

# SAMR: A Model for Teaching and Learning – Day 1

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Ruben R. Puentedura, Ph.D.

## Transformation

### **Redefinition**

*Tech allows for the creation of new tasks,  
previously inconceivable*

### **Modification**

*Tech allows for significant task redesign*

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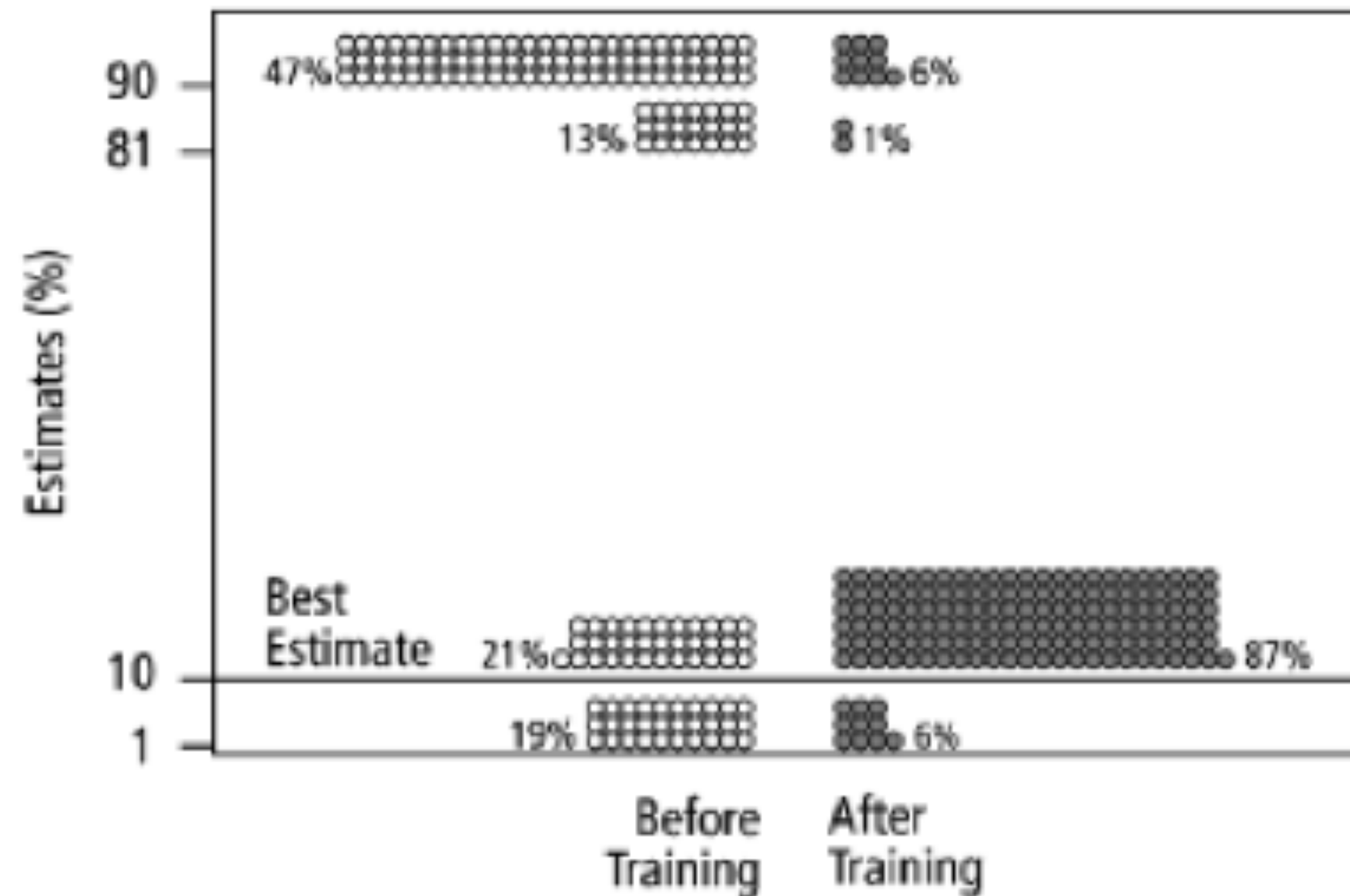
### **Augmentation**

*Tech acts as a direct tool substitute, with  
functional improvement*

### **Substitution**

*Tech acts as a direct tool substitute, with no  
functional change*

## Enhancement



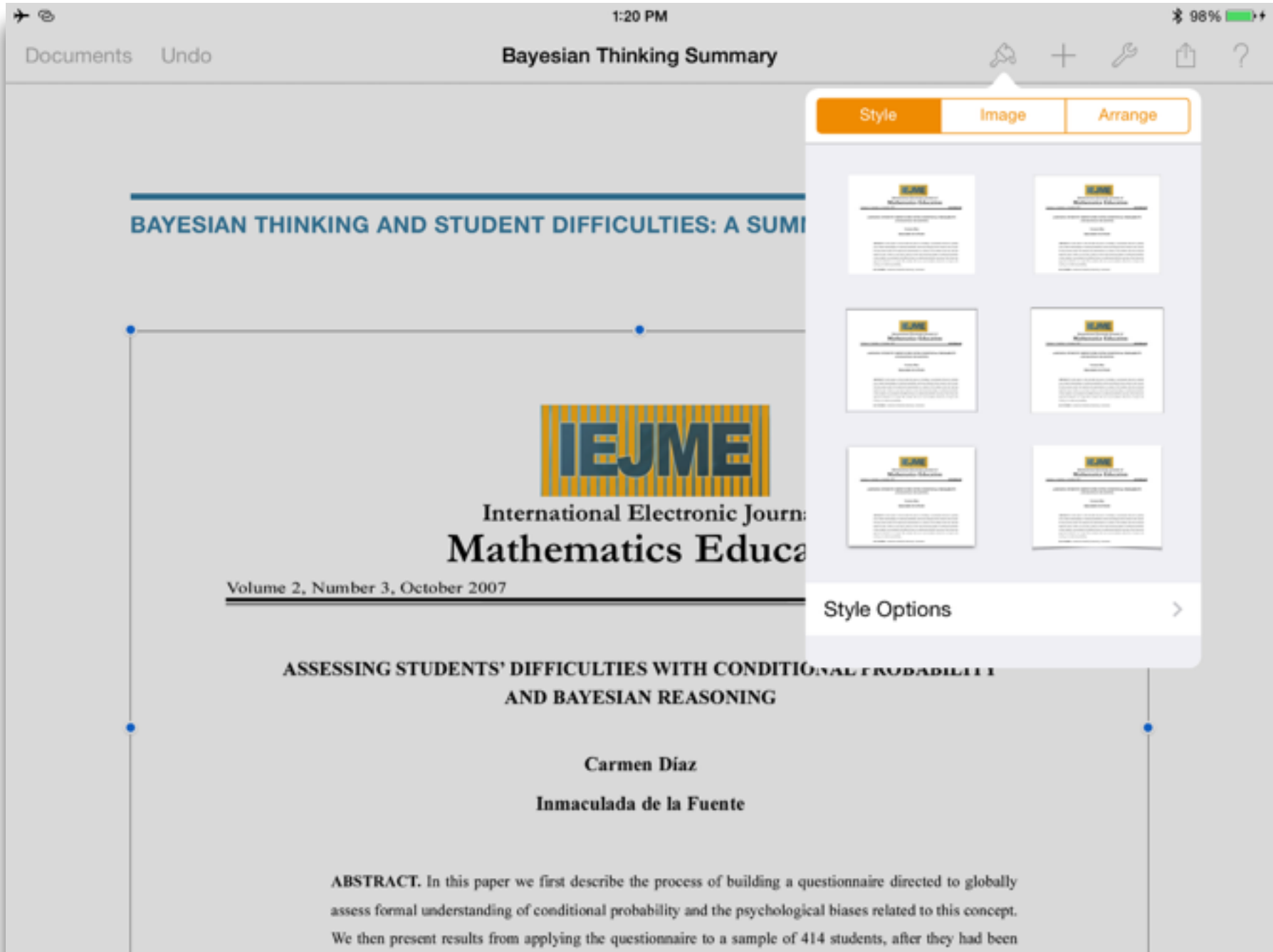
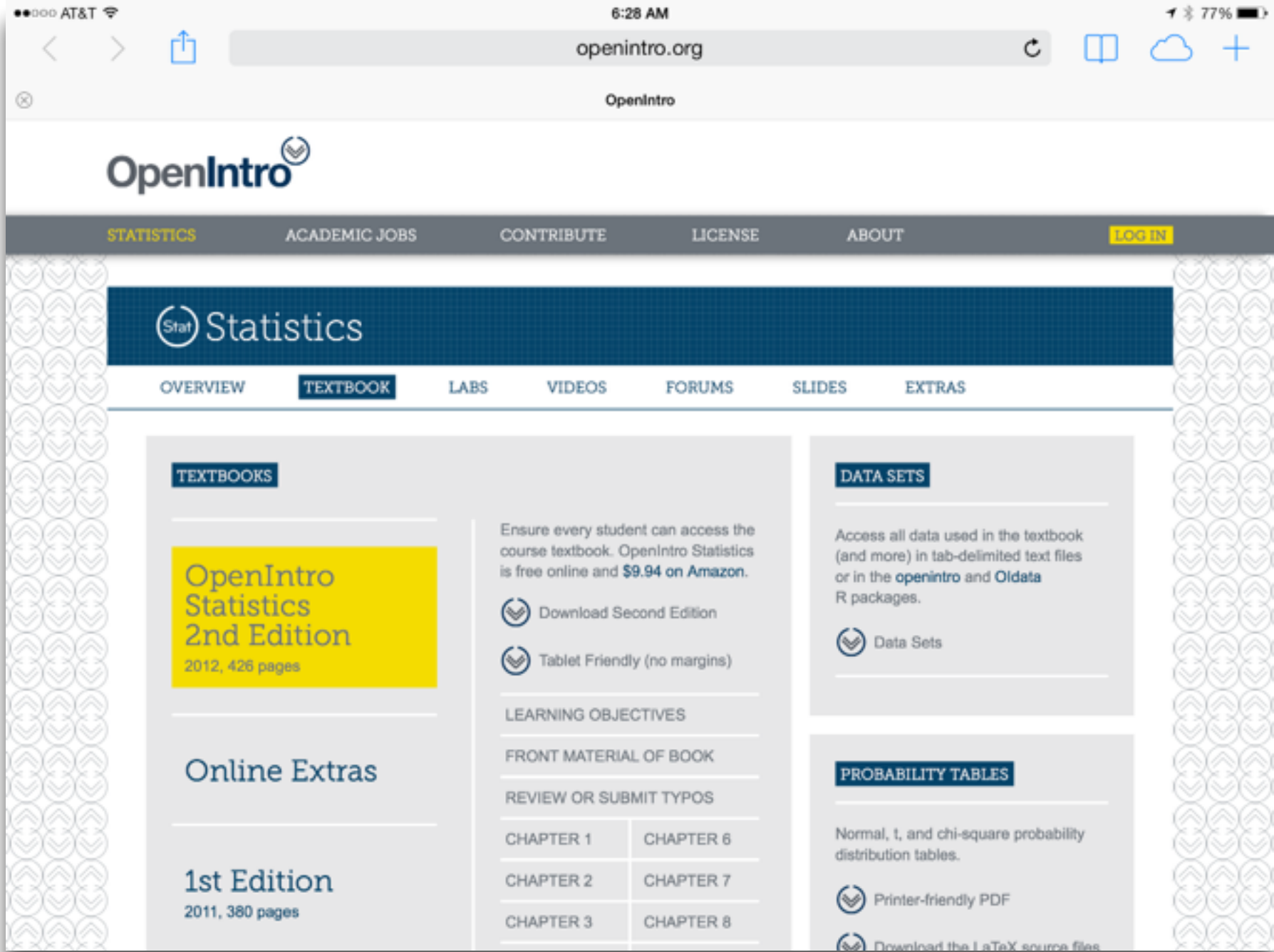
**Fig. 2.** Estimates by 160 gynecologists of the probability that a woman has breast cancer given a positive mammogram, before and after receiving training in how to translate conditional probabilities into natural frequencies.

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Computing Not So Basic Probabilities from

DataSet = 2Seed = 64

in the table below, dosage calculations from a sample of 56 doctors are sorted according to whether the label on the drug bottle contained a concentration or a ratio, and whether the calculation was correct or wrong.

	Correct	Wrong	Row Totals
Concentration	22	6	28
Ratio	4	24	28
Column Totals	26	30	56

a) What is the probability that a calculation in the sample was based on a concentration or was correct?

☐ Check the box to see the answer to (a).

b) Given that a calculation in the sample was correct, what is the probability that the calculation was based on a ratio?

☐ Check the box to see the answer to (b).

Number

☐ ANm1 = 22

☐ ANm2 = 6

☐ ANm3 = 4

☐ APrb = 0.571

☐ ATot = 32

☐ BDnm = 26

☐ BNum = 4

☐ BOp = 0

☐ BPrb = 0.154

☒ DataSet = 2

☐ GrTt = 56

☐ OpANm1 = 1

☐ OpANm2 = 1

Input Bar

Apr 8, 2014, 1:26 PM

Edit

age = 48

3 ENTRIES1 DAYS3 THIS WEEK3 TODAY

Timeline

3 >

Photos

1 >

Tags

0 >

Calendar

>

Starred

0 >

Years

>

Settings

>

DAY ONE

age = 48

factor1 = 0.44

factor2 = 0.25

Line

age = 48

$a: y = 0.44x + 0.25$

Trying to look at different ways of visualizing how different factors come together in determining the probability of the result - some questions are brought up by the diagram above, though:

Can you collapse multiple factors into one trivially? The graph would seem to imply that - but it isn't obvious from the equations.

Are there ways of simplifying the calculations for some limiting cases?

1:26 PM TUESDAY, APRIL 8, 2014

Share

Star

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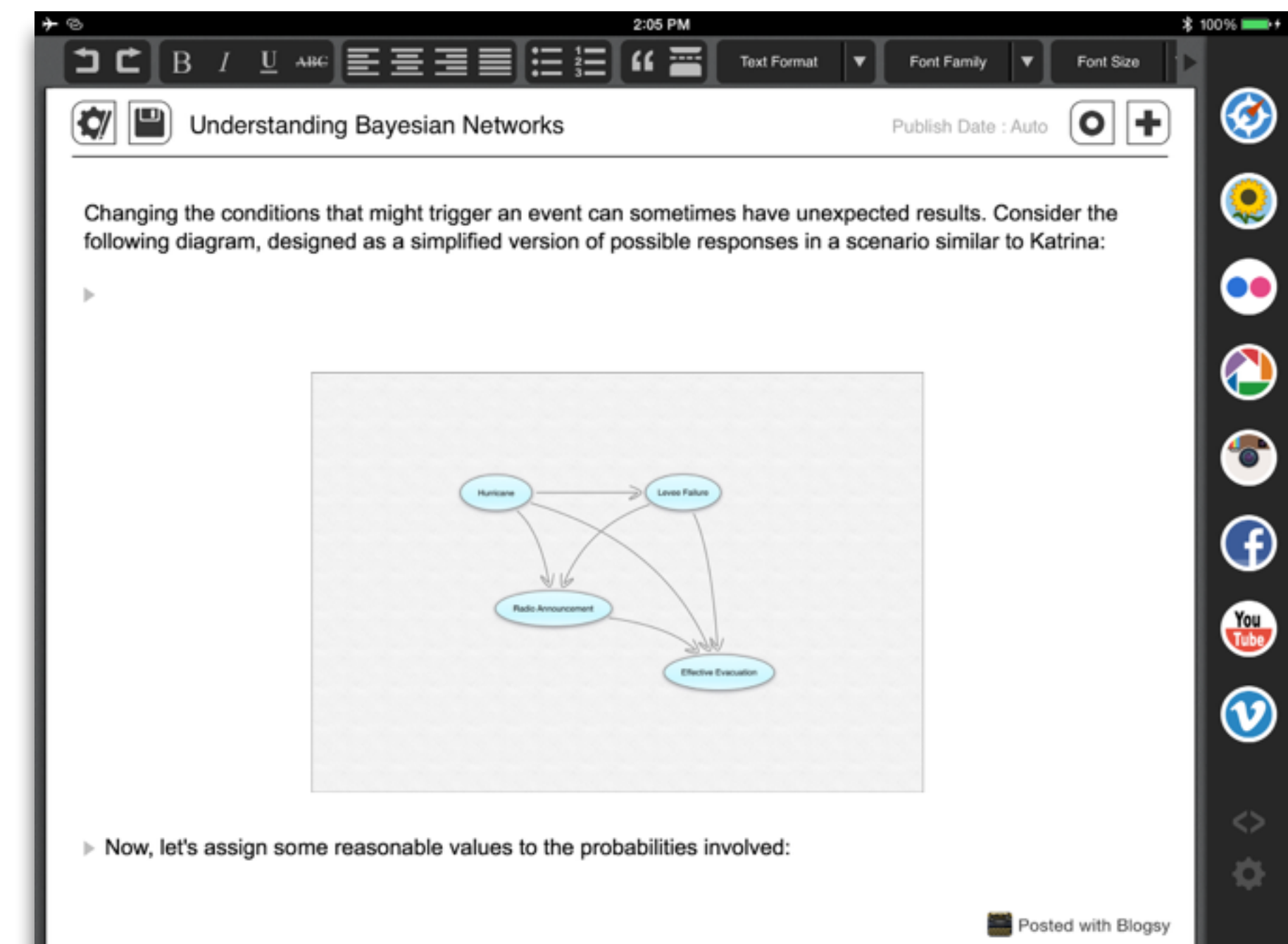
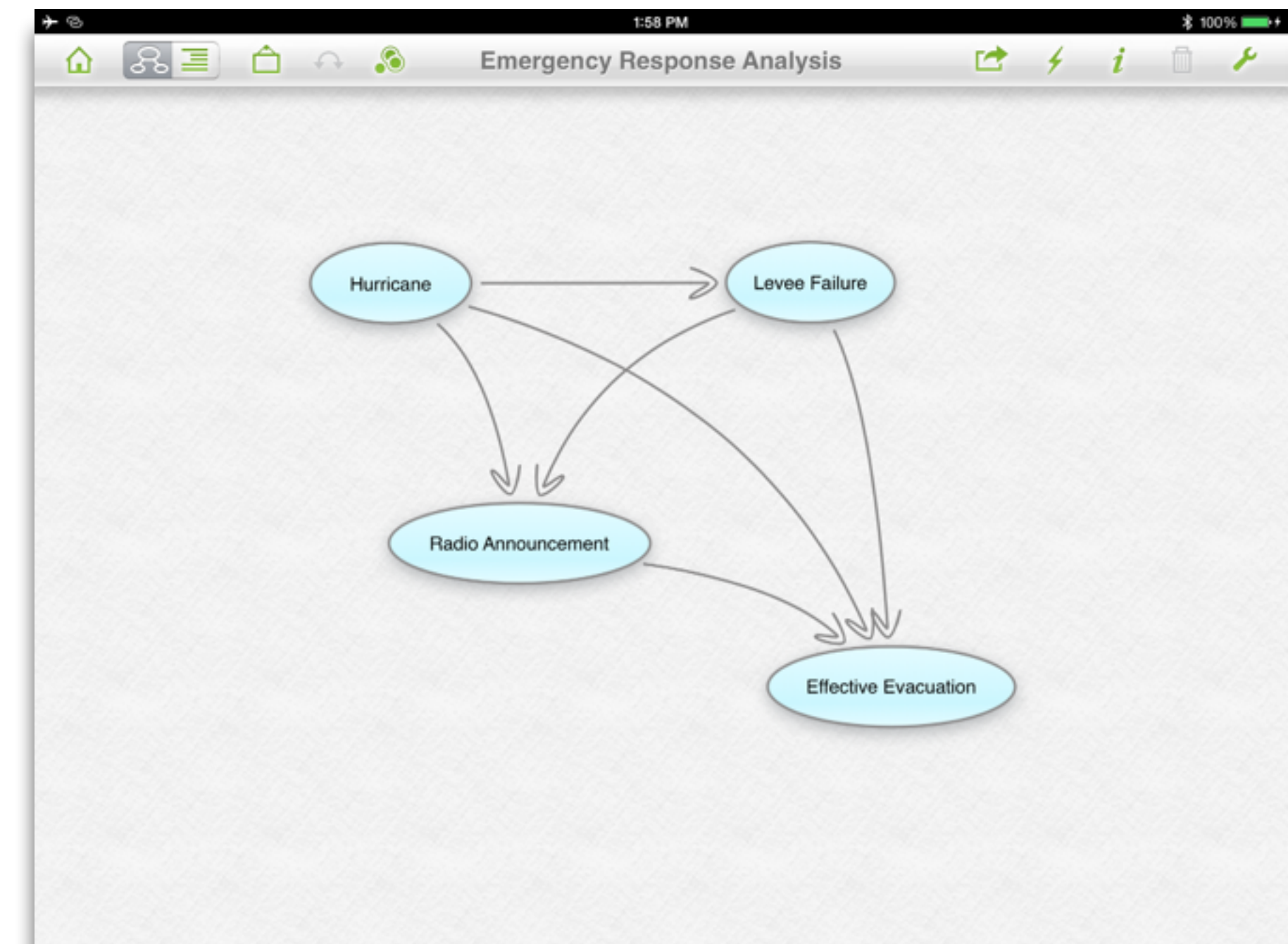
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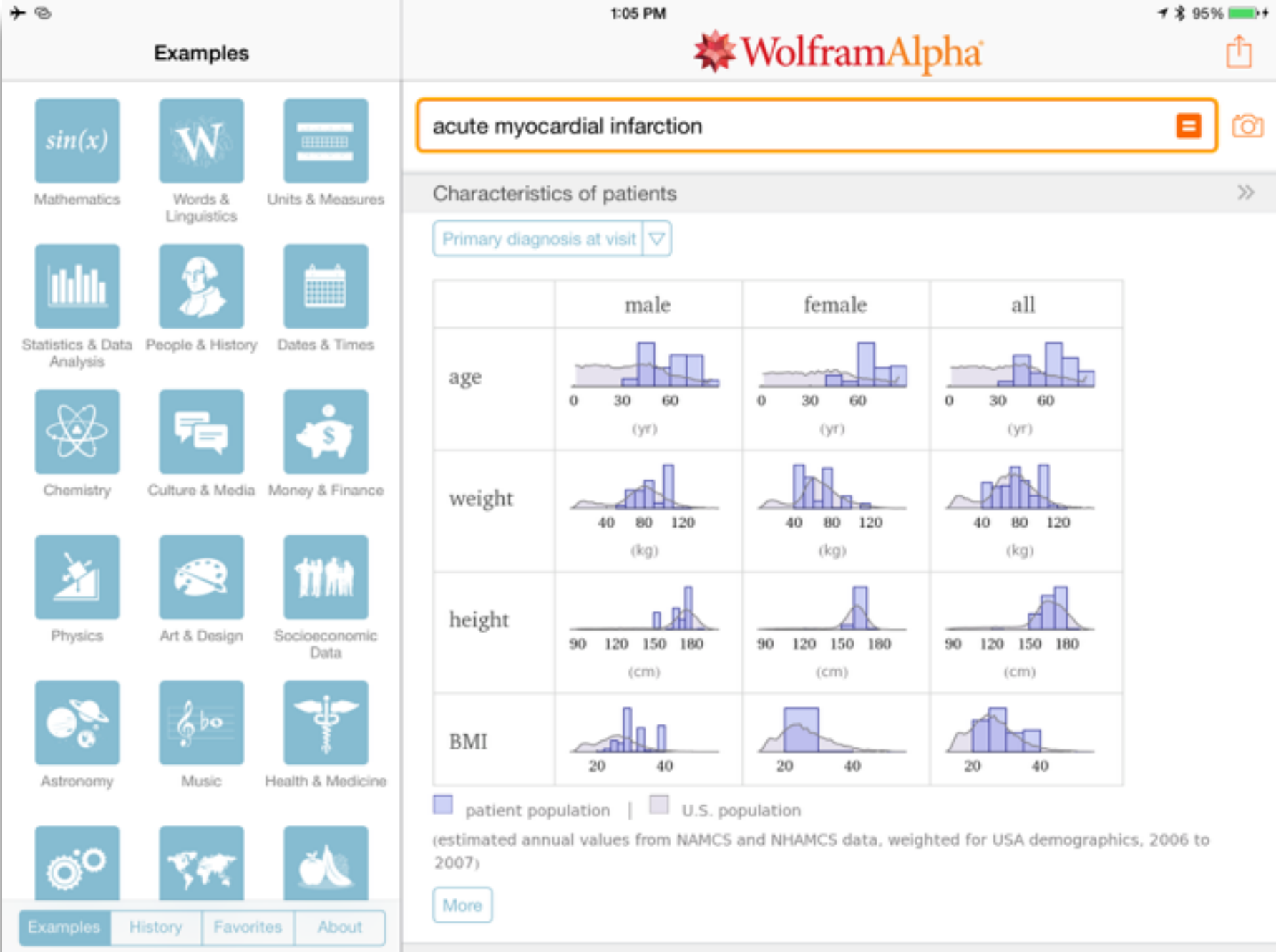
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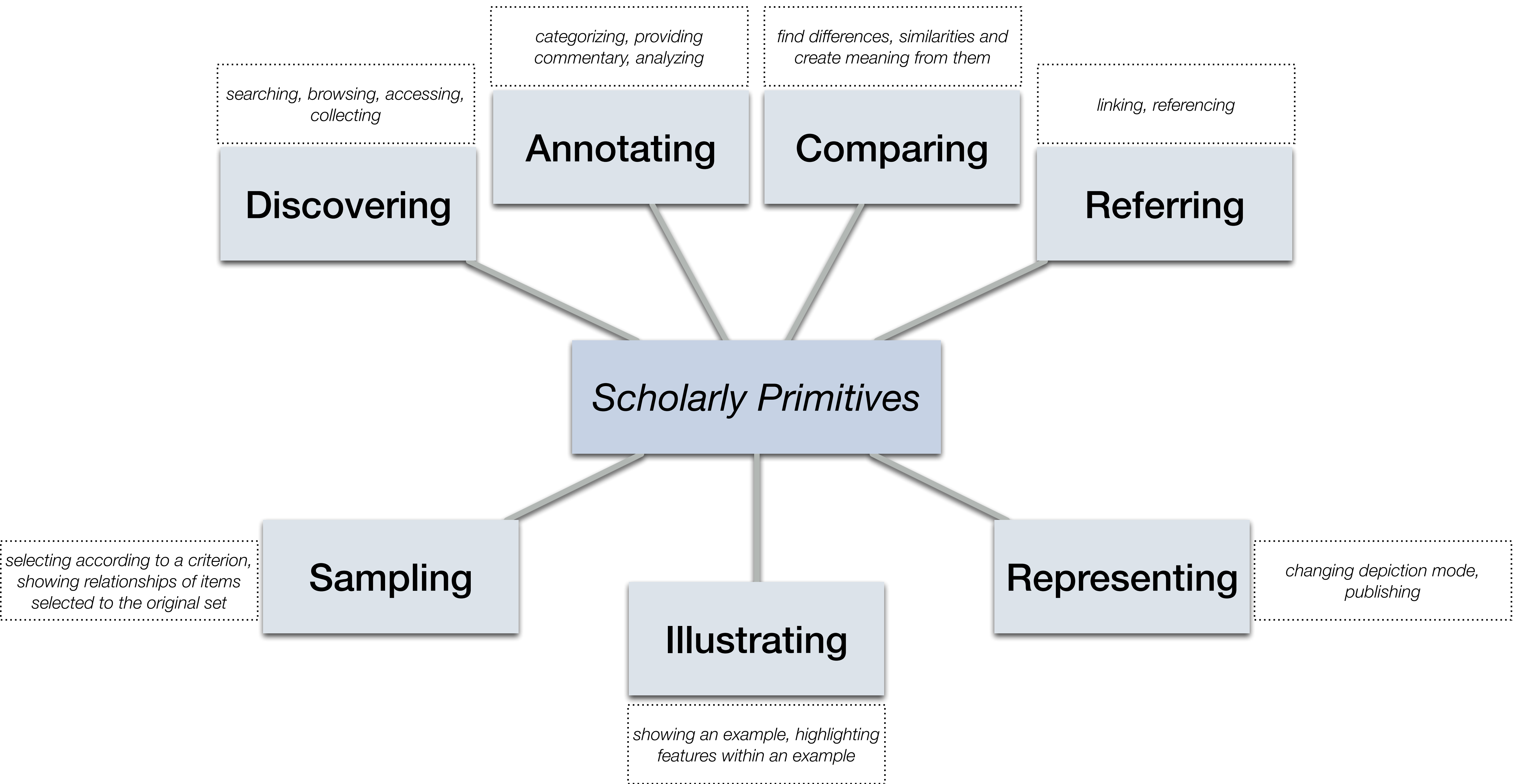
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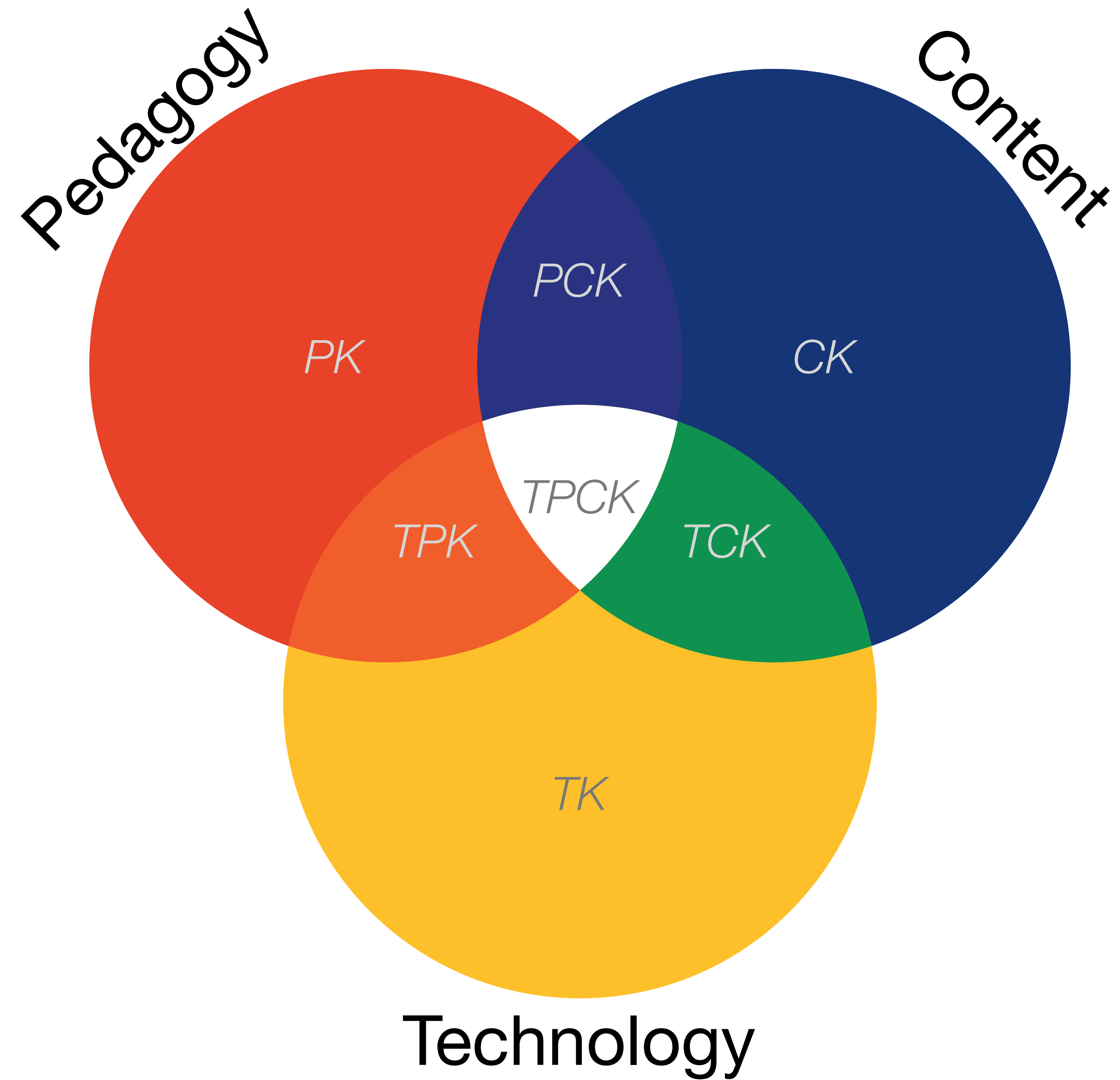
The screenshot shows a presentation slide titled "Stent Policy Analysis". On the left is a sidebar with three thumbnails. The main slide area contains a table of independent predictors for two outcomes: 30-Day Major Adverse Cardiac or Cerebrovascular Event and 3-Year Survival. Below the table is the title "Will Stent Revascularization Replace Coronary Artery Bypass Grafting?" and the author "James M. Wilson, MD".

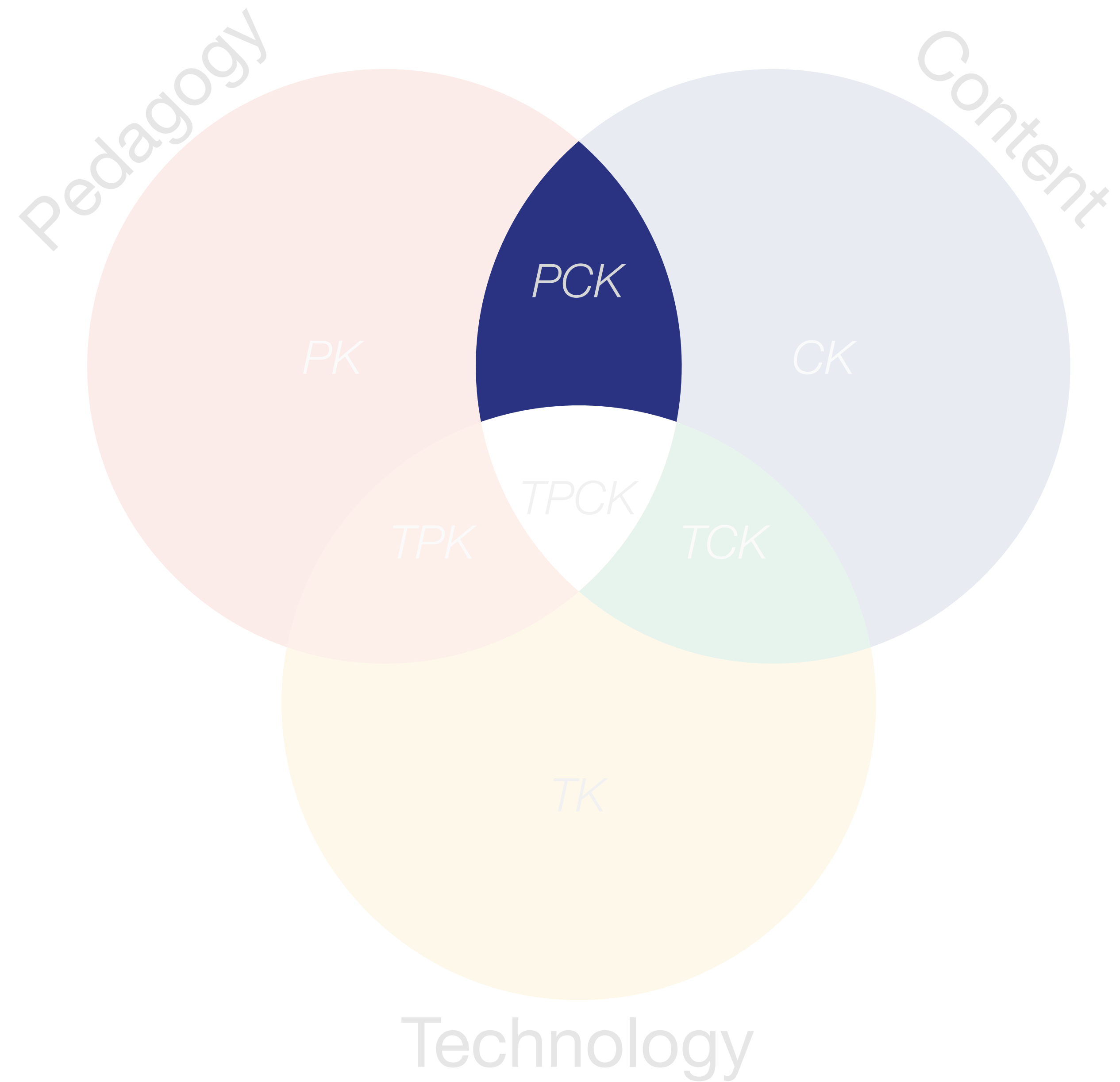
Independent Predictor	Hazard Ratio	95% CI	P Value
<b>30-Day Major Adverse Cardiac or Cerebrovascular Event</b>			
>1 vessel treated	1.416	1.138-1.762	0.0018
Urgent procedure	3.27	2.5-5.54	<0.0001
Female sex	1.464	1.03-2.07	0.0321
Chronic obstructive pulmonary disease	1.541	1.04-2.276	0.03
Hypertension	1.622	1.037-2.535	0.0339
<b>3-Year Survival</b>			
>1 vessel treated	1.252	1.072-1.462	0.0045
NYHA functional class III or IV	1.35	1.015-1.796	0.0389
Prior myocardial infarction	1.411	1.077-1.848	0.0047
Age >65 yr	2.182	1.663-2.864	<0.0001
Chronic renal insufficiency	1.963	1.481-2.602	<0.0001
Valvulopathy	1.641	1.183-2.277	0.0031
Family history of coronary artery disease	0.615	0.437-0.865	0.0039
Hyperlipidemia	0.66	0.518-0.841	0.0002
Congenital heart disease	2.312	1.692-3.16	<0.0001
Peripheral vascular disease	1.921	1.452-2.541	<0.0001

Will Stent Revascularization Replace Coronary Artery Bypass Grafting?  
James M. Wilson, MD













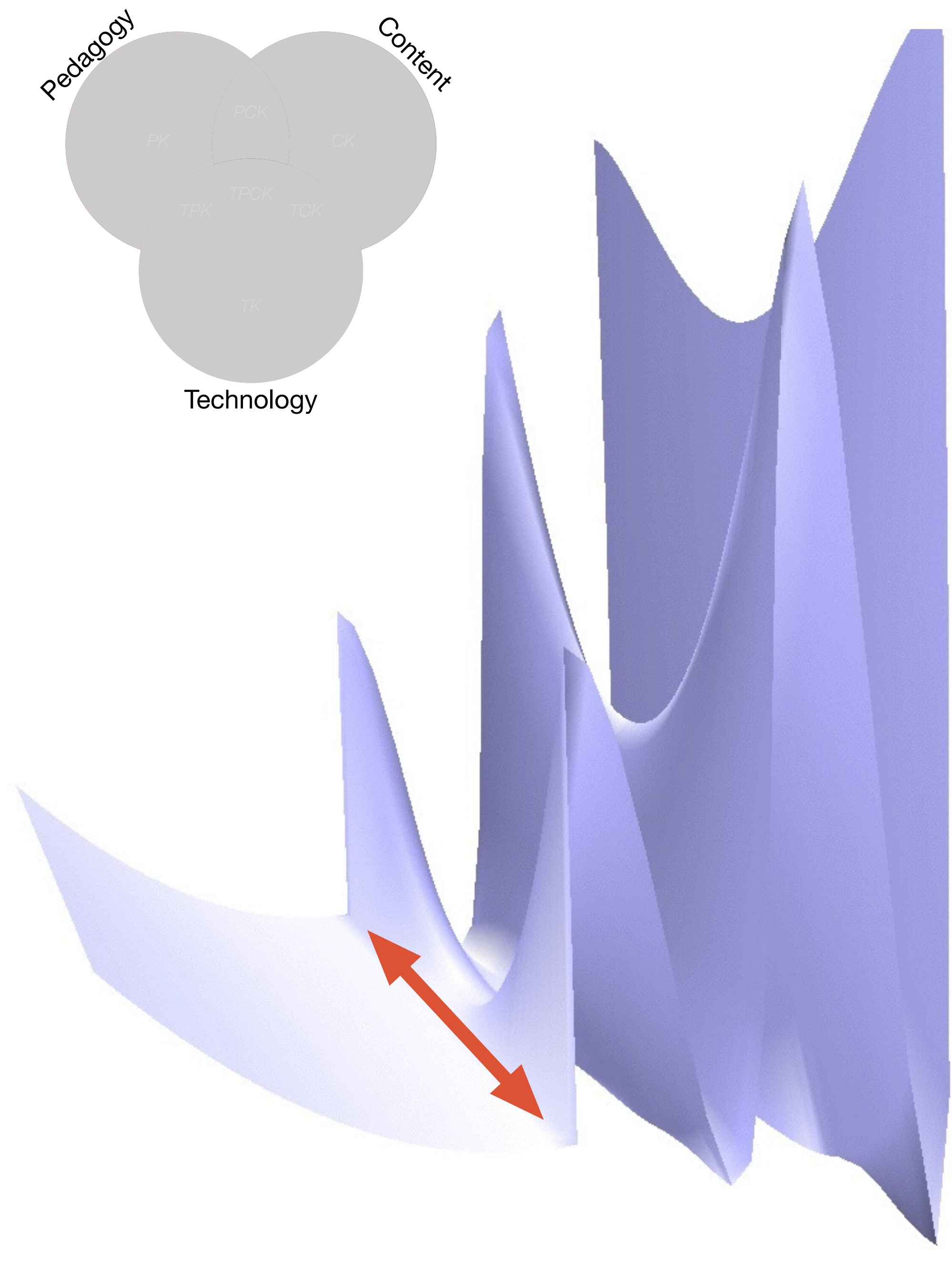


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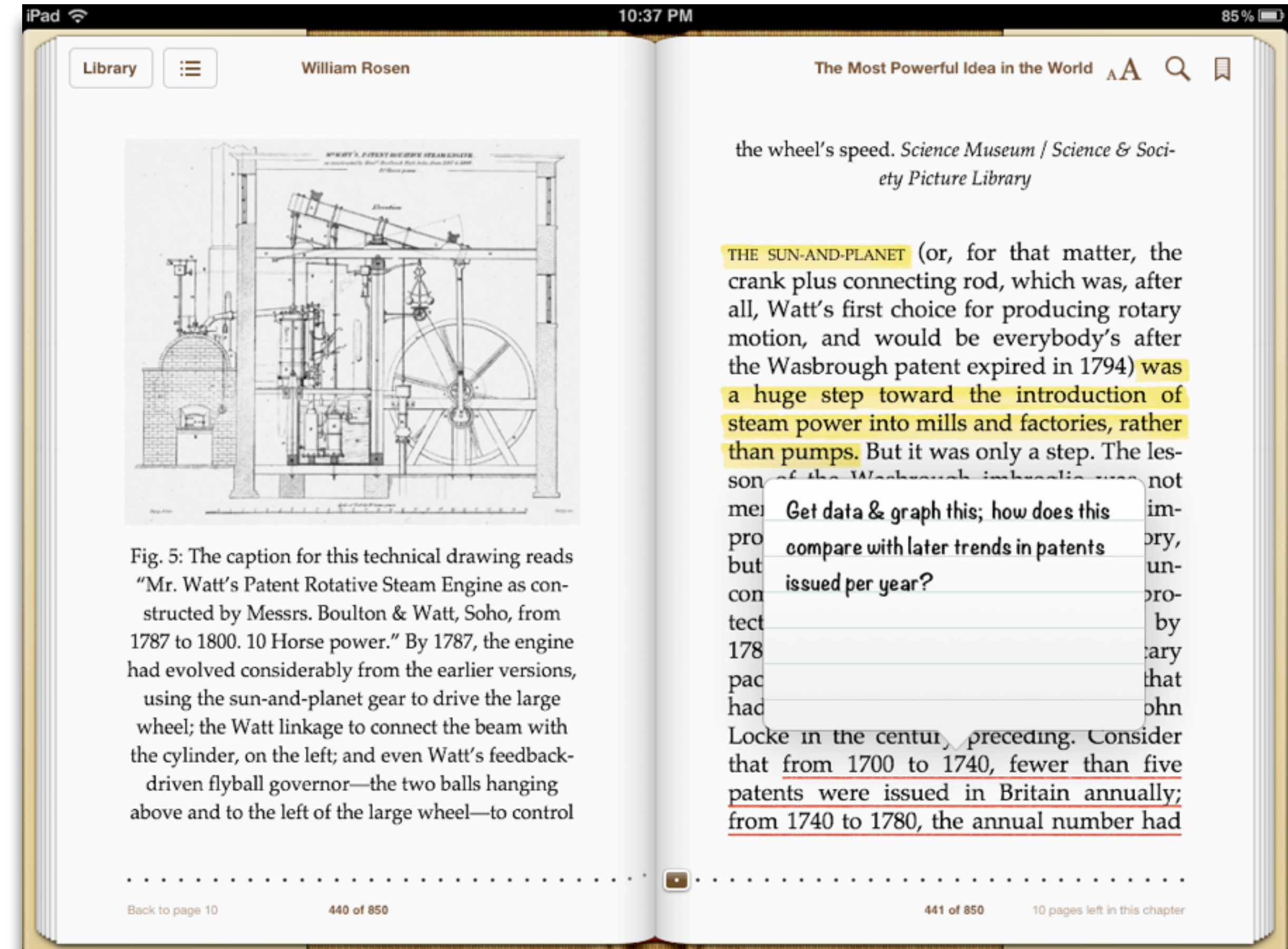
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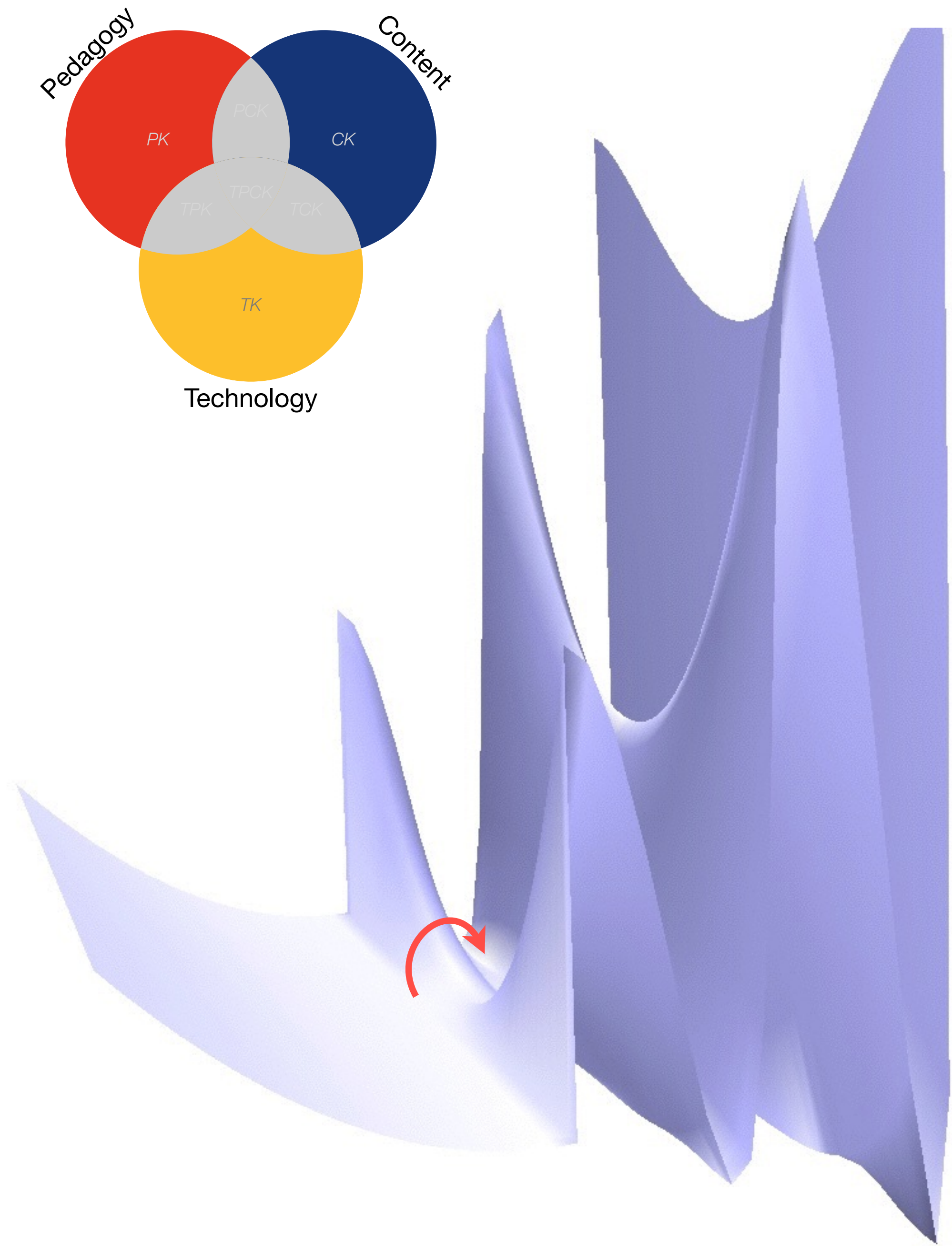


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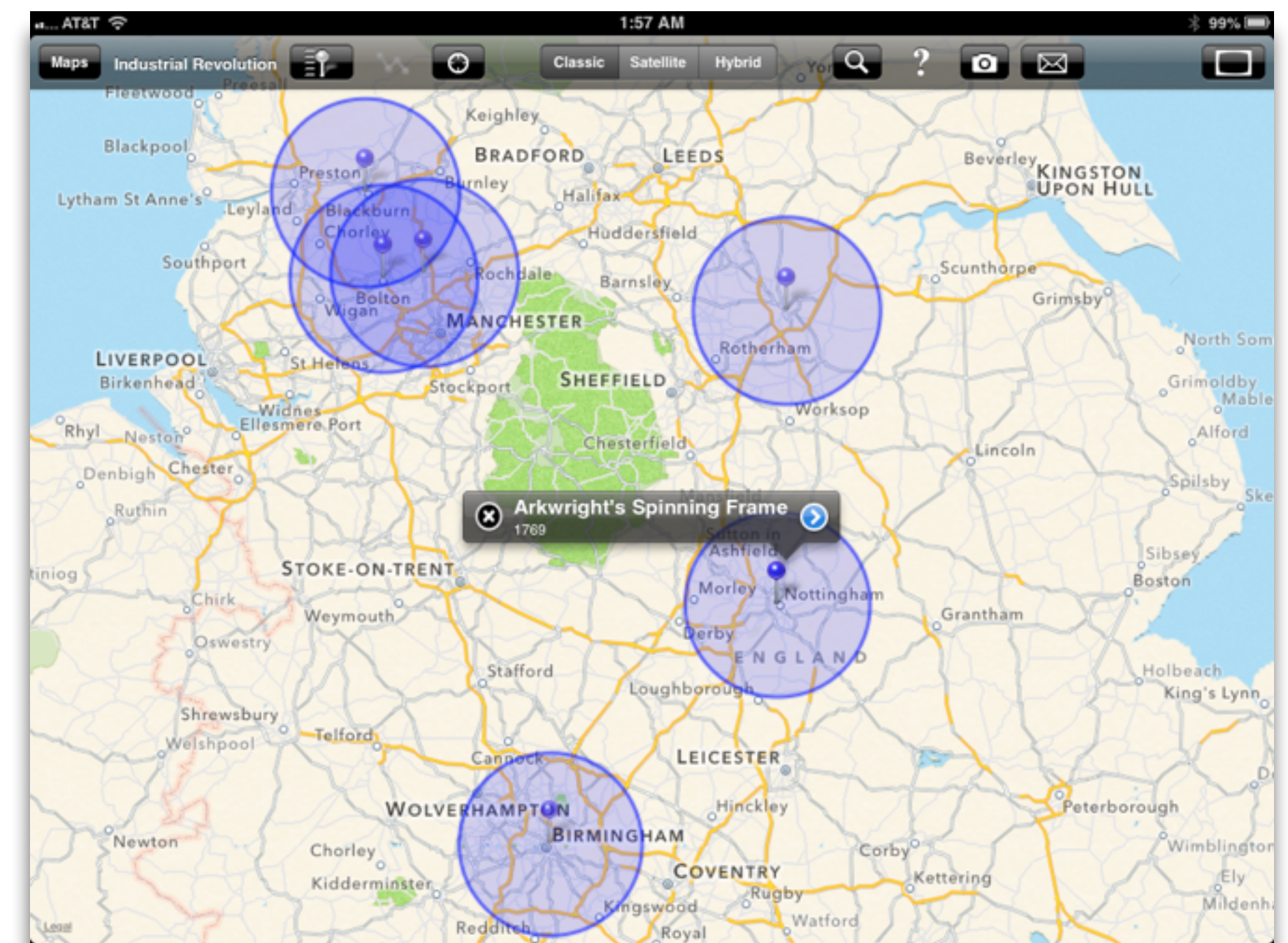
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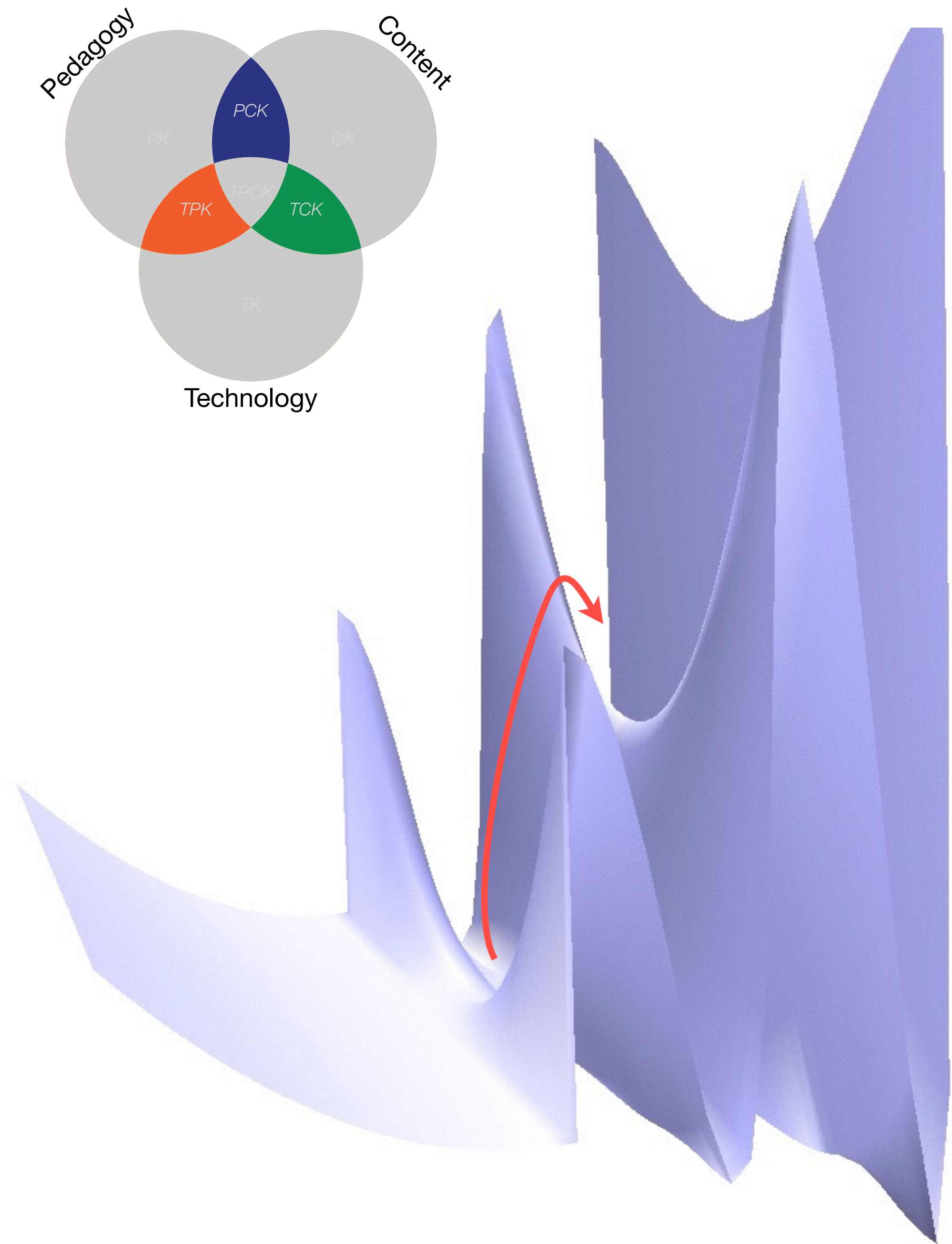


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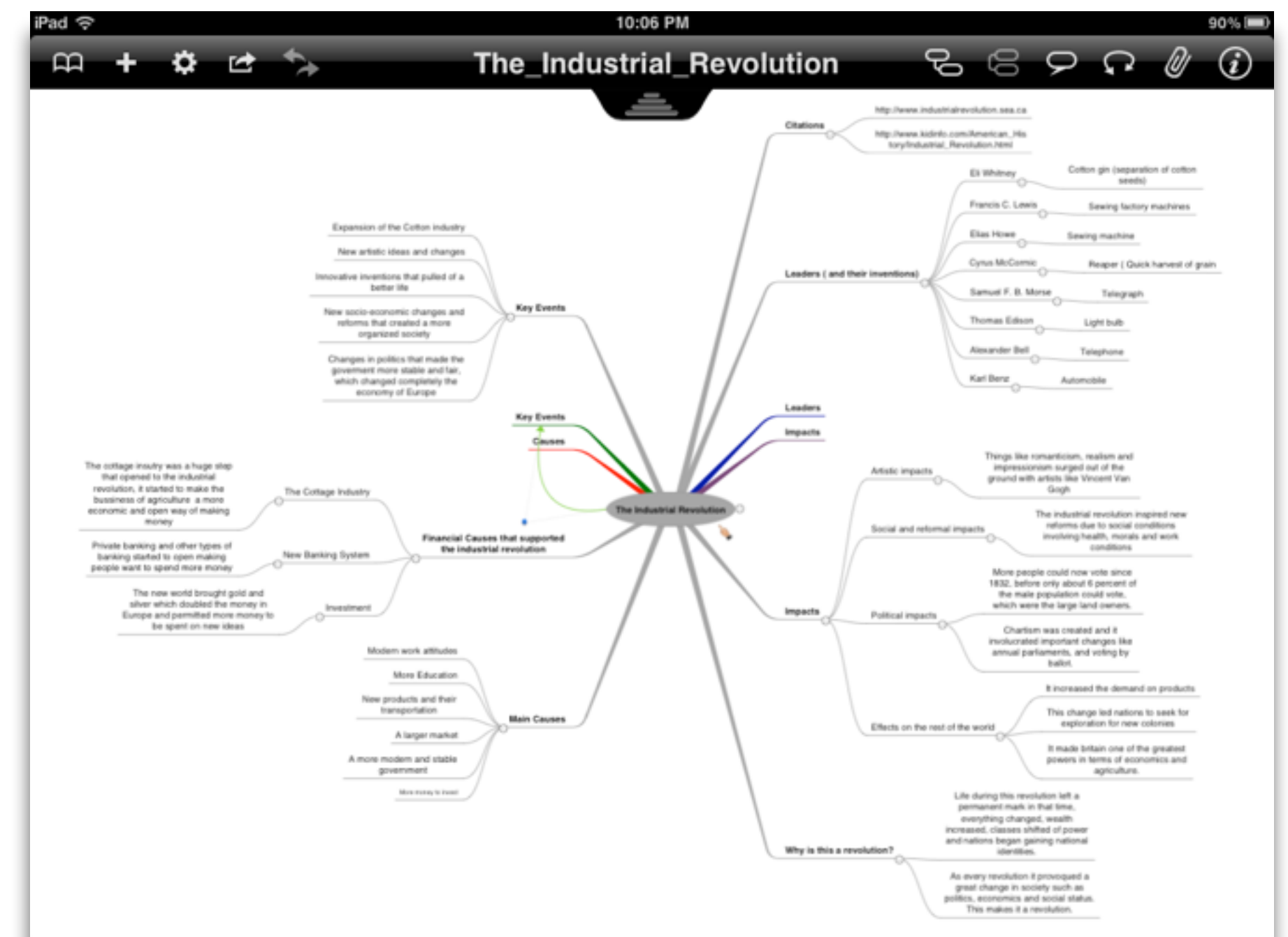
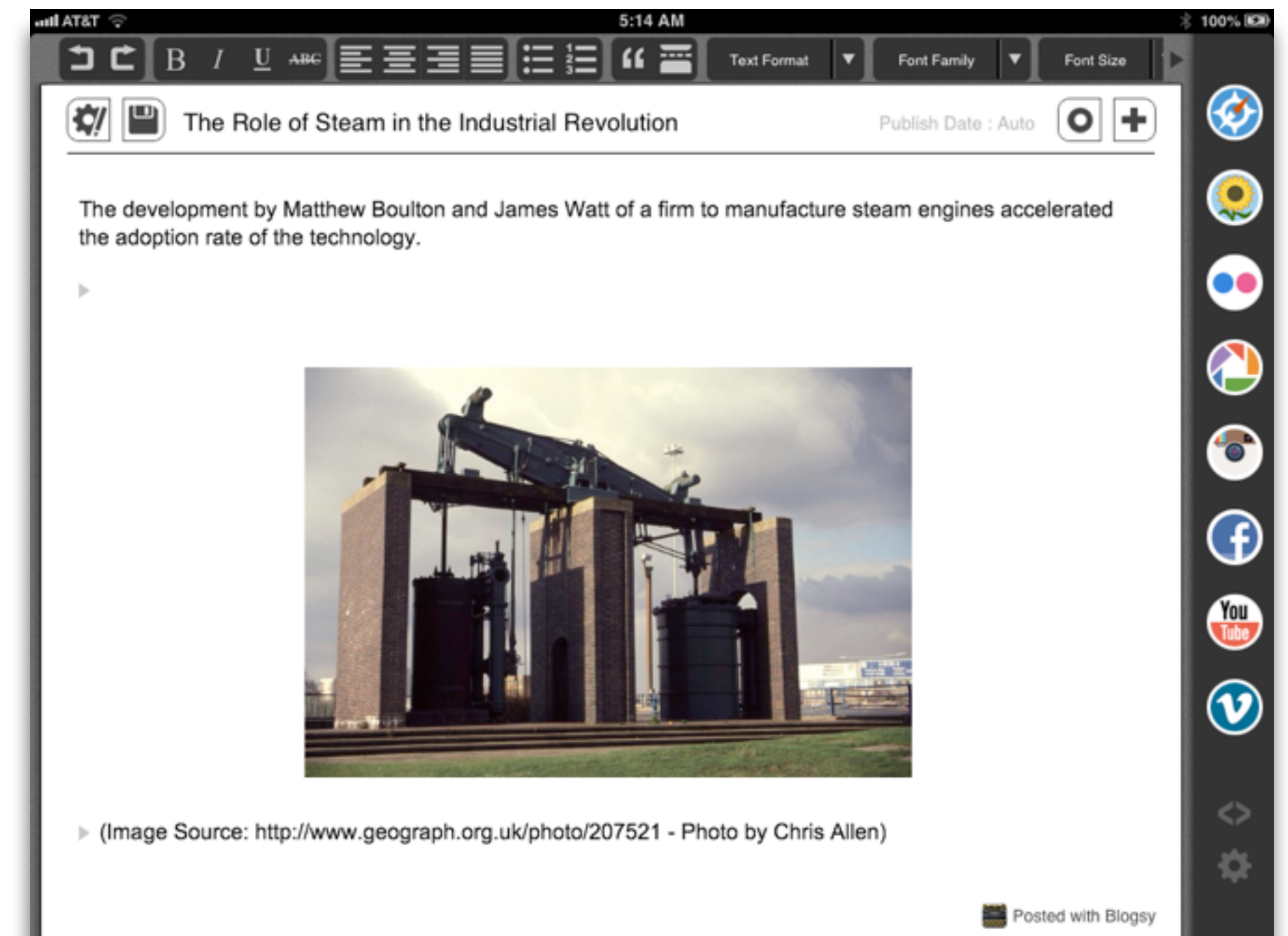
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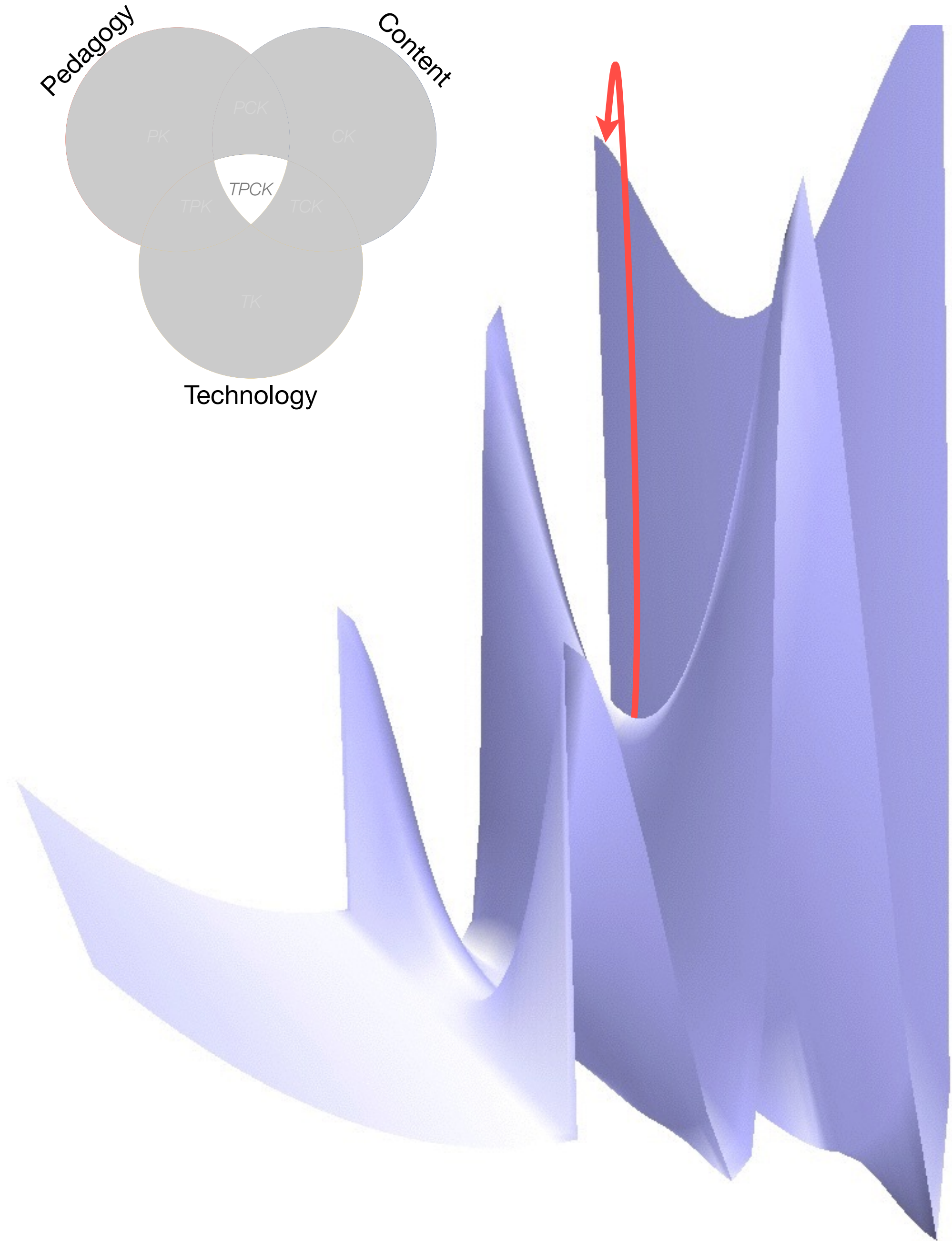


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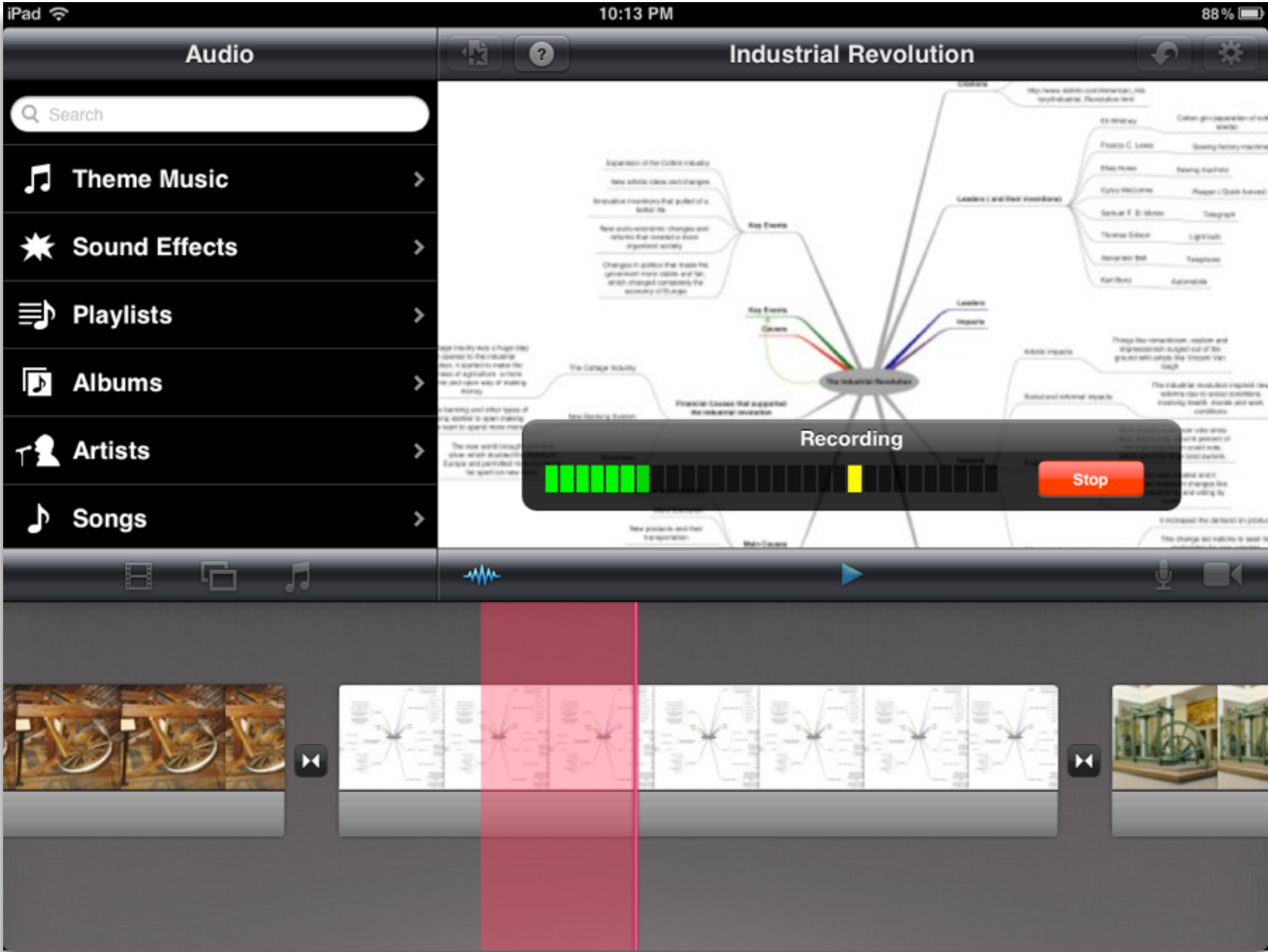
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# Choosing the First SAMR Ladder Project: Three Options

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- **Your Passion:**

- If you had to pick one topic from your class that best exemplifies why you became fascinated with the subject you teach, what would it be?




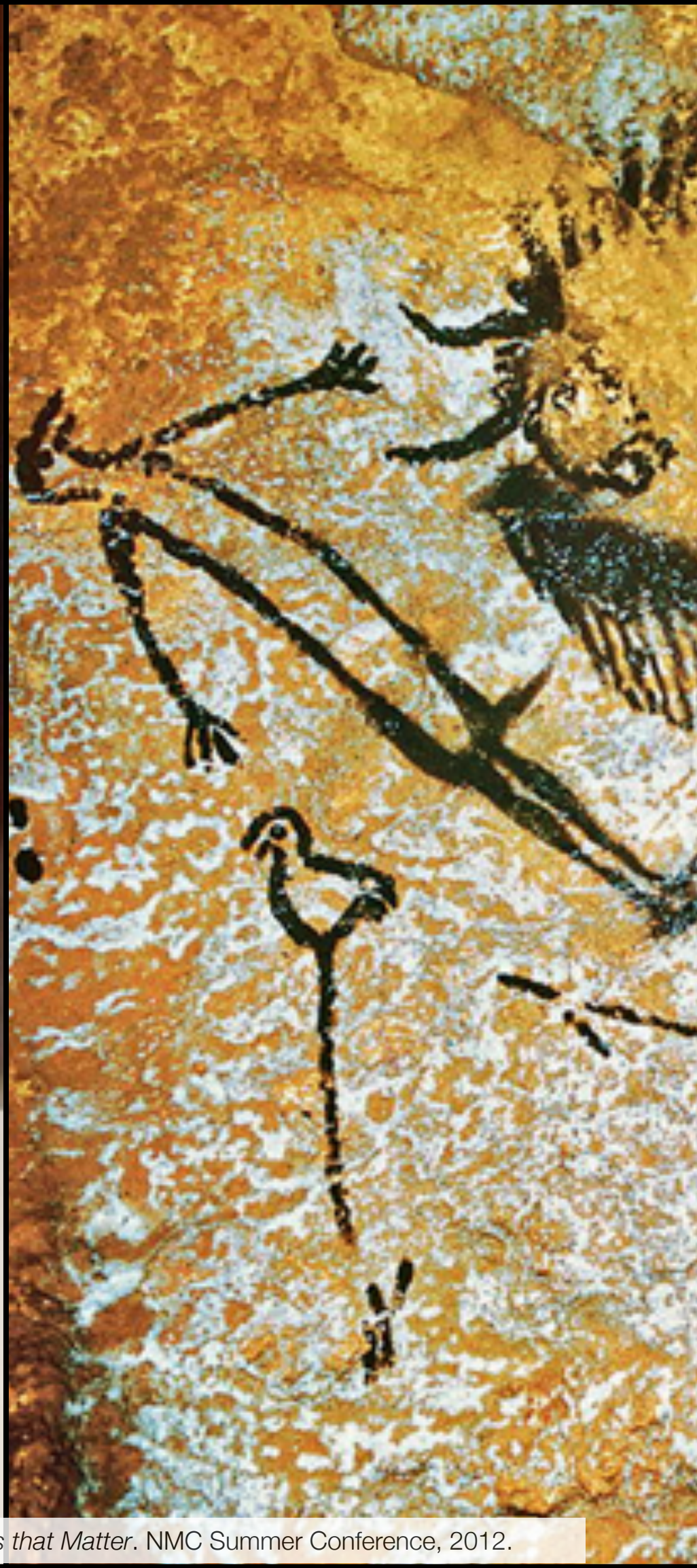

- **Barriers to Your Students' Progress:**

- Is there a topic in your class that a significant number of students get stuck on, and fail to progress beyond?

- **What Students Will Do In the Future:**

- Which topic from your class would, if deeply understood, best serve the interests of your students in future studies or in their lives outside school?



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



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Bookmarks



RSS Feeds

Discussions



Microblogging

Blogging











Wikis

Telepresence



File Sharing



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Class

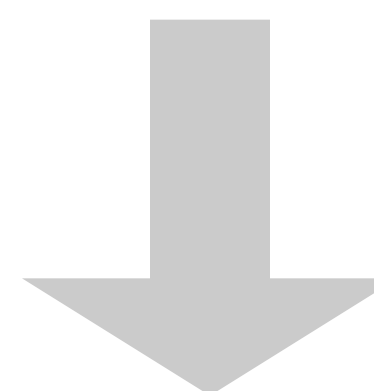
Homework



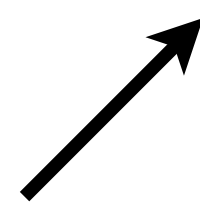
School

World

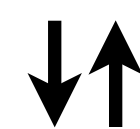
Home



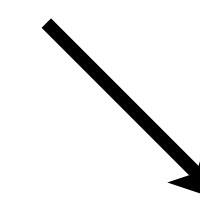
Learning Environments



*Contextual Search*  
*Augmented Reality*







*Cloud Resources*  
*Mobile Tools*

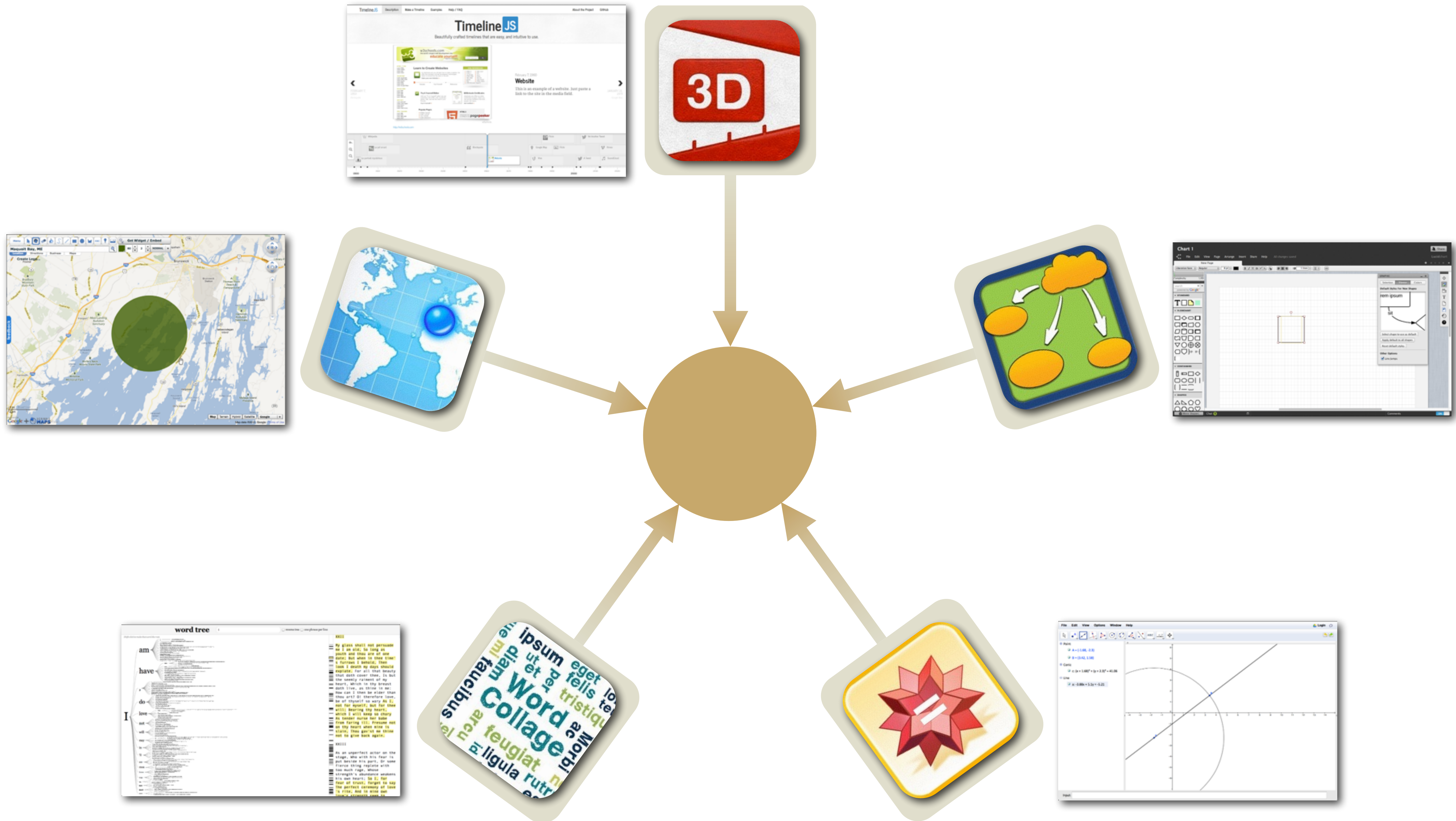


*Sensors*  
*Recorders*



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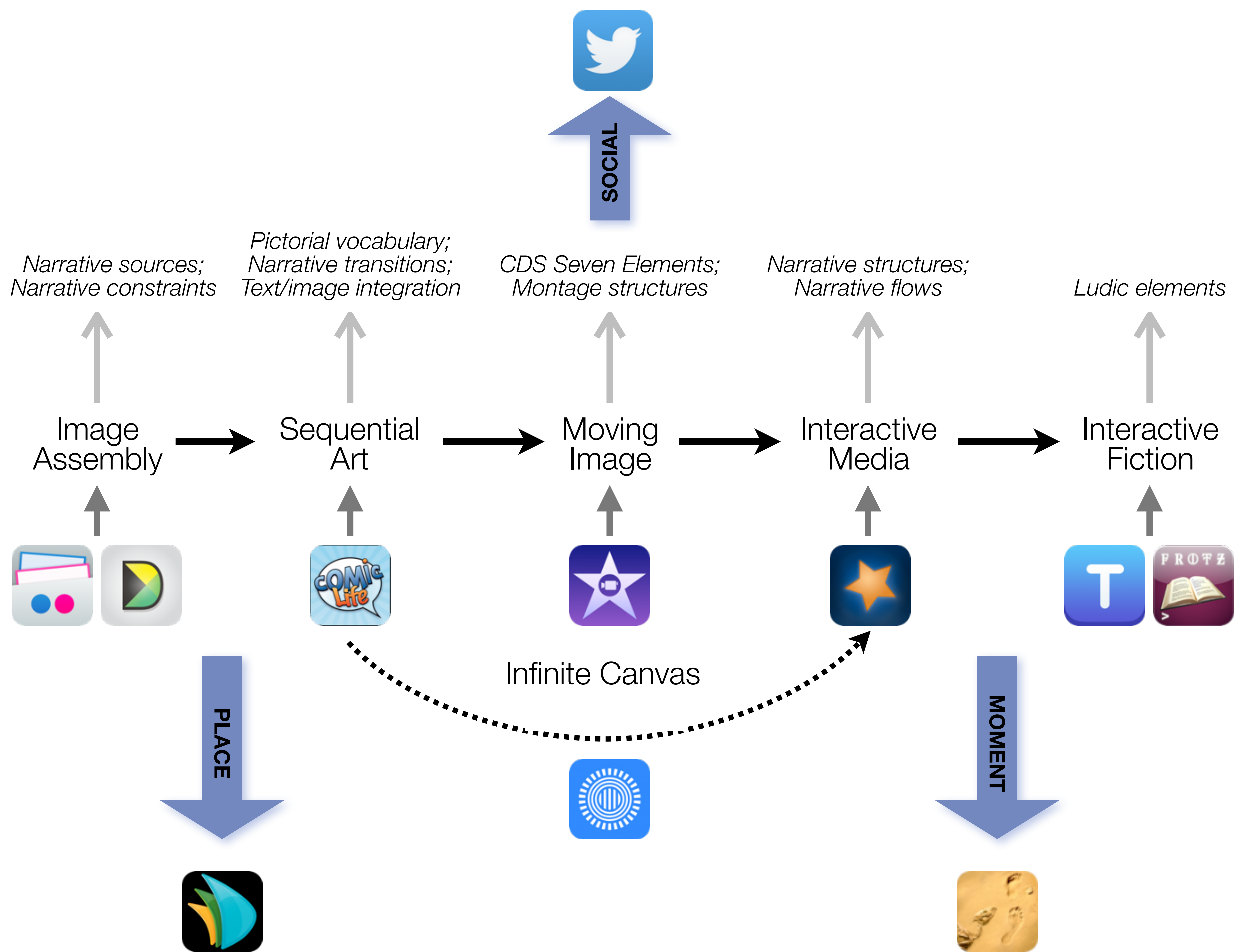






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## Formal Definition of **Game** (Salen & Zimmerman)

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“A game is a system in which players engage in an artificial conflict, defined by rules, that results in a quantifiable outcome.”

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



**Pam A. Mueller<sup>1</sup> and Daniel M. Oppenheimer<sup>2</sup>**

<sup>1</sup>Princeton University and <sup>2</sup>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.

Psychological Science

1–10

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DOI: 10.1177/0956797614524581

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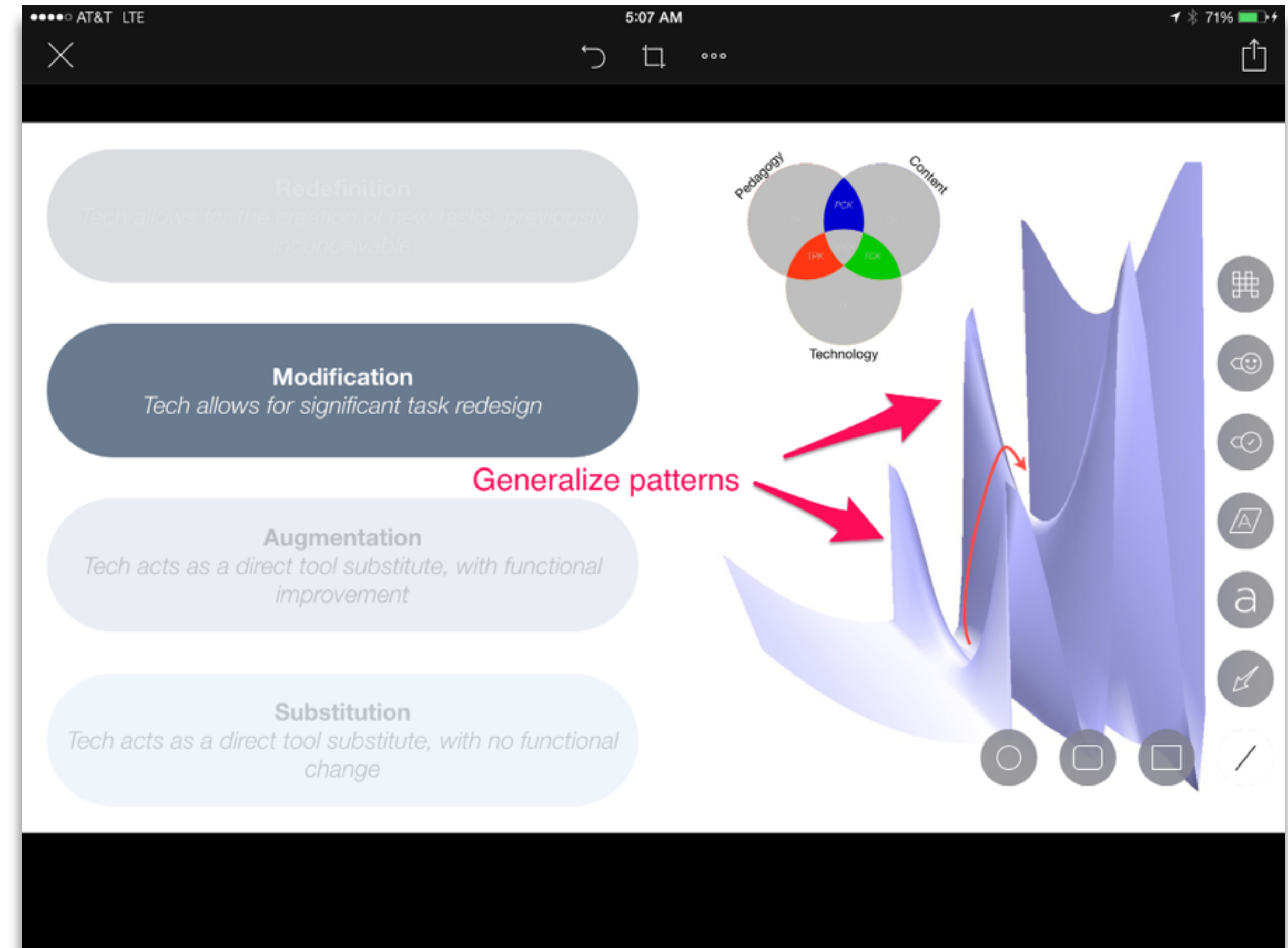
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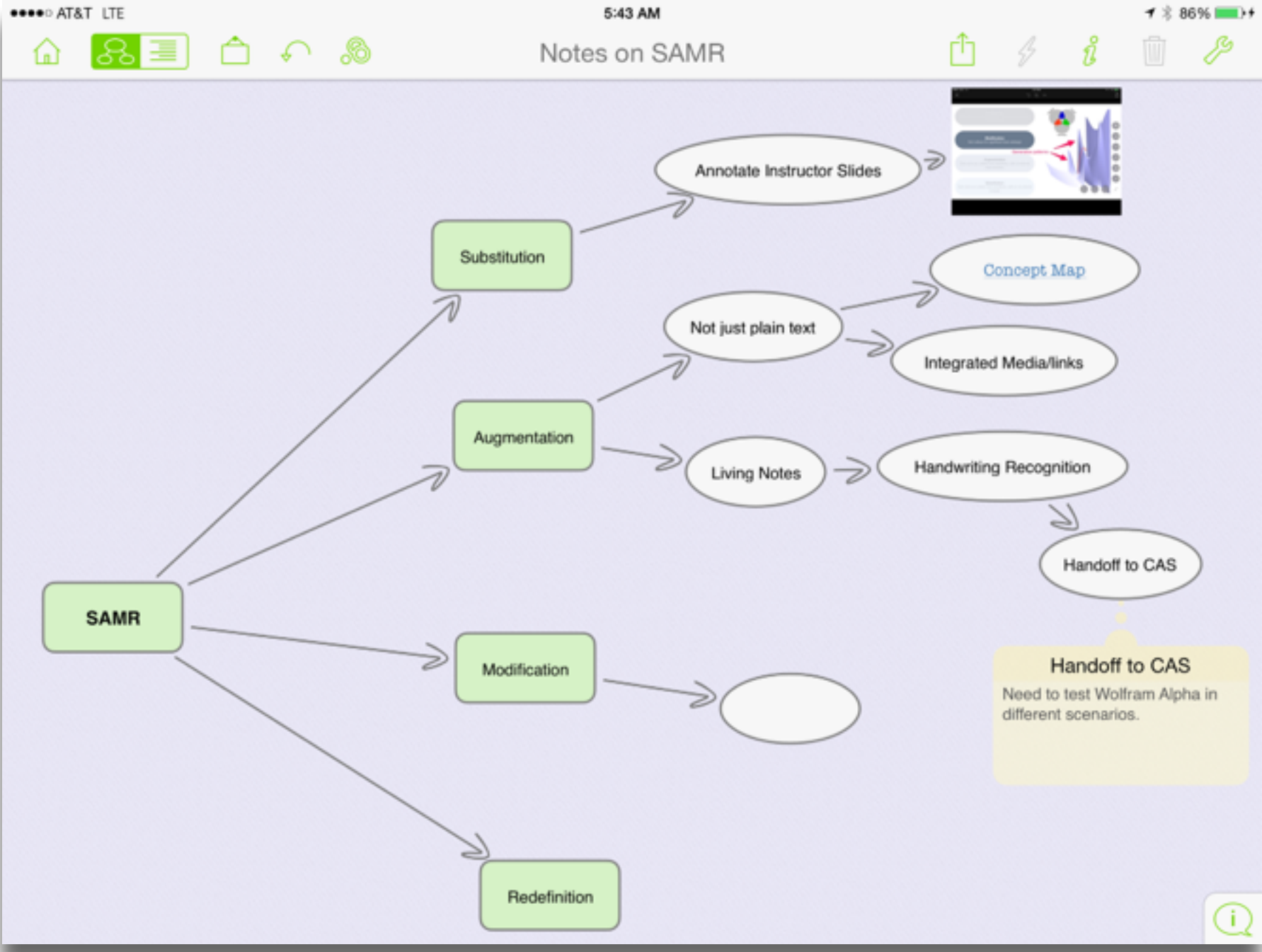


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Thoughts on SAMR  
Jun 20, 2014, 5:45 AM

Substitution: the valley where we were  
Augmentation: the next valley over - could see, not reach

Concept Maps - Google Scholar



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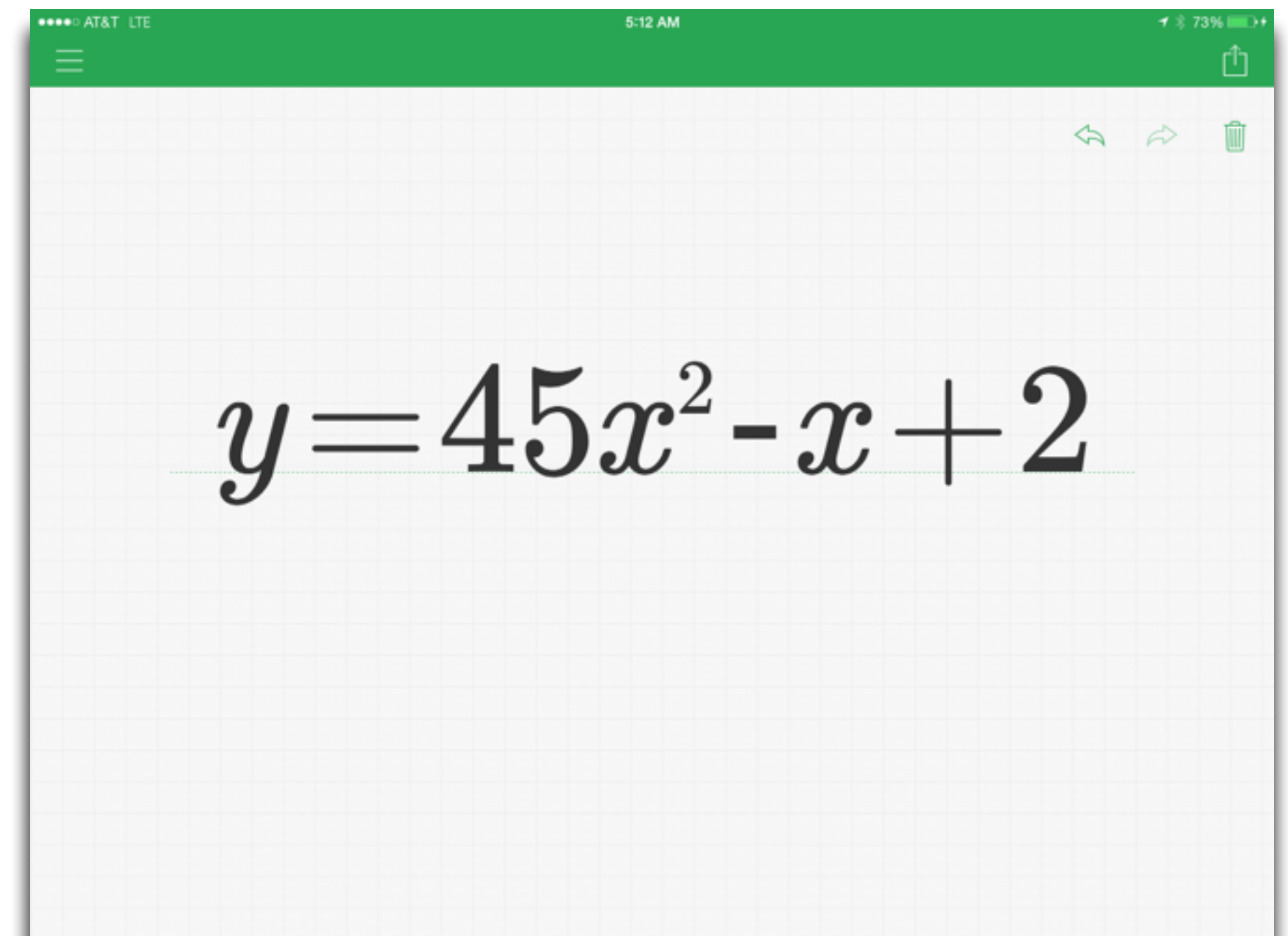
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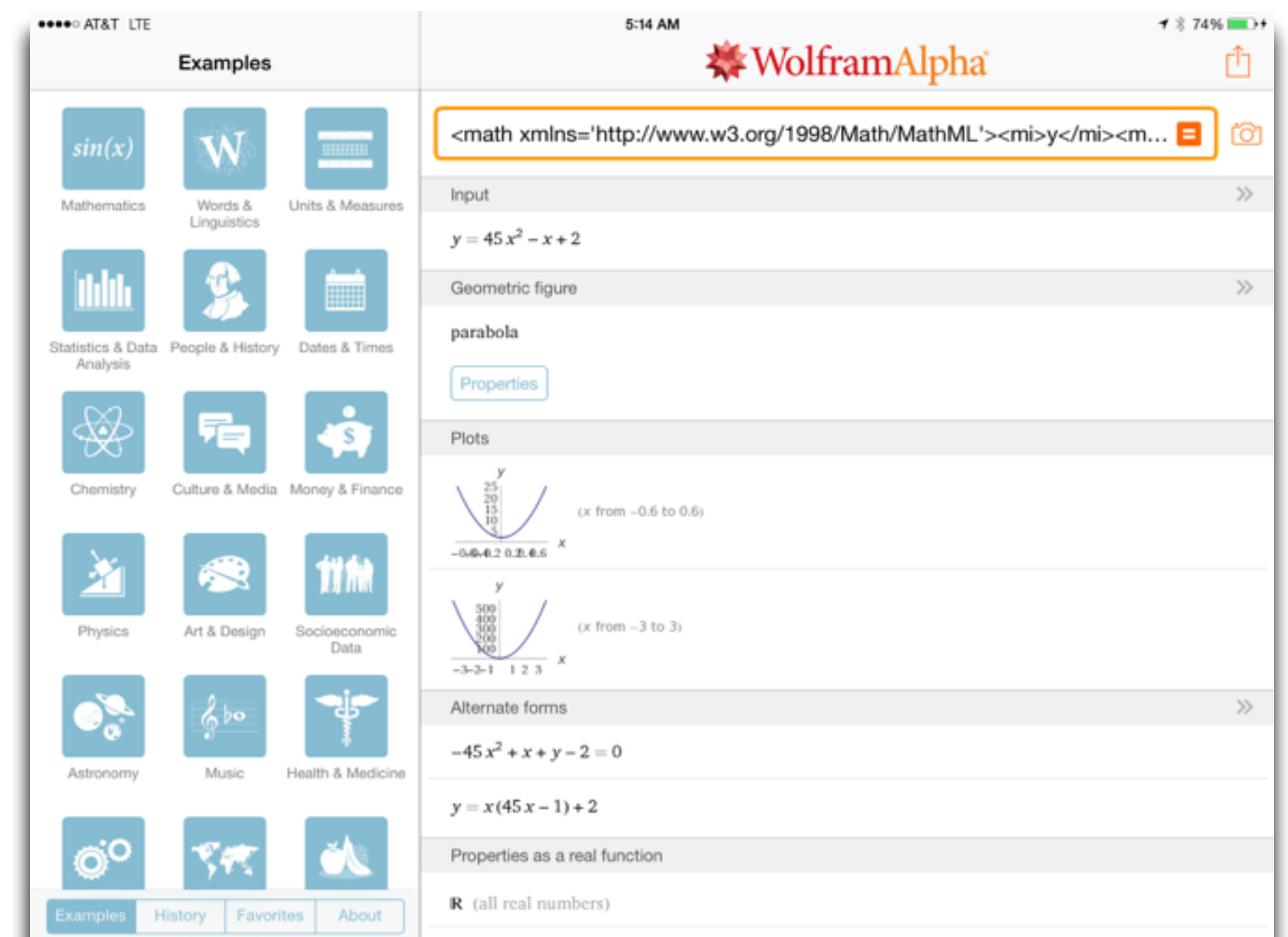
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A screenshot of a mobile application interface. At the top, a green status bar shows "AT&T LTE", "5:12 AM", and "73%". Below the status bar is a green header with a menu icon and a share icon. The main area is a light gray grid with the equation  $y = 45x^2 - x + 2$  centered in a large, black, serif font.





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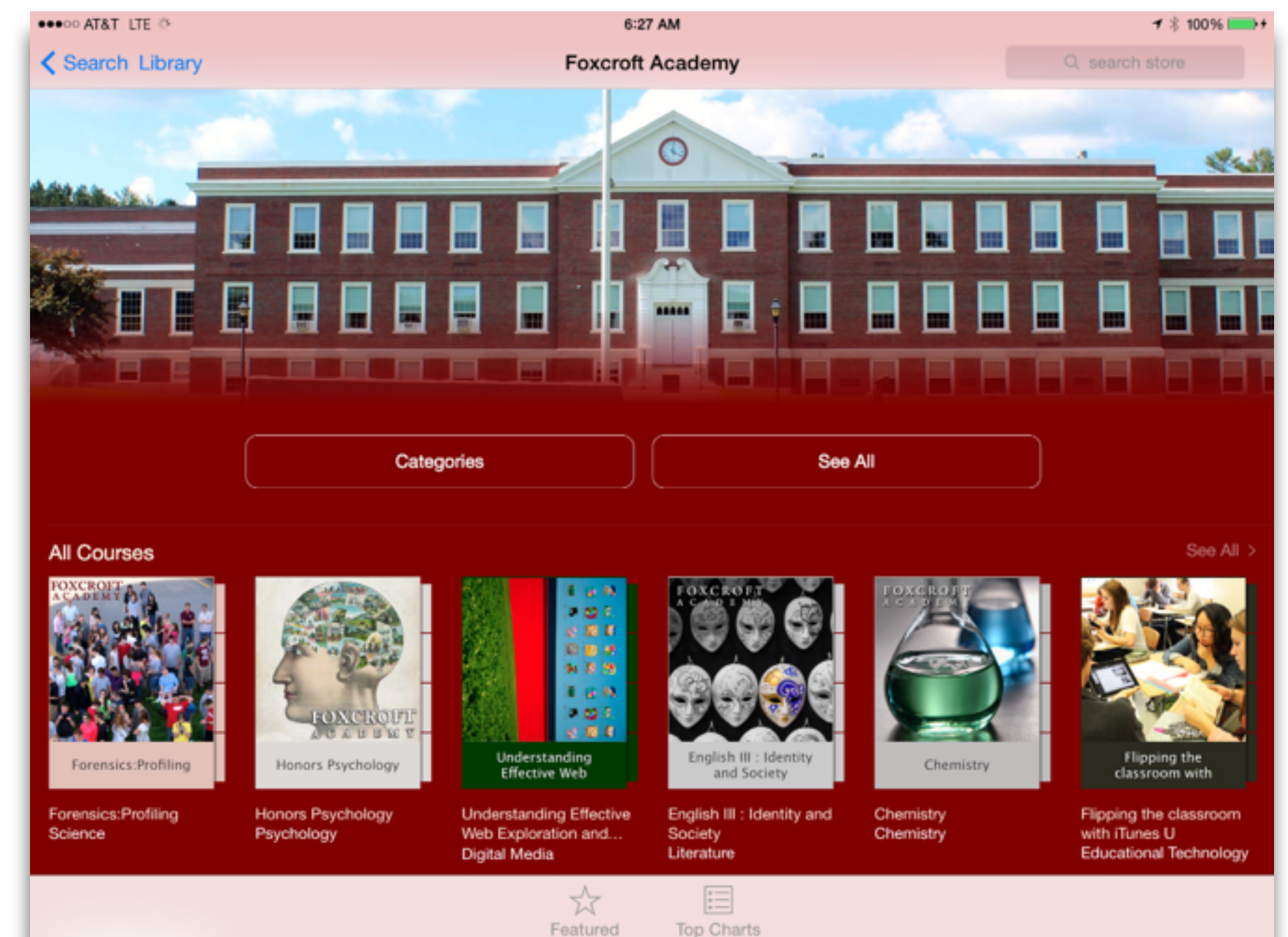
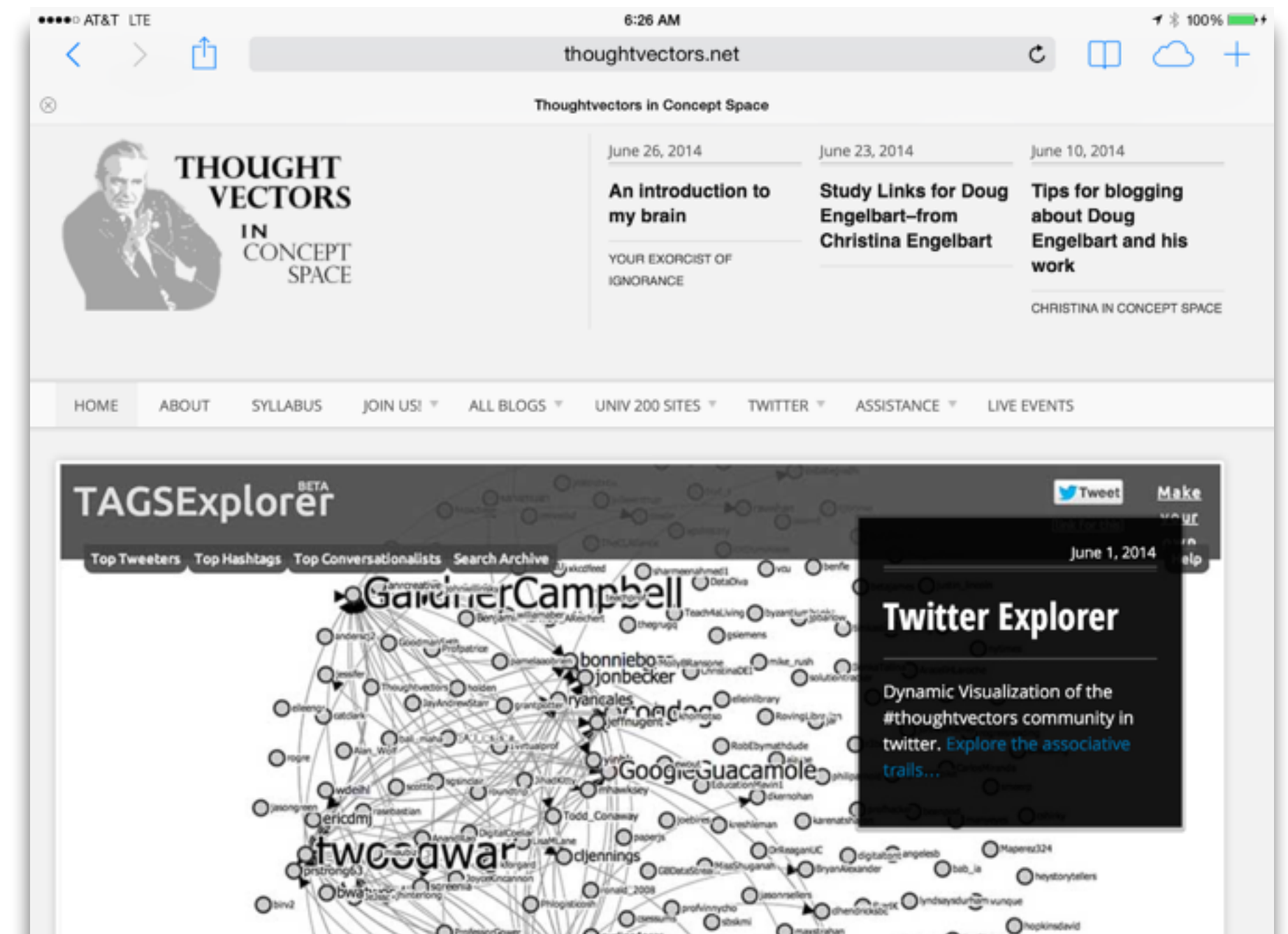
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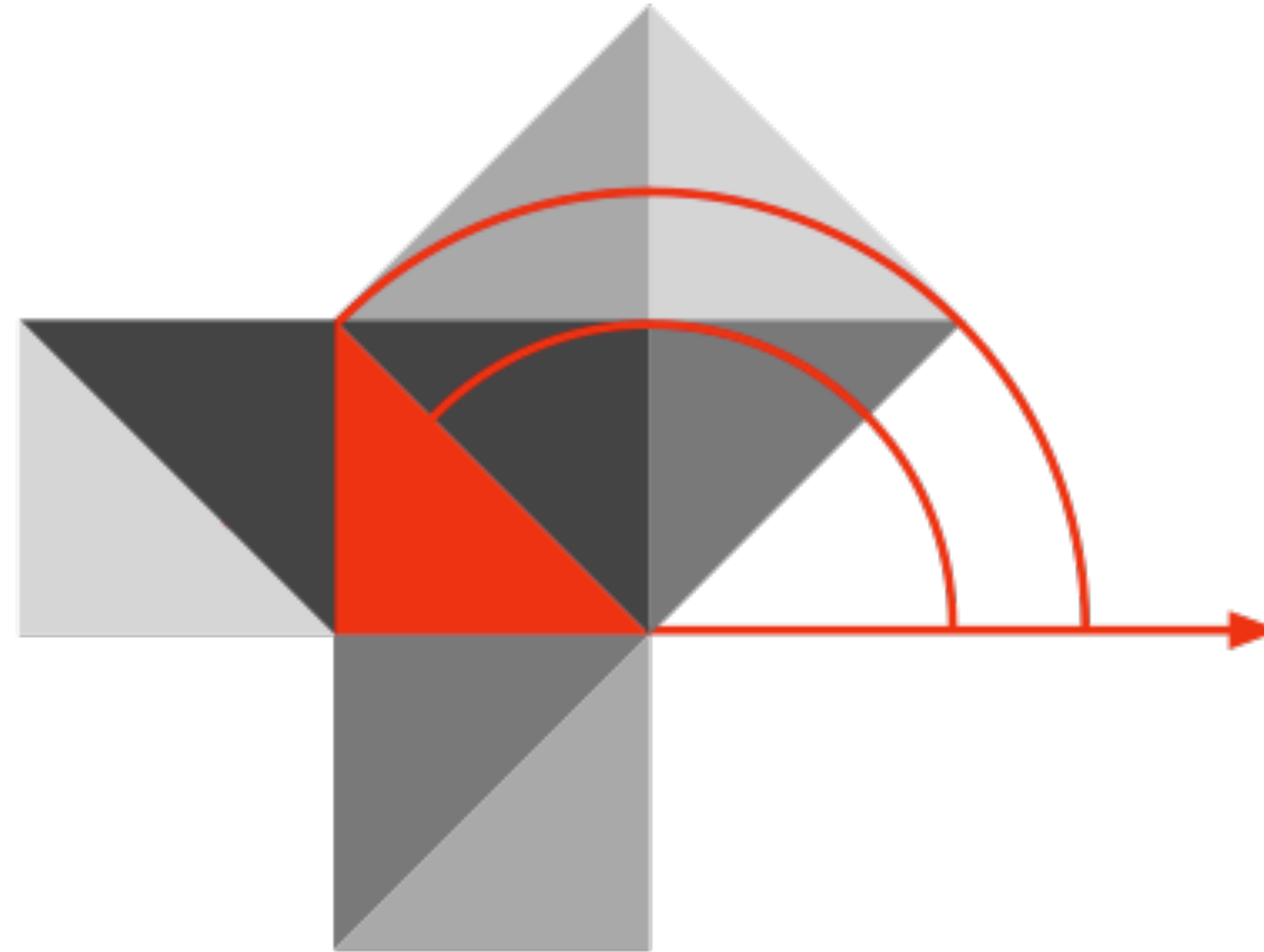
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# Hippasus

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