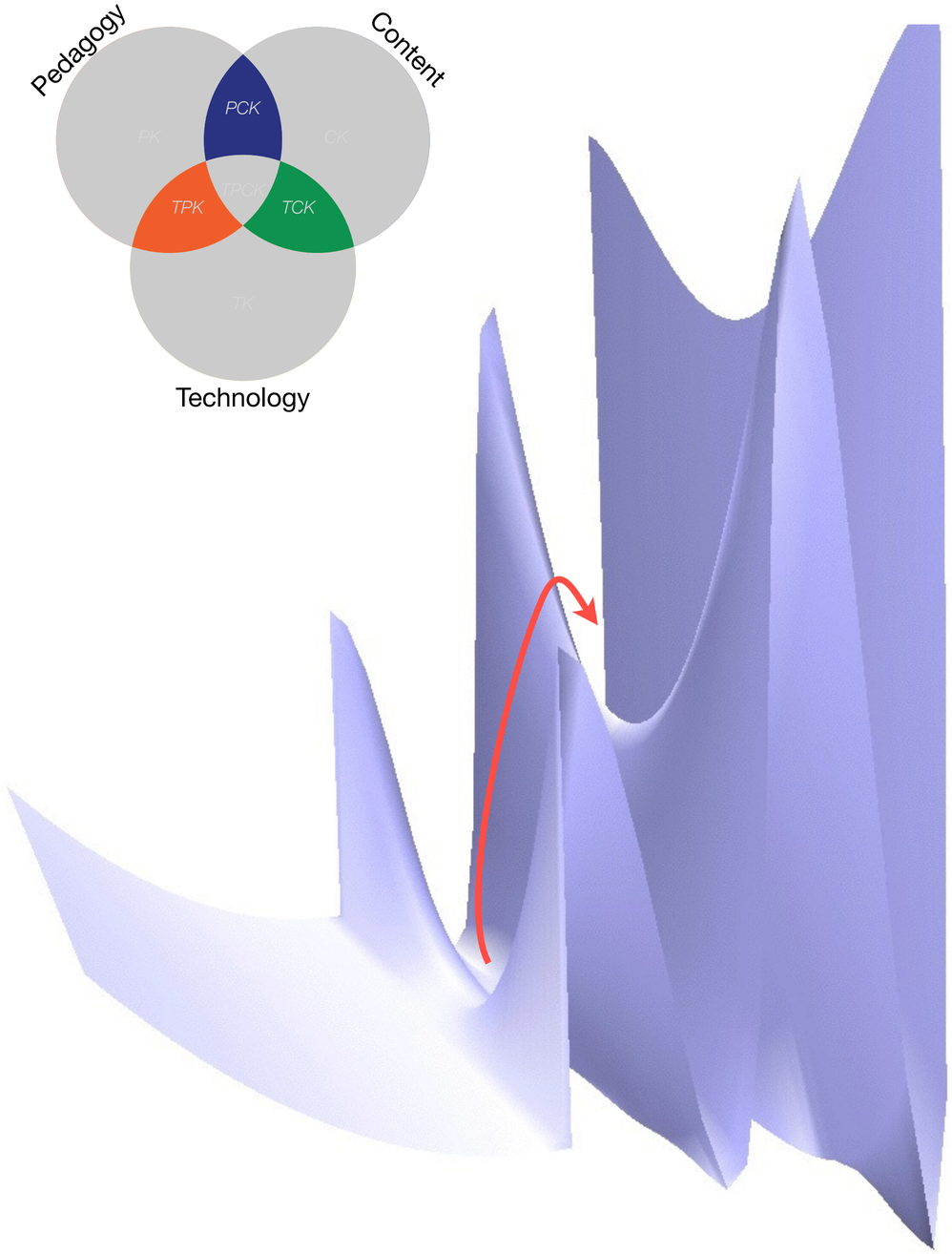

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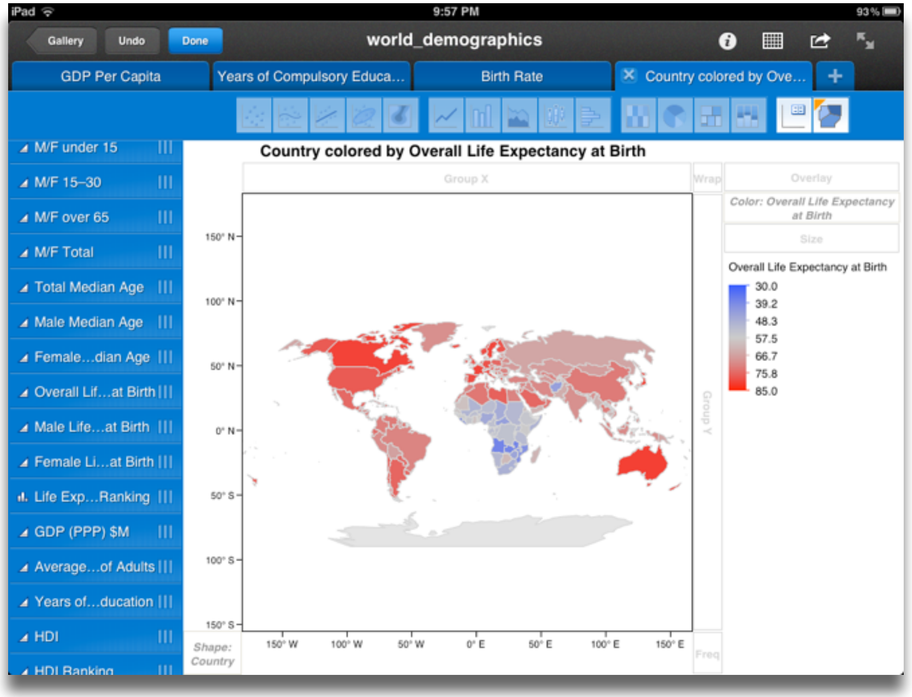

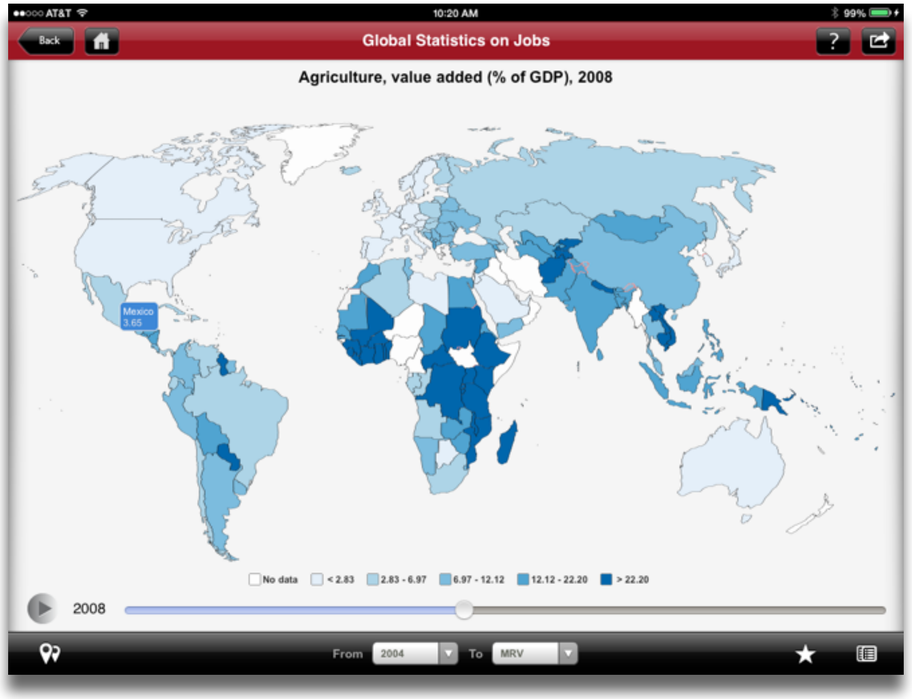

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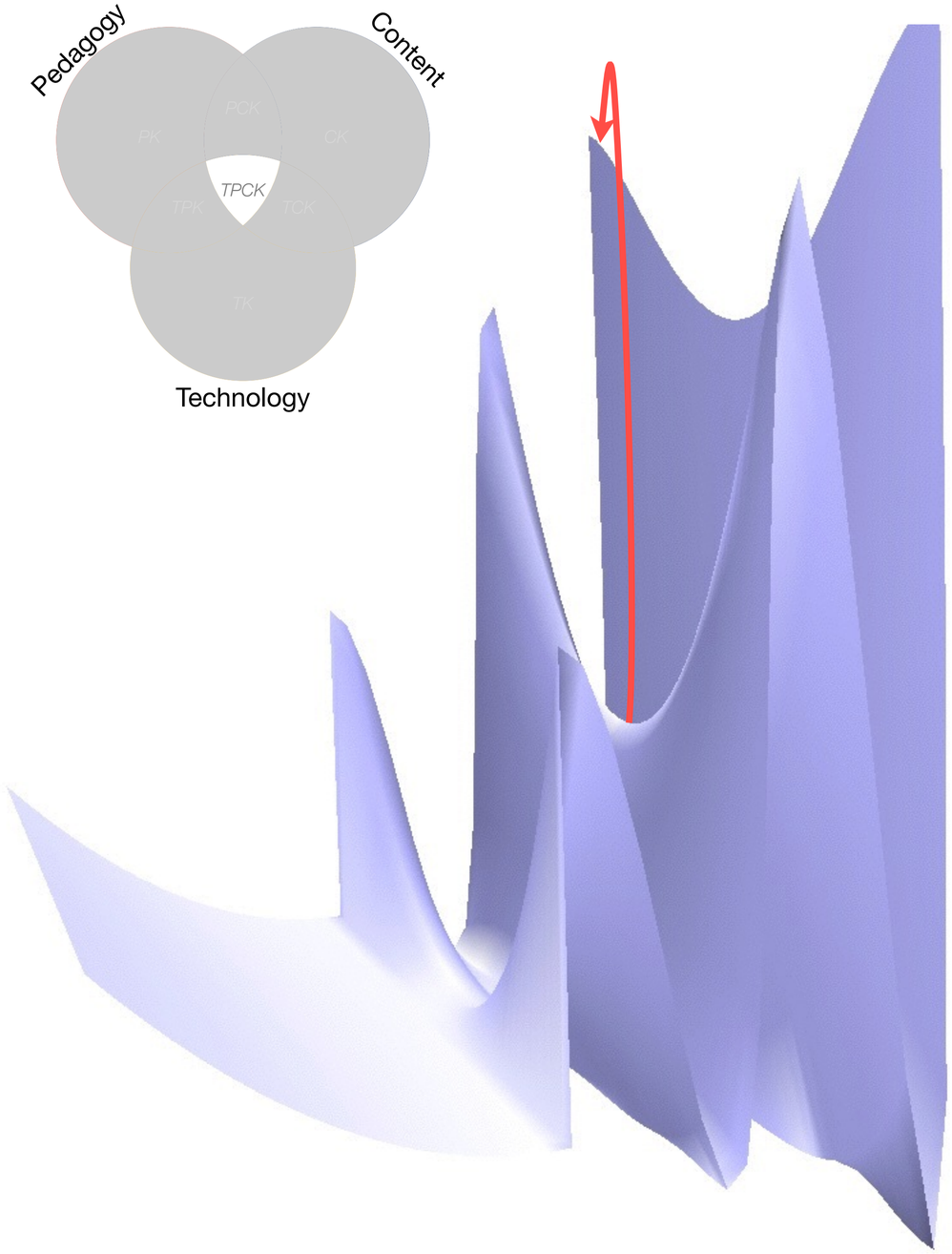

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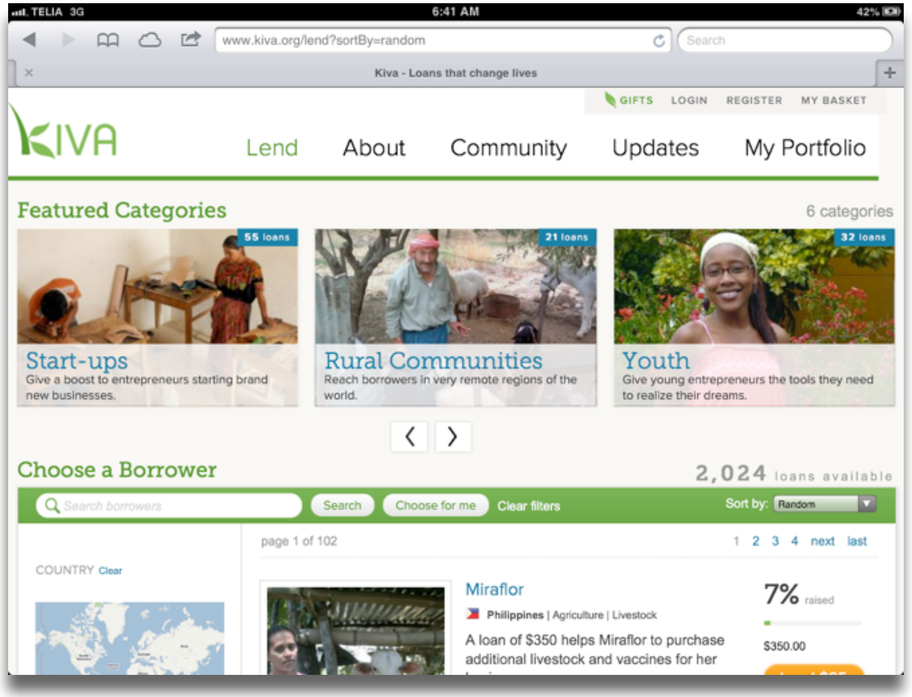

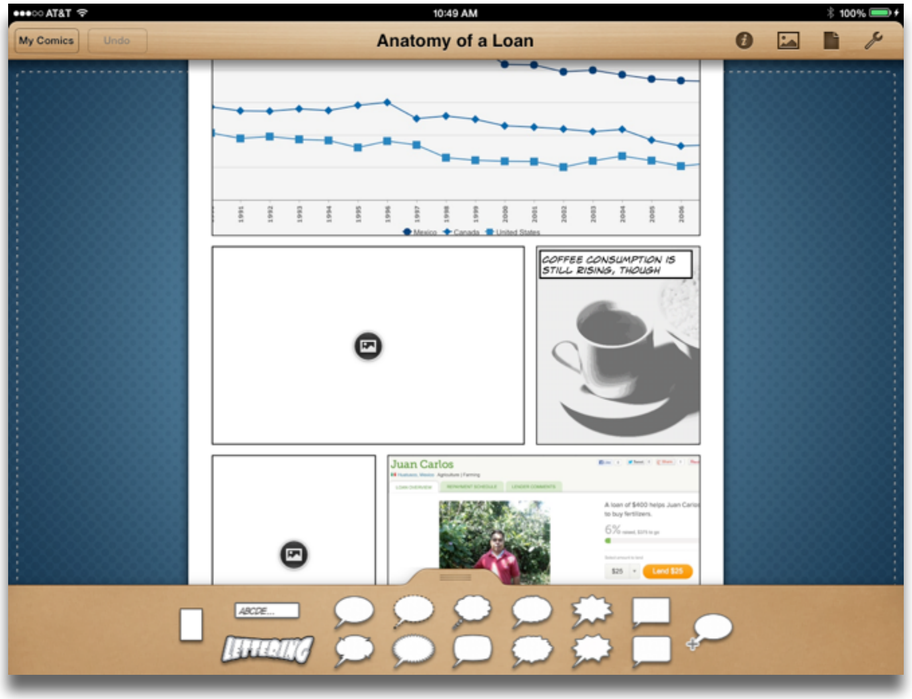

Social	Mobility	Visualization	Storytelling	Gaming
200,000 years	70,000 years	40,000 years	17,000 years	8,000 years

Ruben R. Puentedura, “Technology In Education: The First 200,000 Years” *The NMC Perspective Series: Ideas that Matter*. NMC Summer Conference, 2012.

The EdTech Quintet – Associated Practices	
Social	Communication, Collaboration, Sharing
Mobility	Anytime, Anyplace Learning and Creation
Visualization	Making Abstract Concepts Tangible
Storytelling	Knowledge Integration and Transmission
Gaming	Feedback Loops and Formative Assessment

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.

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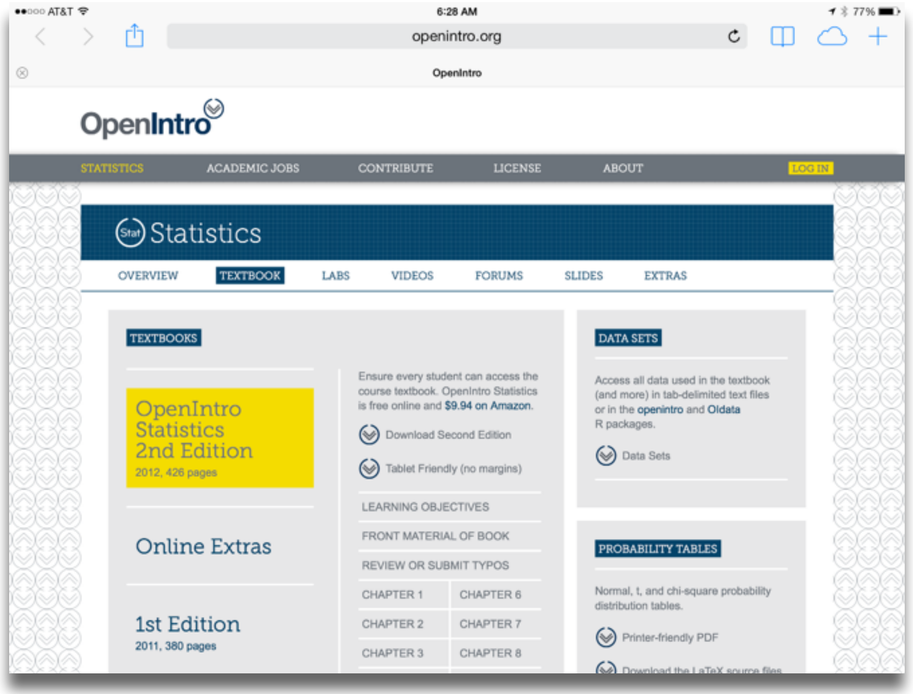

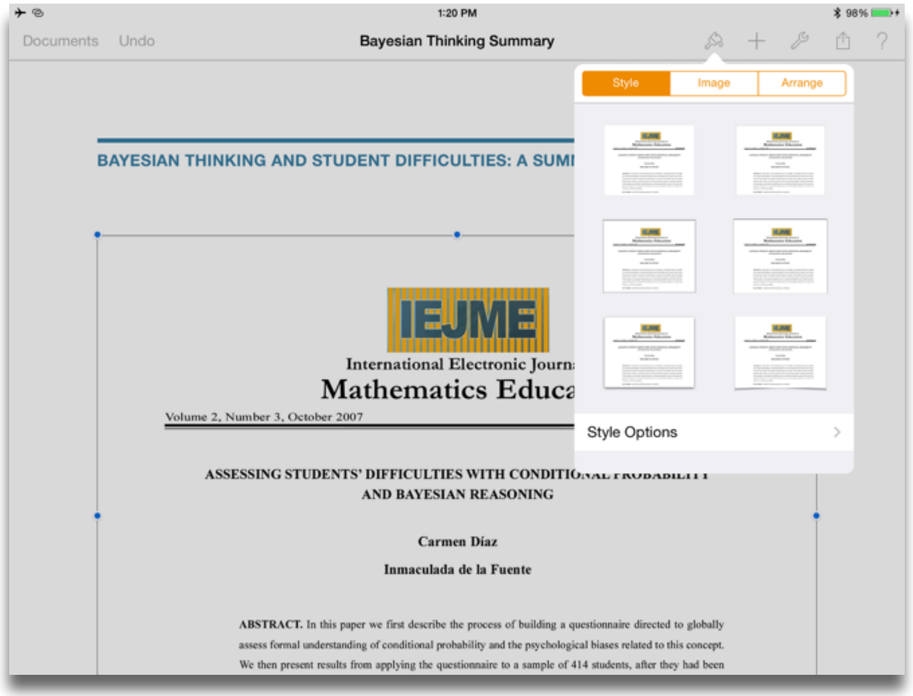

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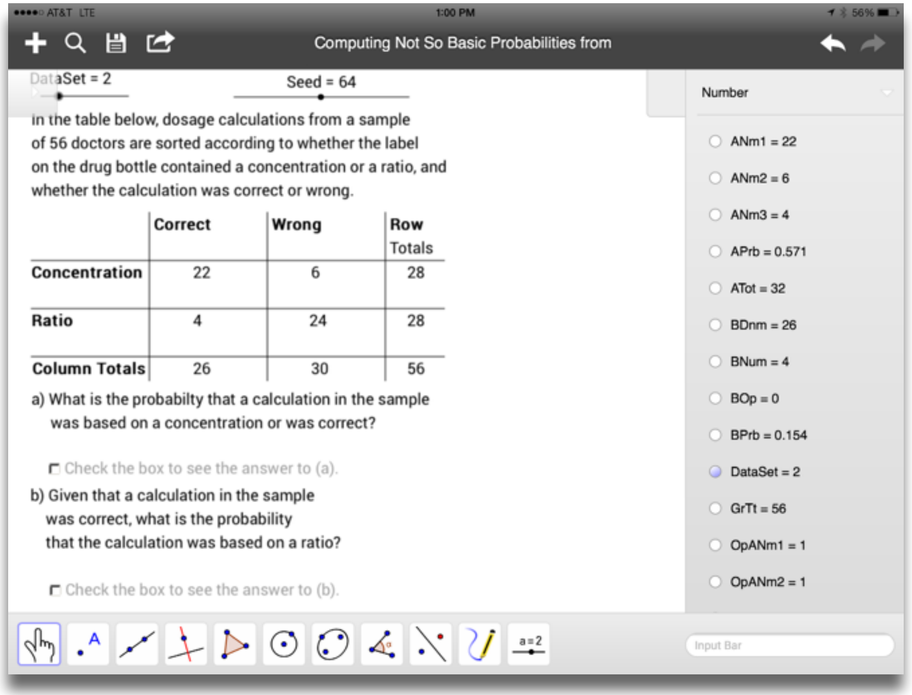

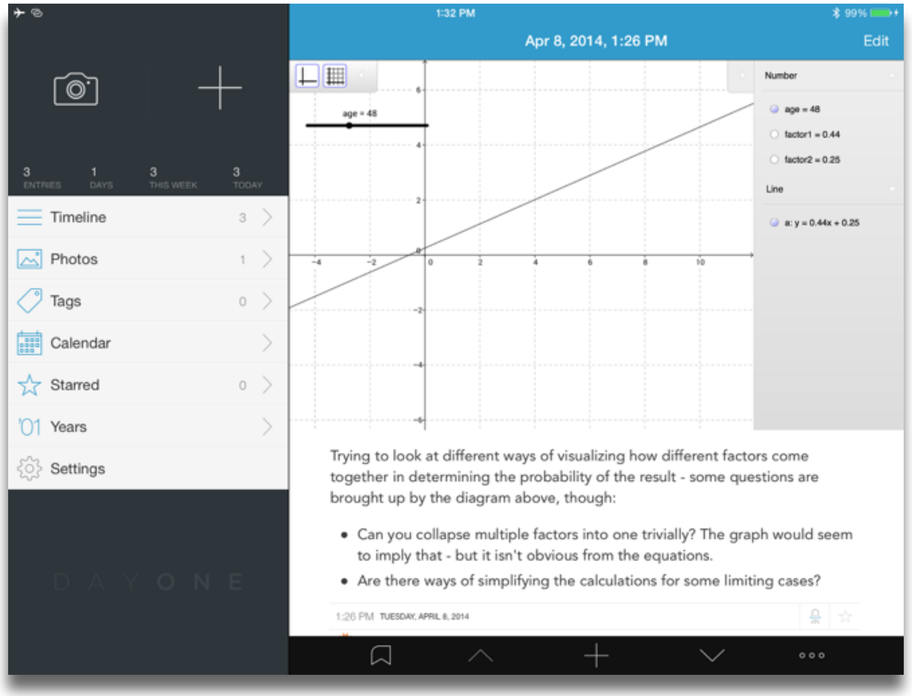

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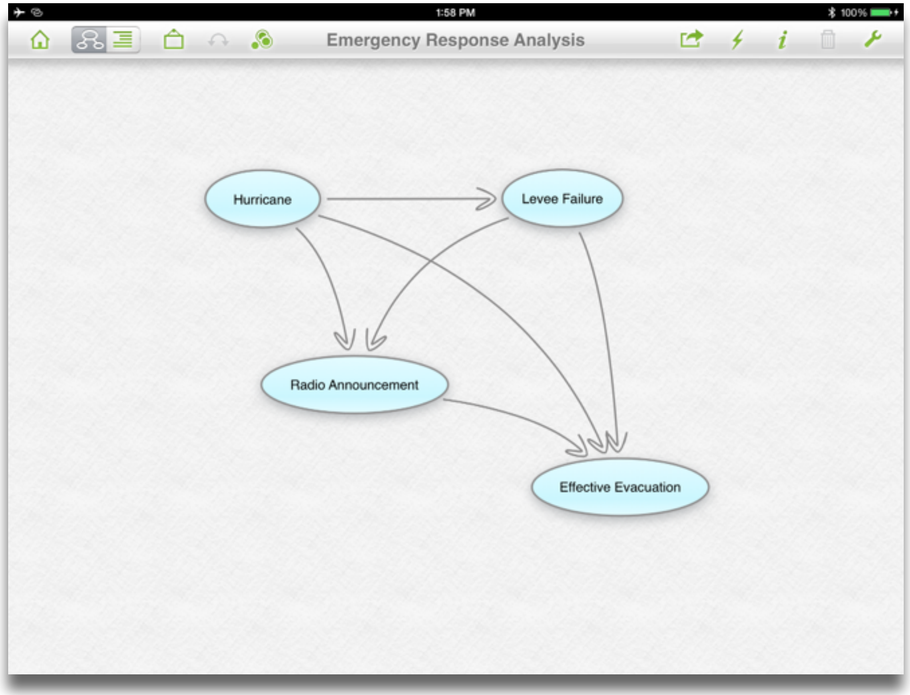

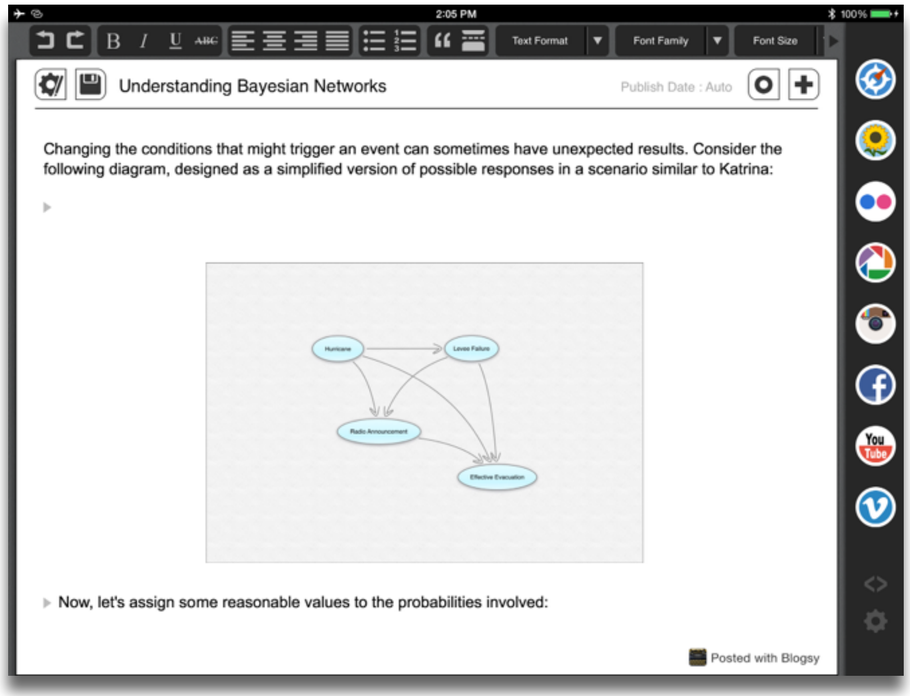

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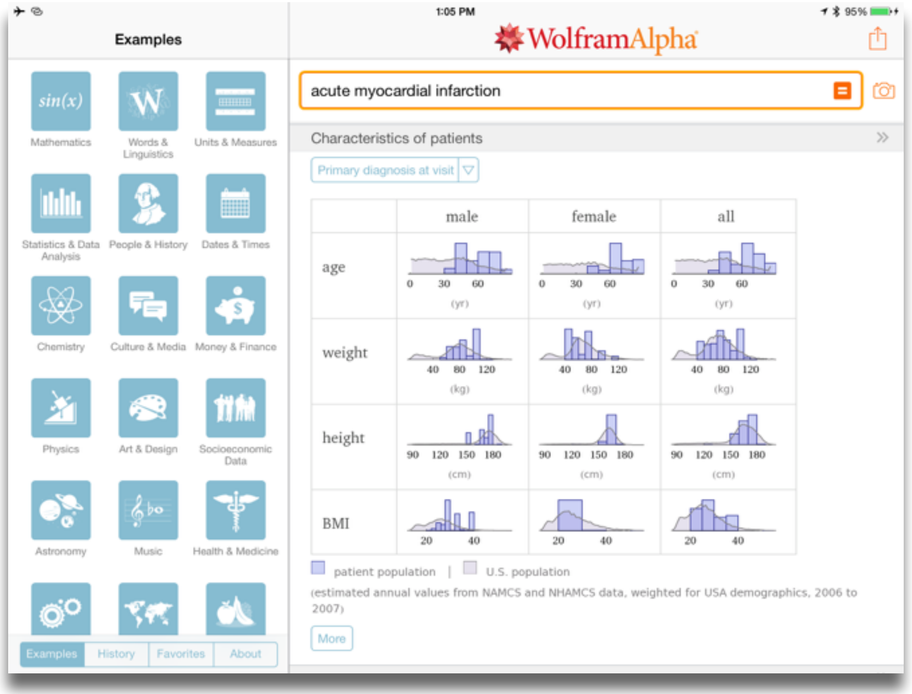

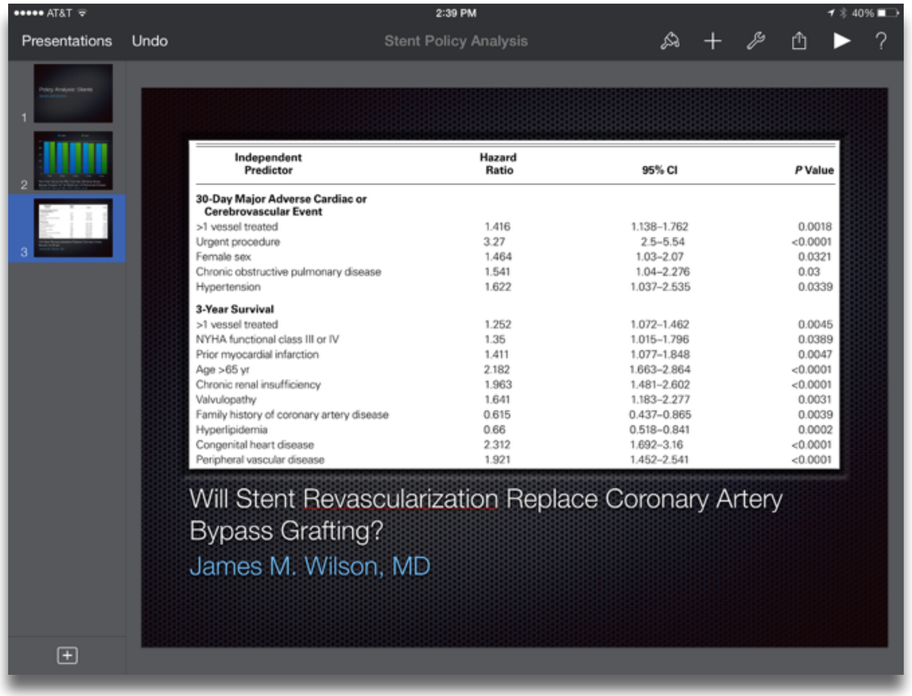

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Long-Range (5+ yrs.)	Agile Approaches to Change Evolution of Online Learning

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Adoption: 4-5 yrs.	Quantified Self Virtual Assistants

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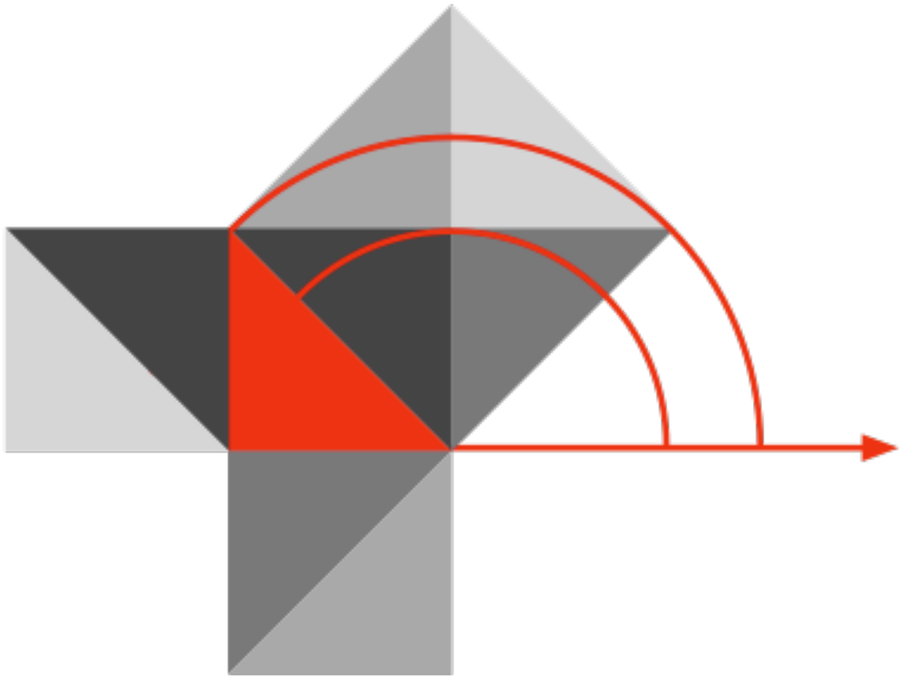

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