

SAMR and the EdTech Quintet: New Directions

Ruben R. Puentedura, Ph.D.

Transformation

Redefinition

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

Modification

Tech allows for significant task redesign

Augmentation

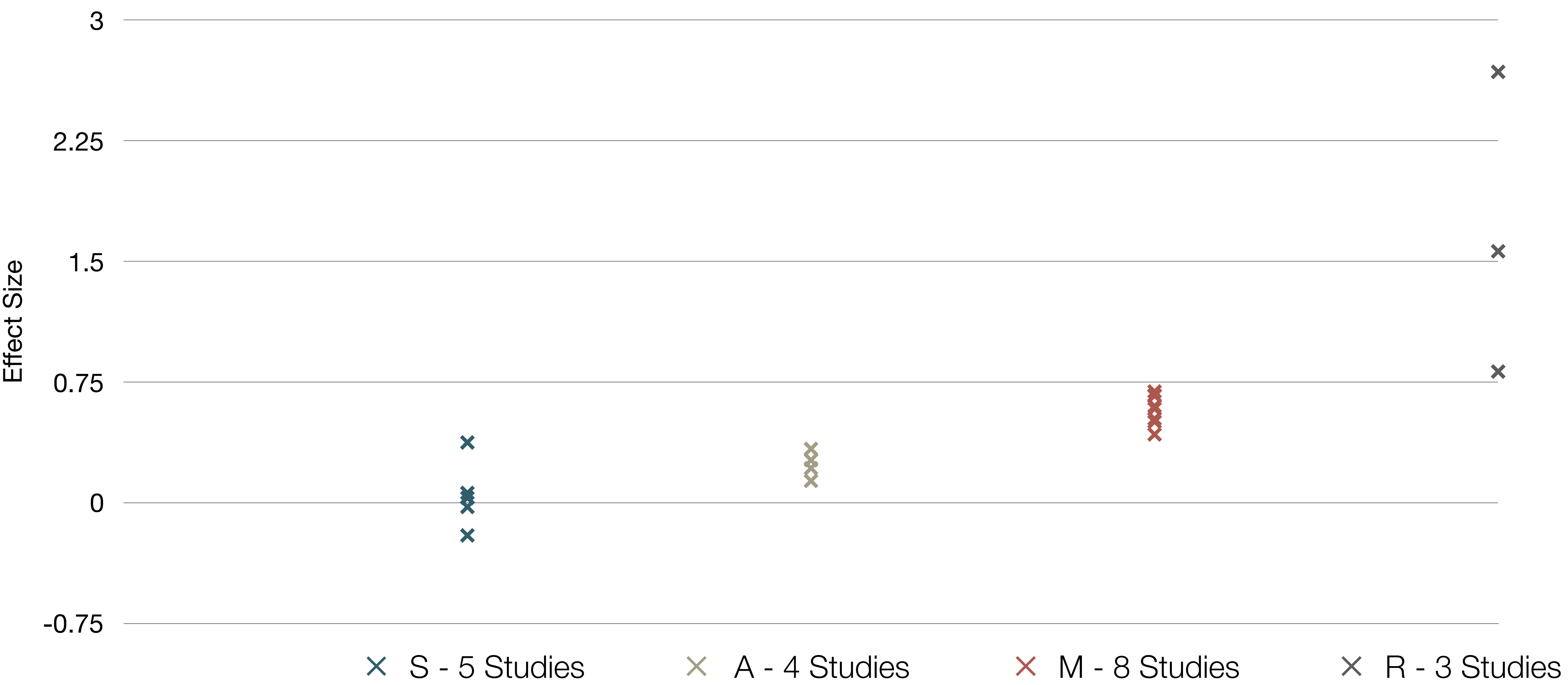
*Tech acts as a direct tool substitute,
with functional improvement*

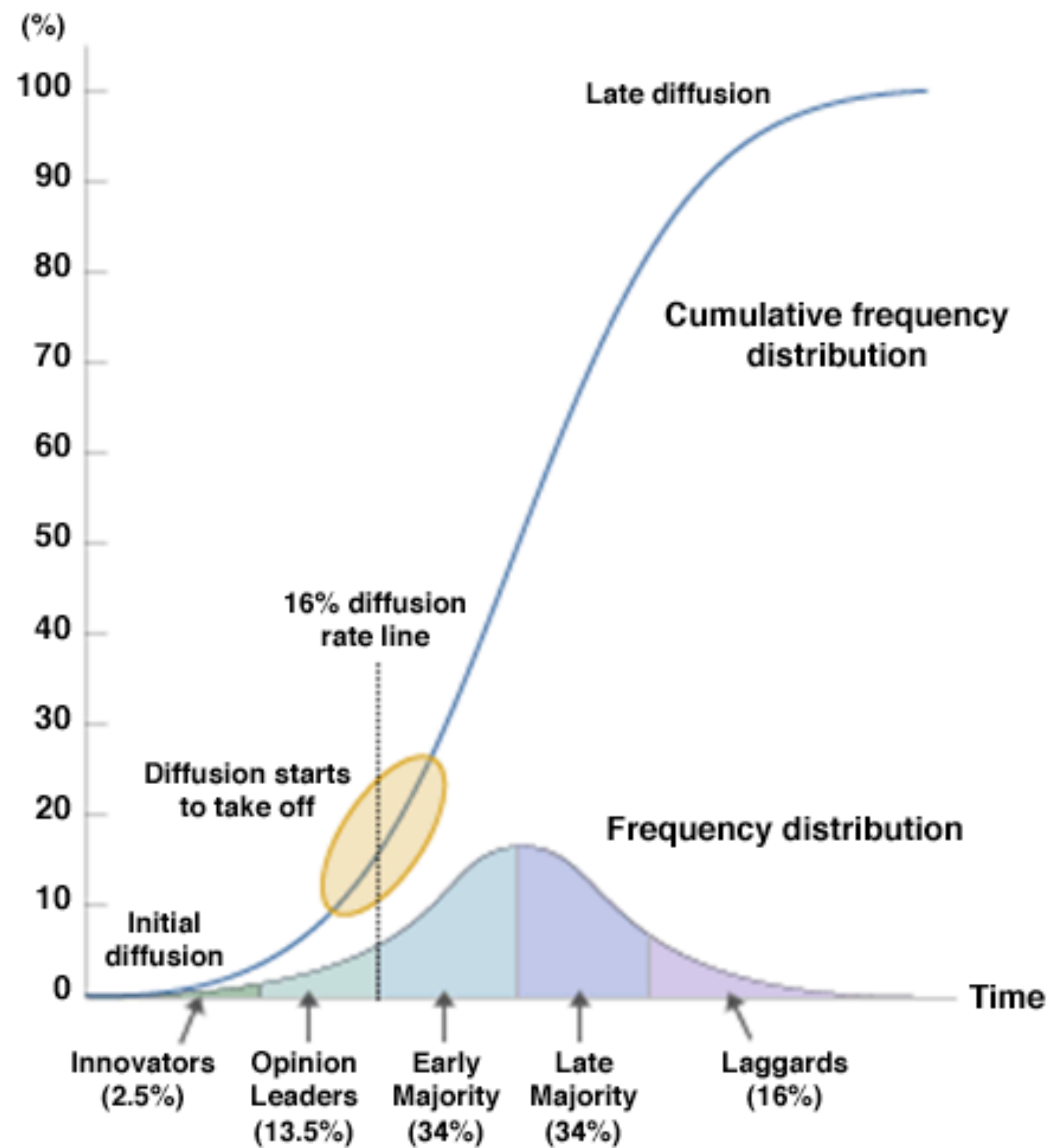
Substitution

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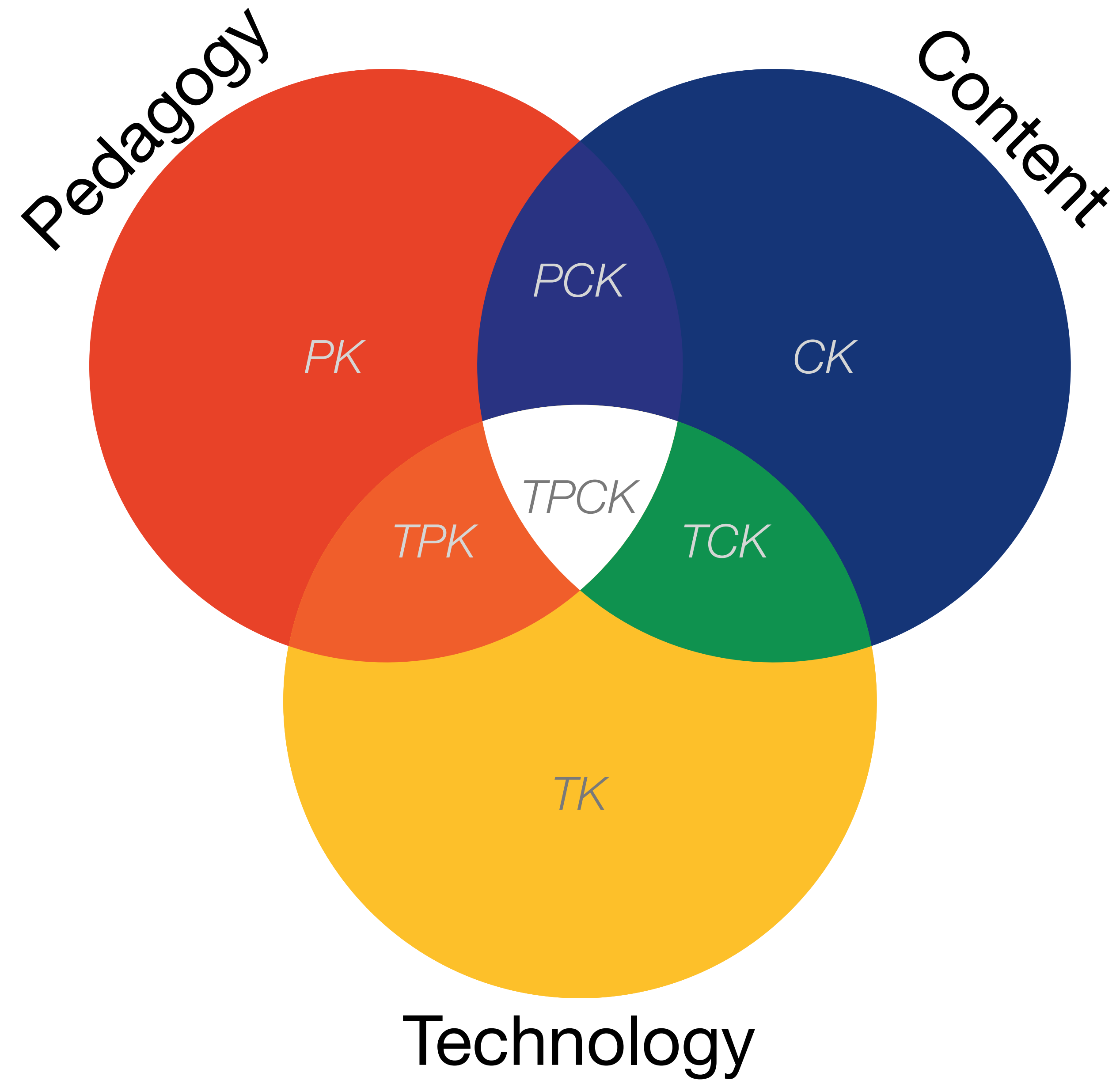
Enhancement

SAMR and the Use of Technology to Enhance Reading Performance in Middle School









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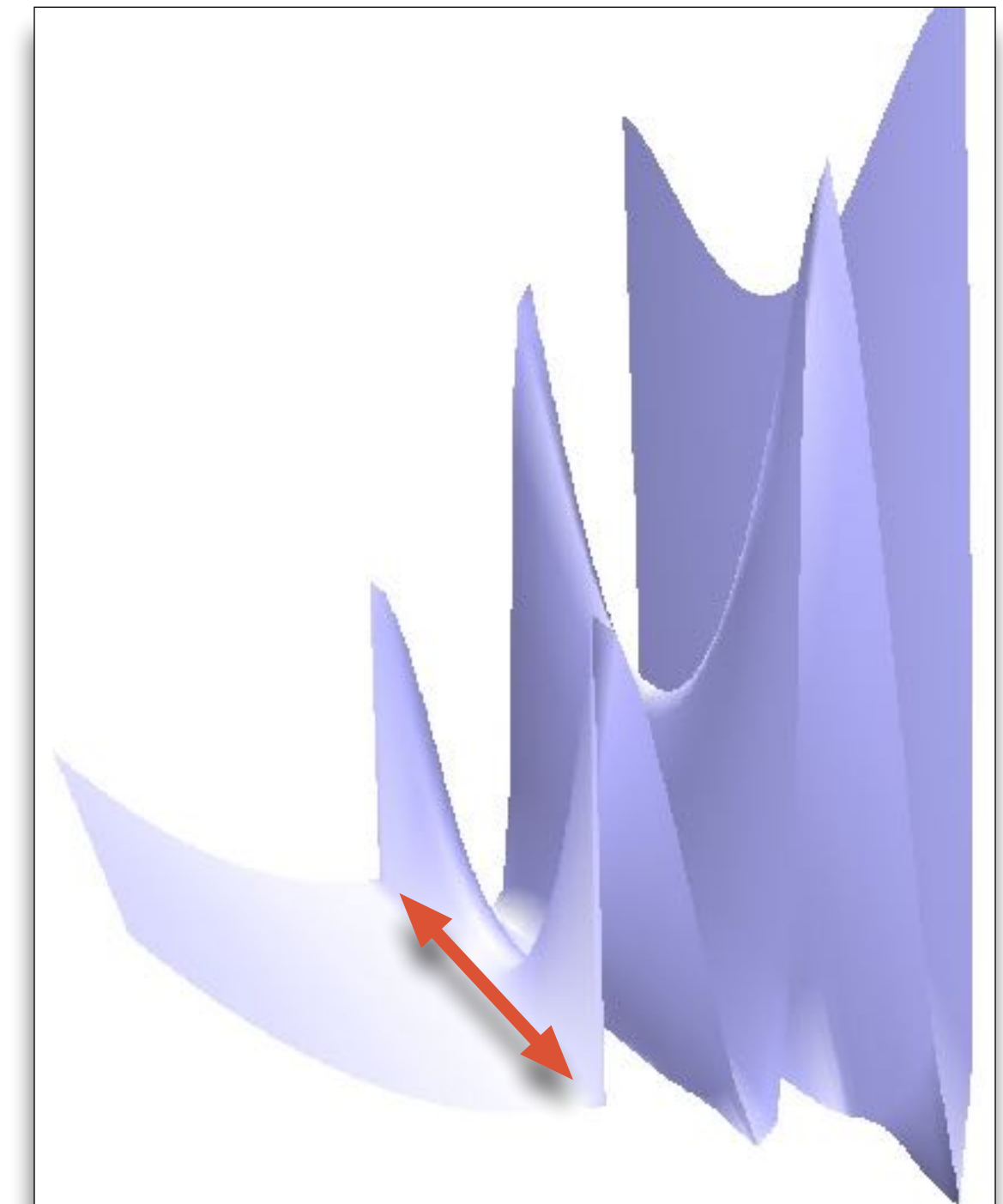
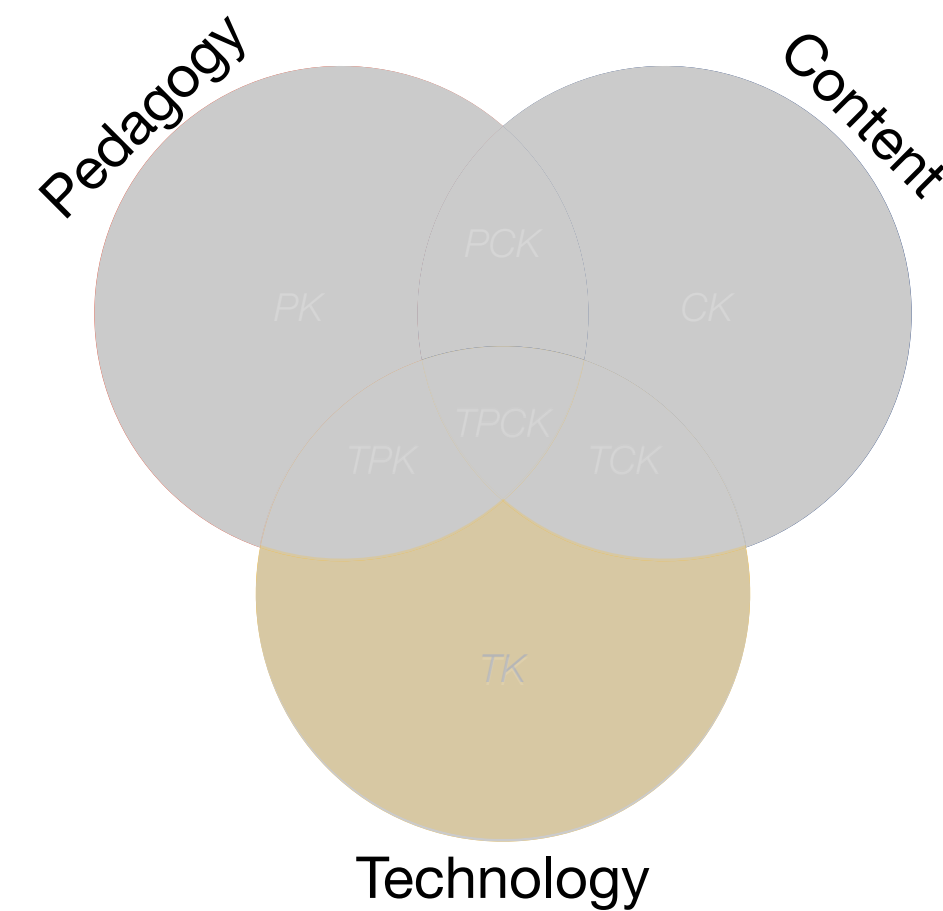
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Direct Use

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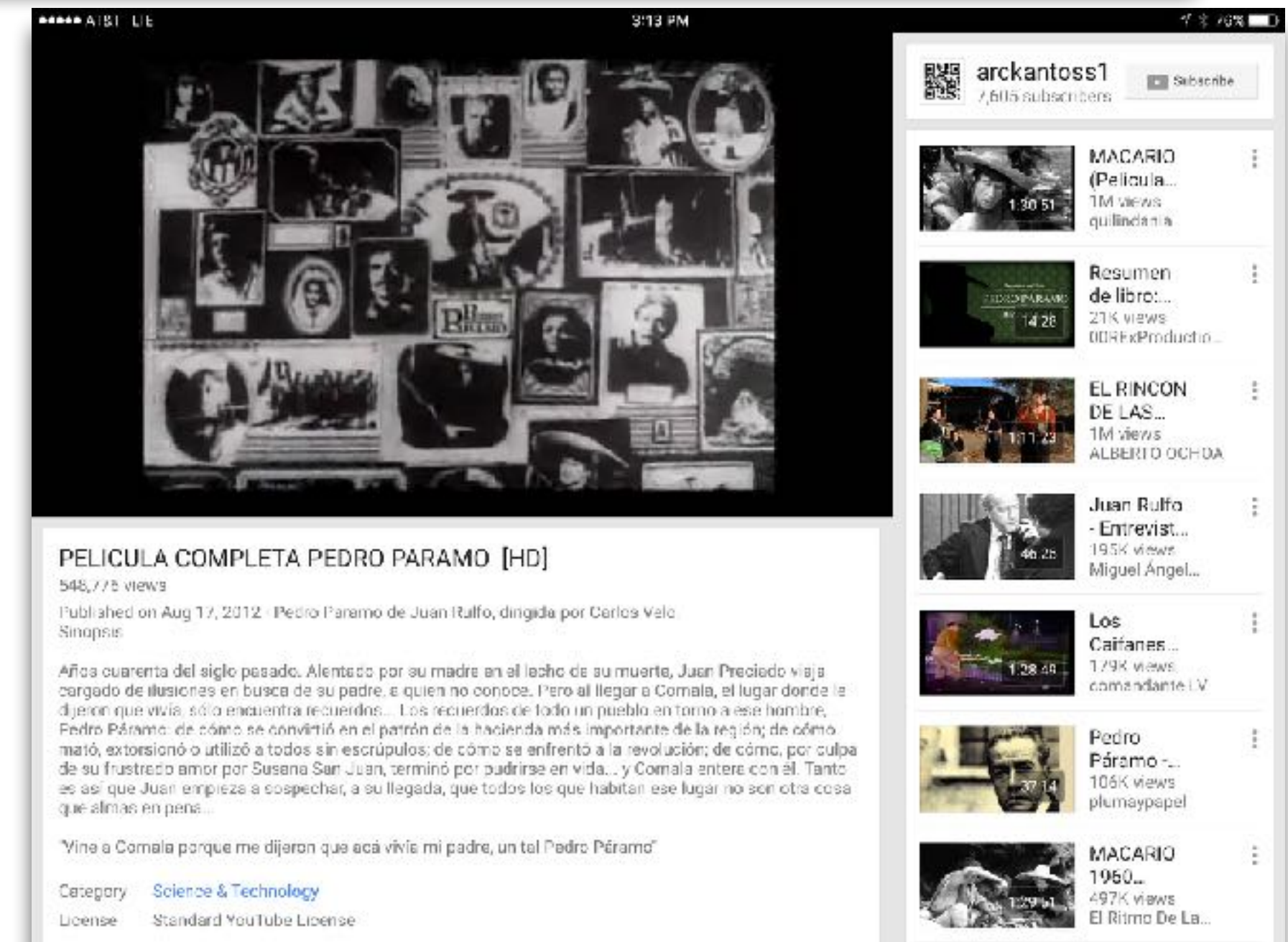
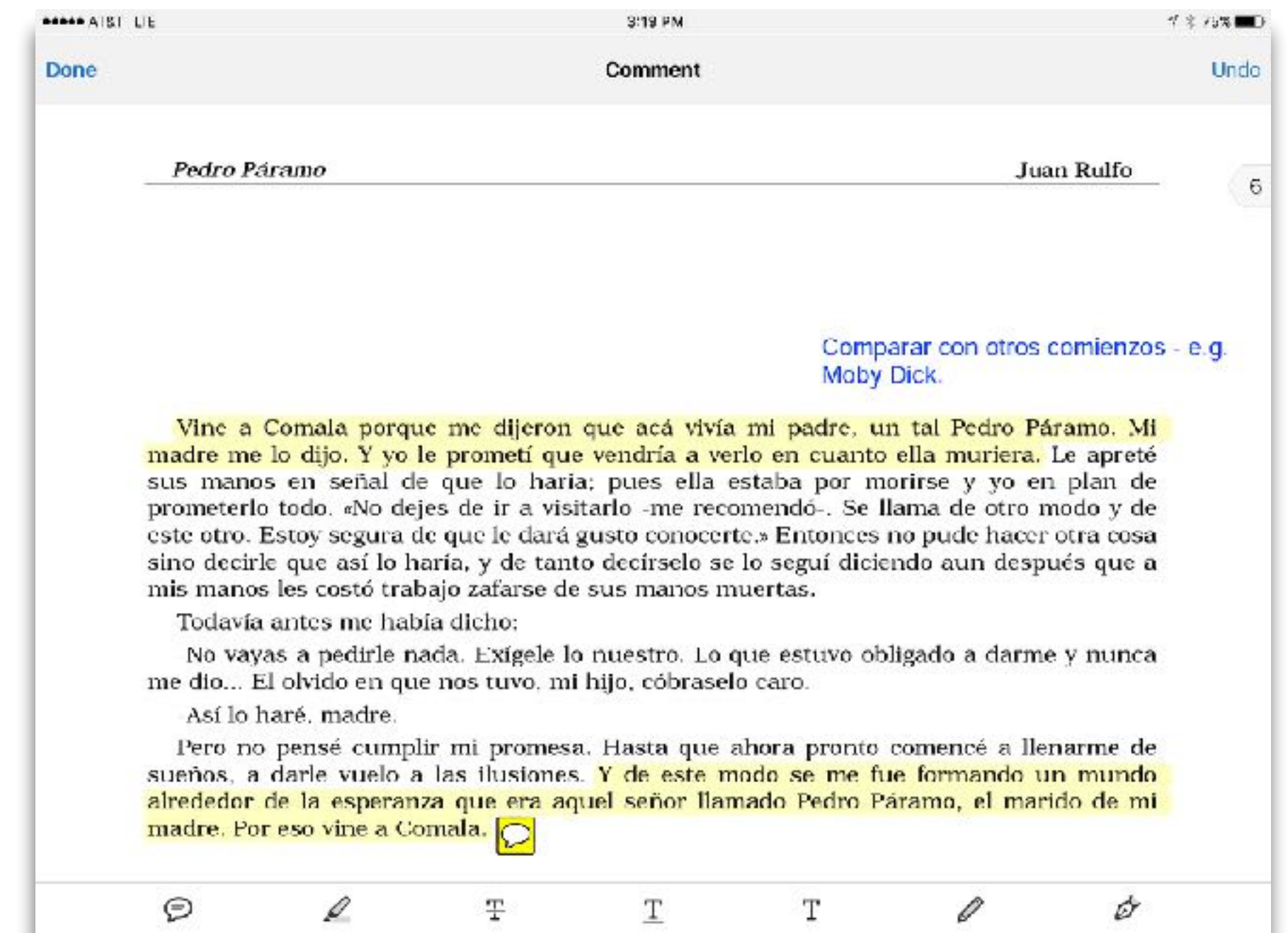
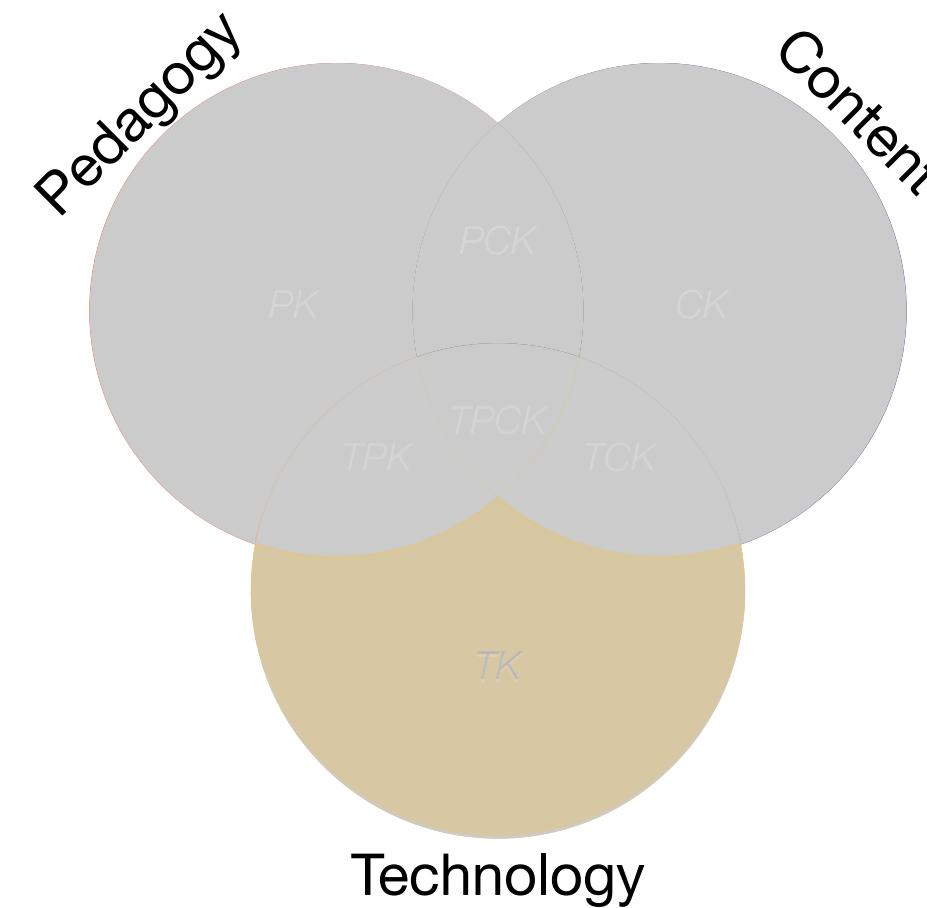
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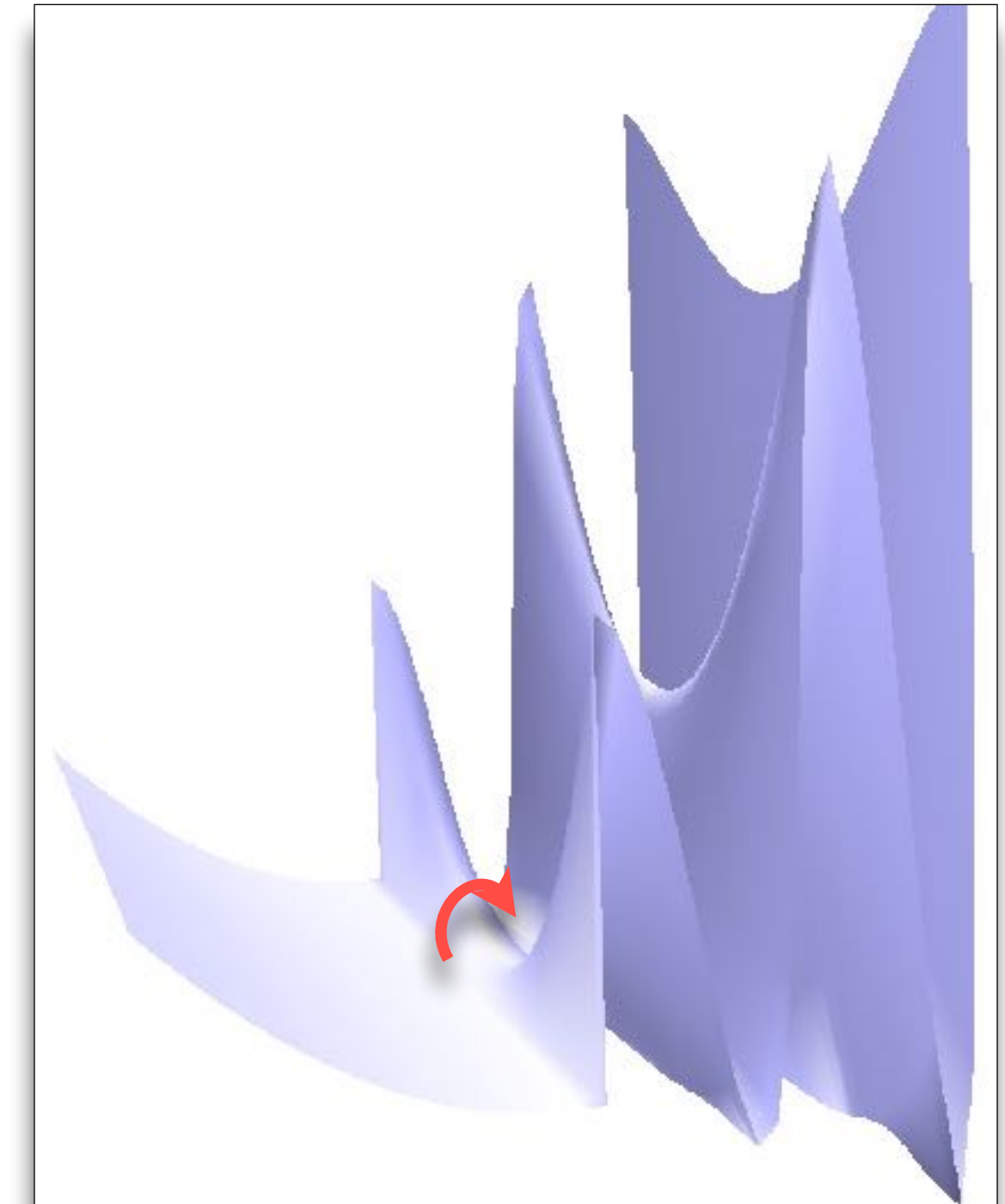
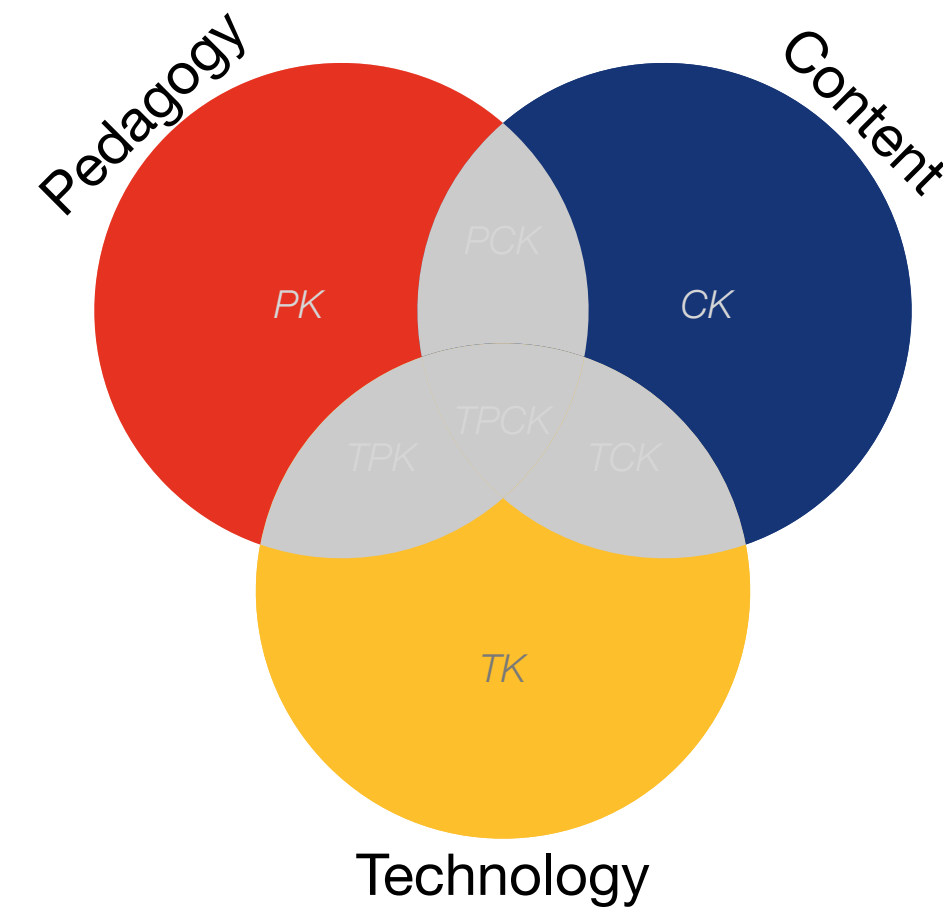
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Direct Observation

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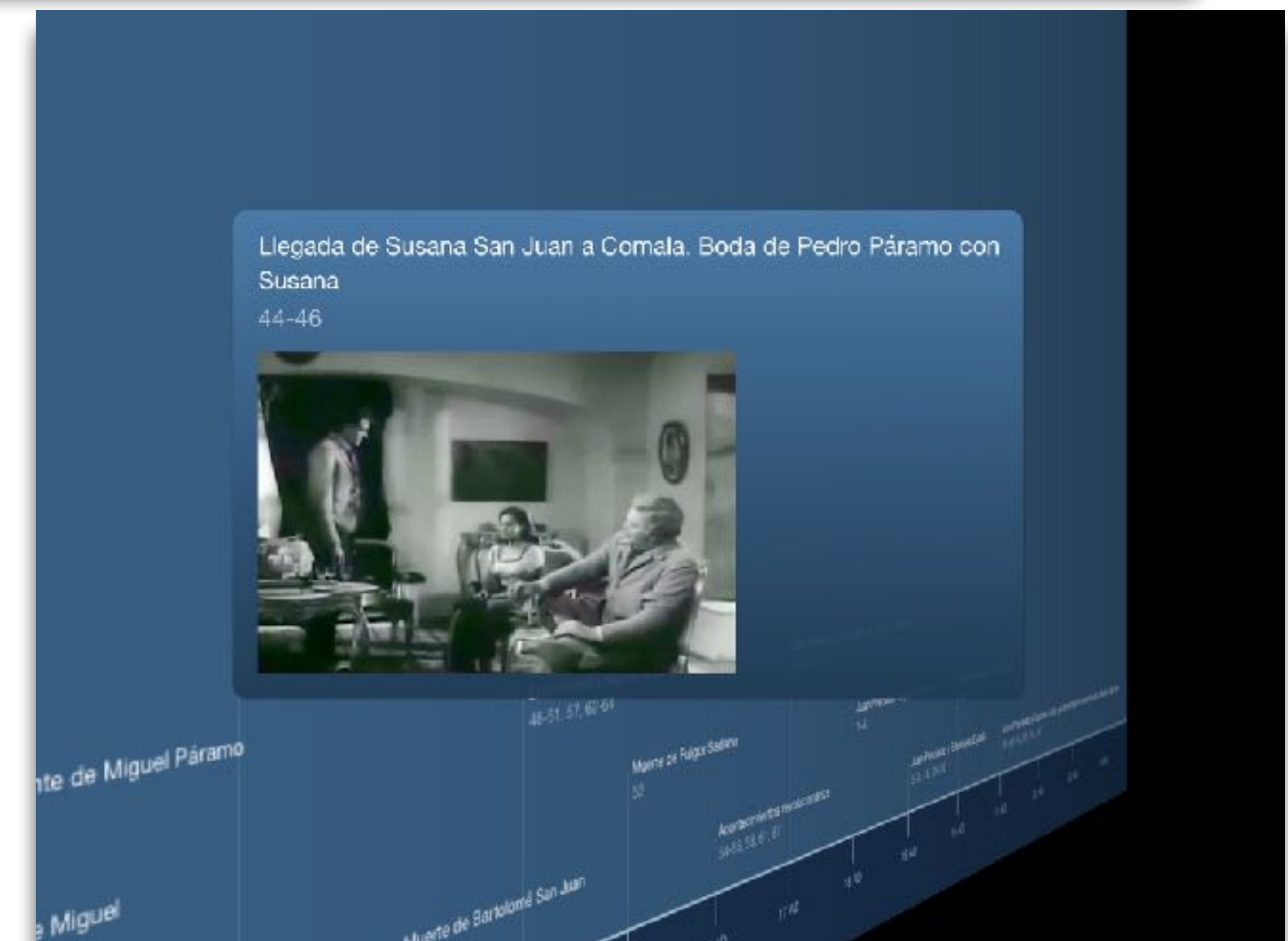
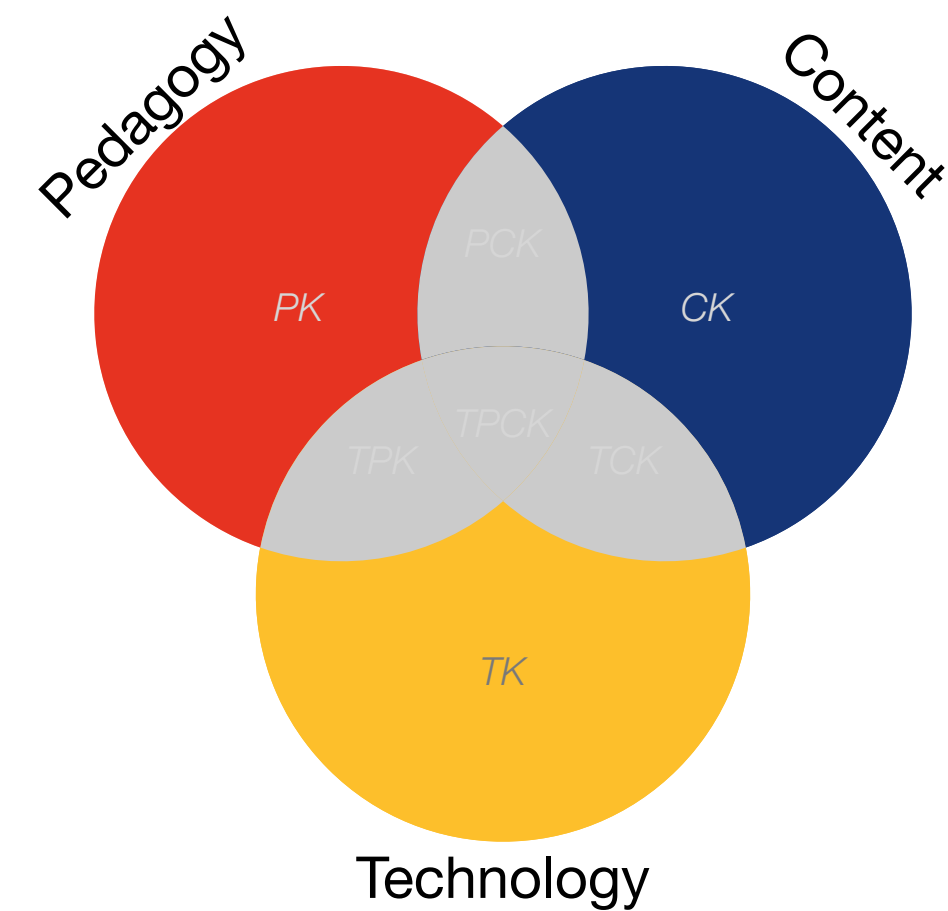
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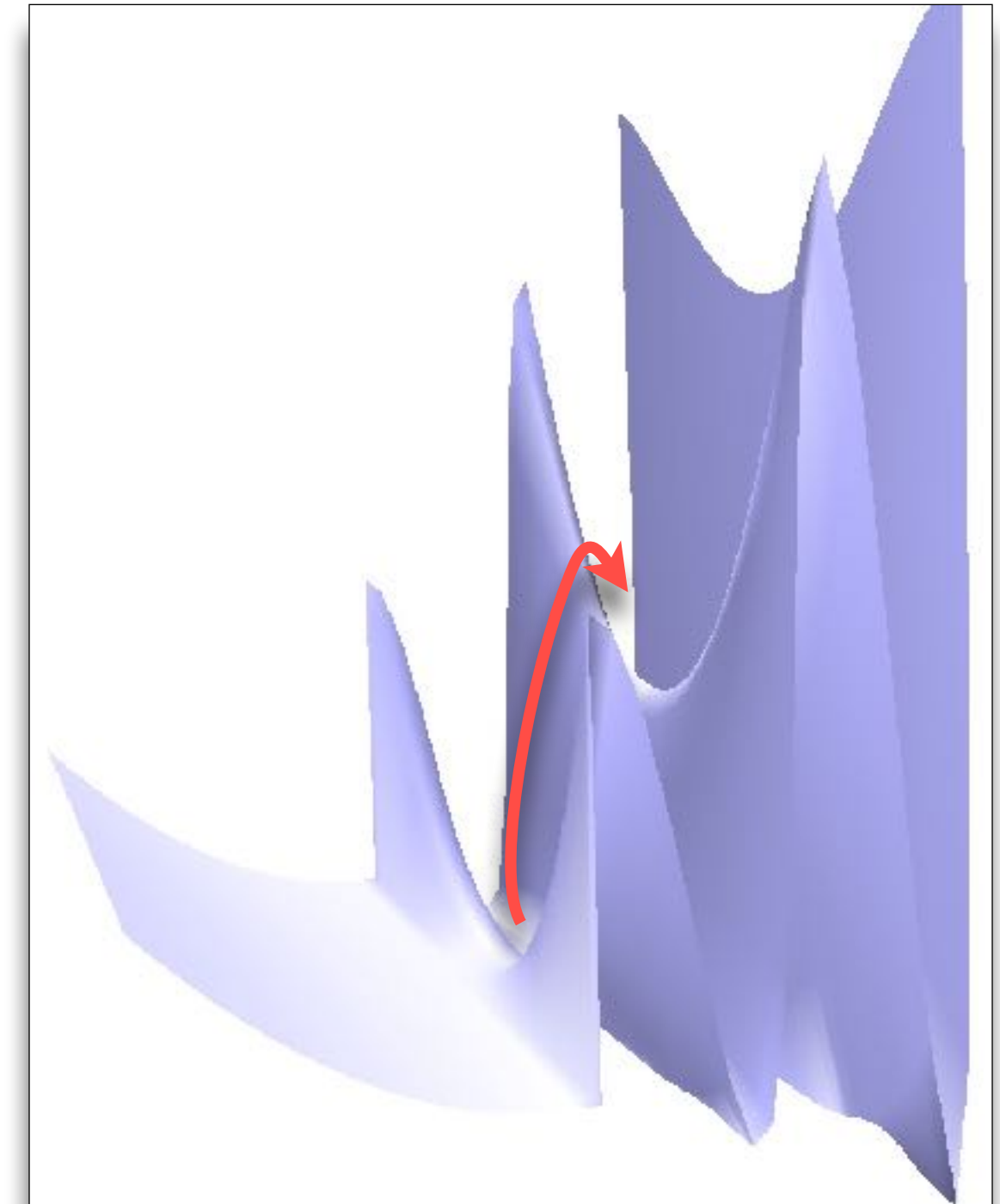
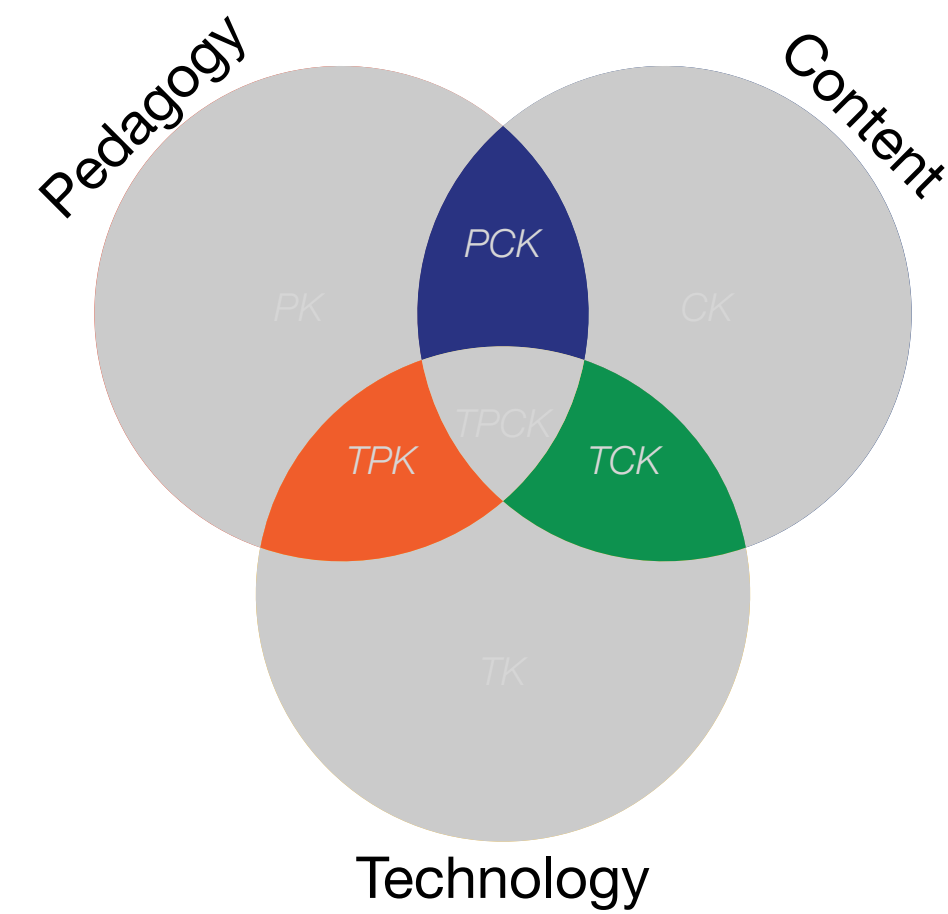
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Pattern Recognition

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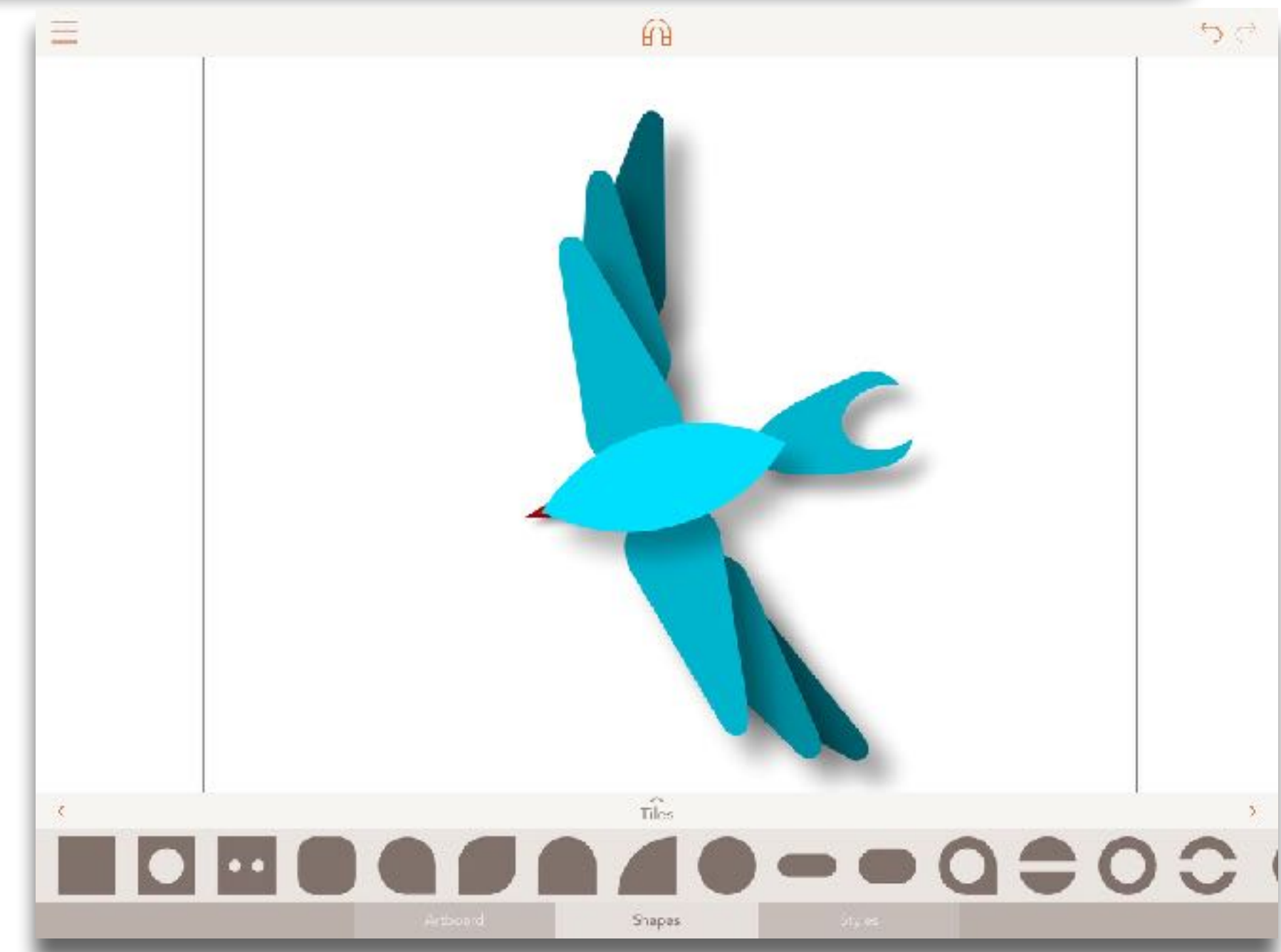
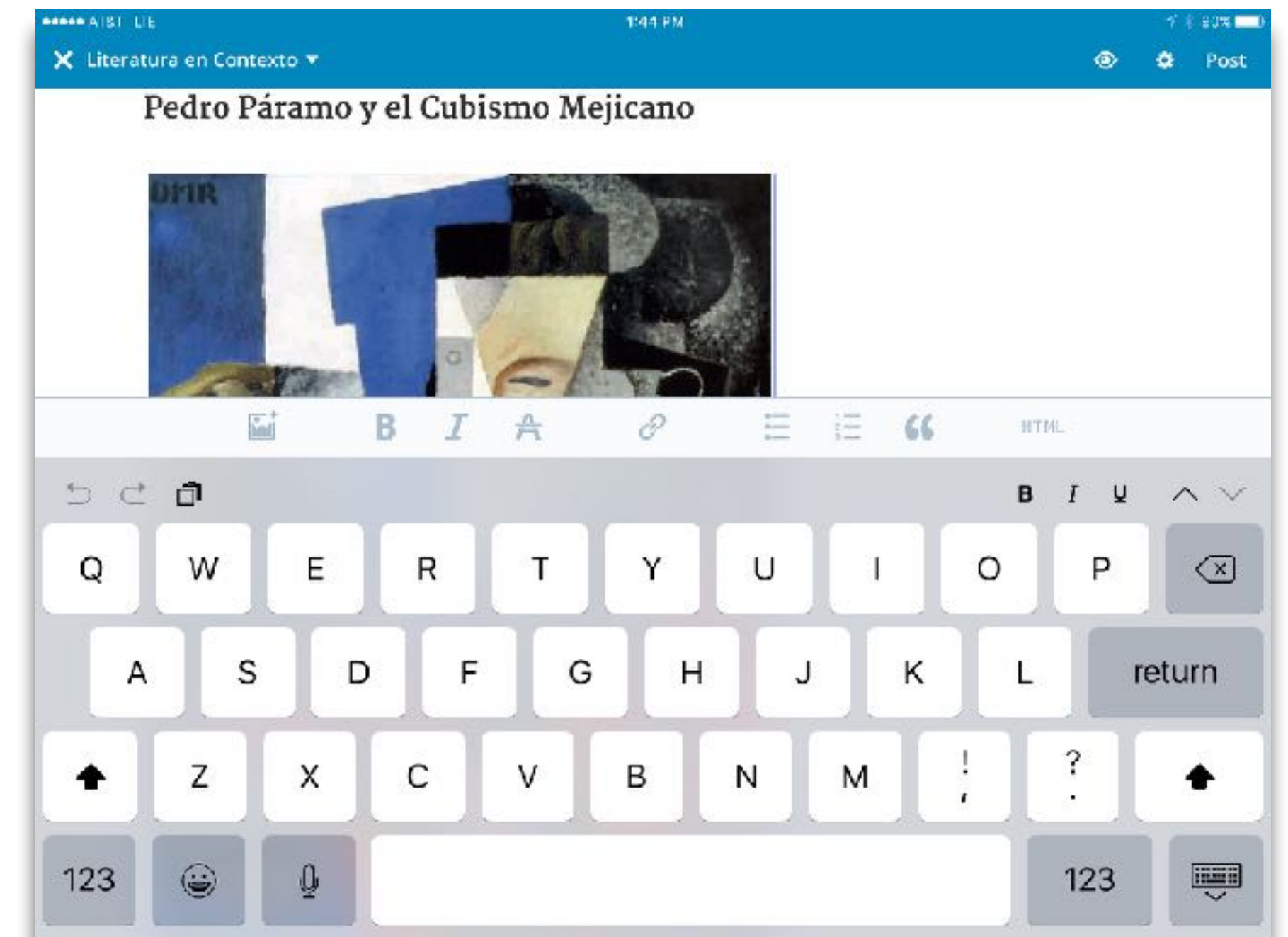
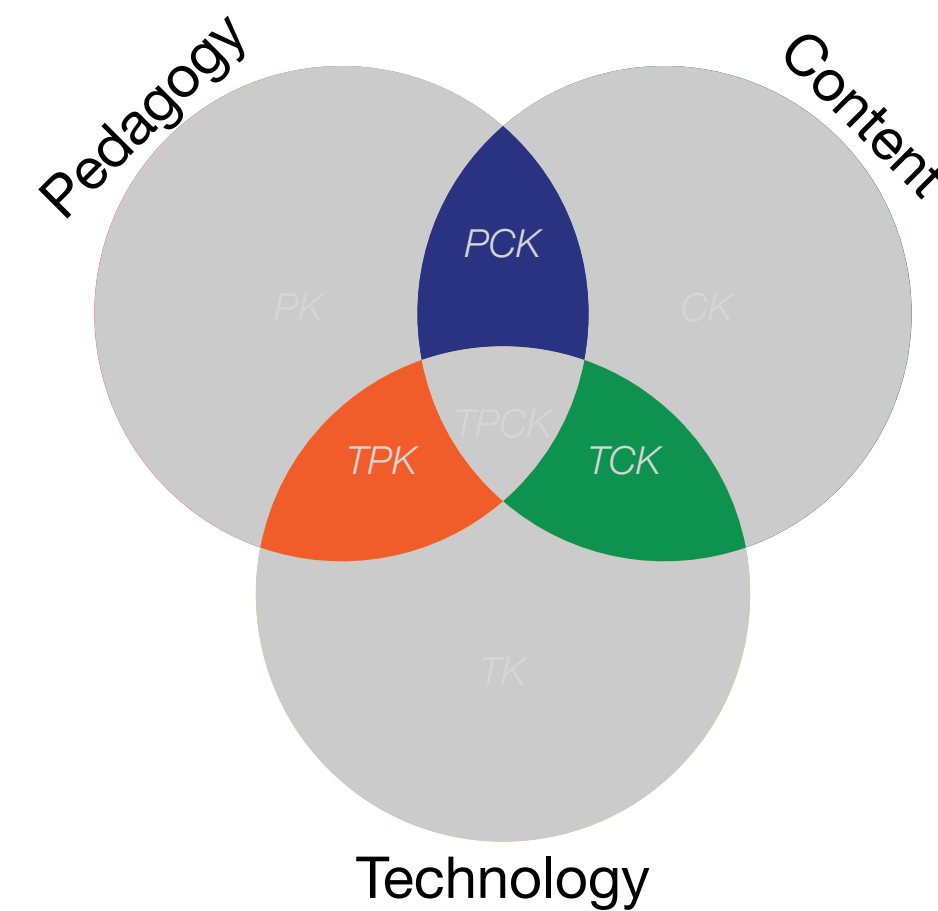
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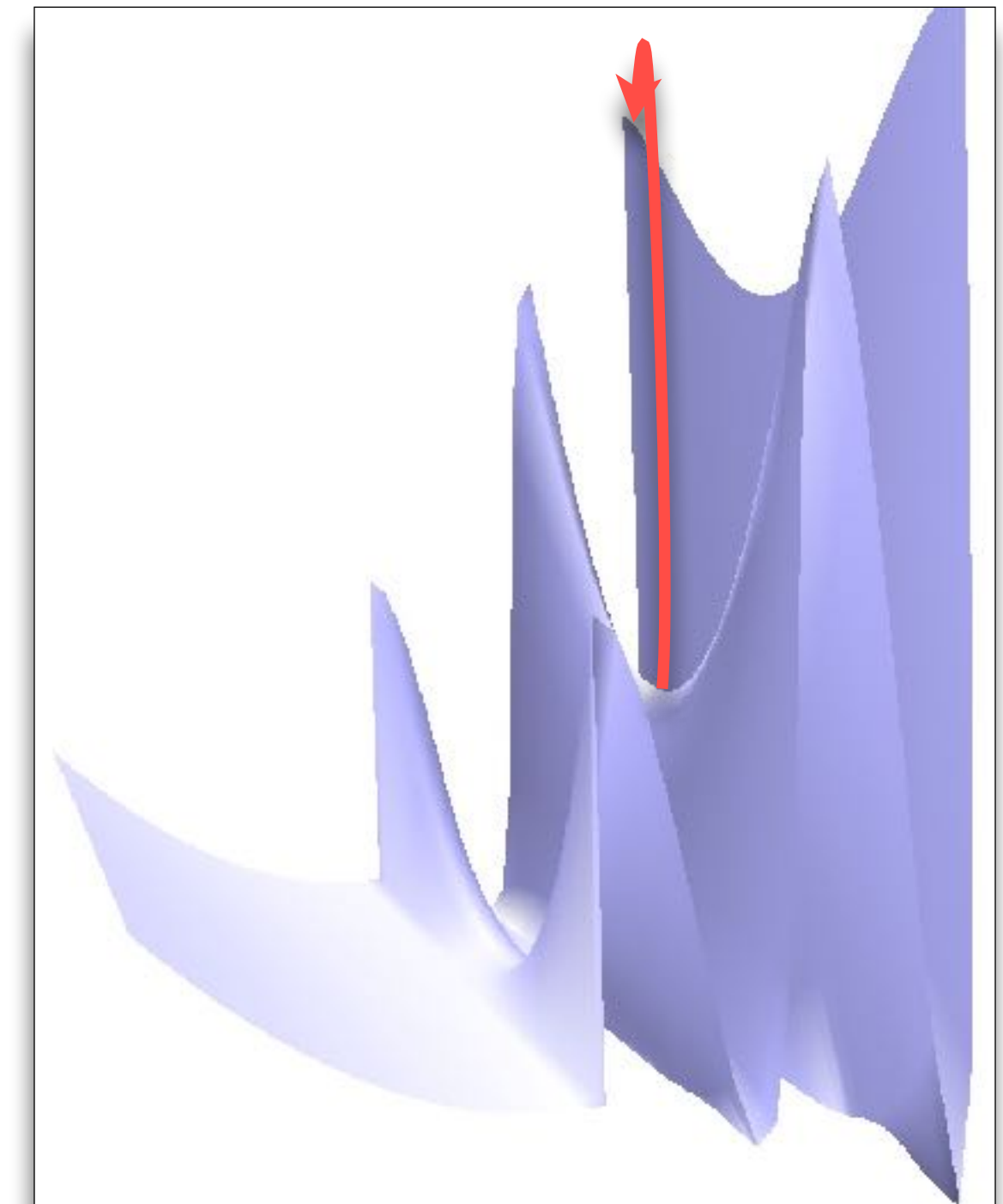
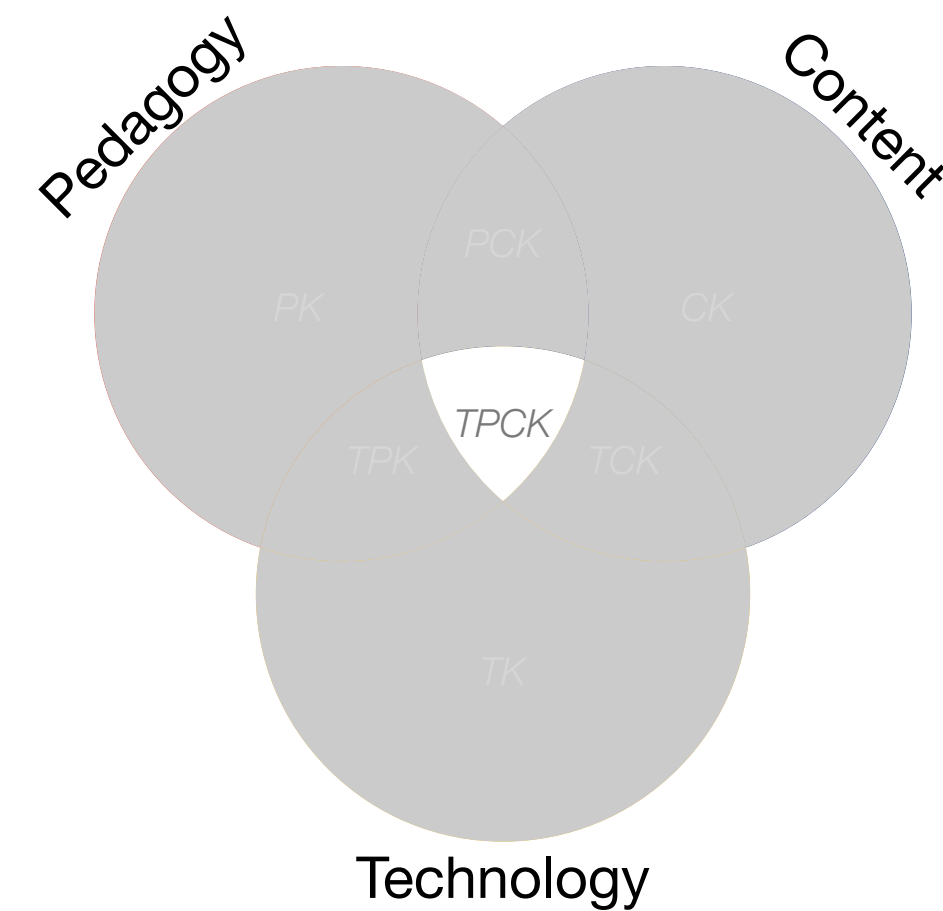
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Pattern Synthesis

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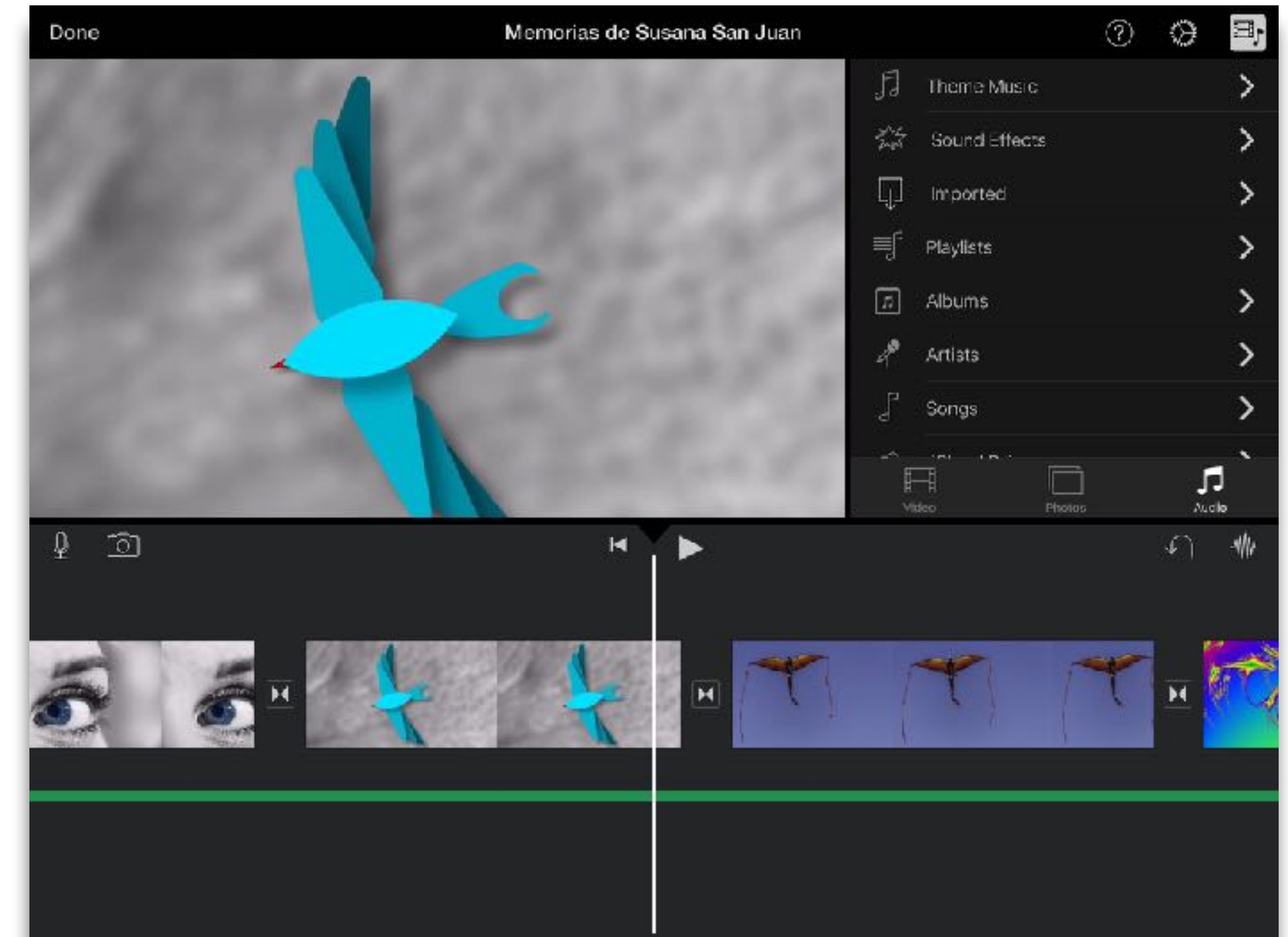
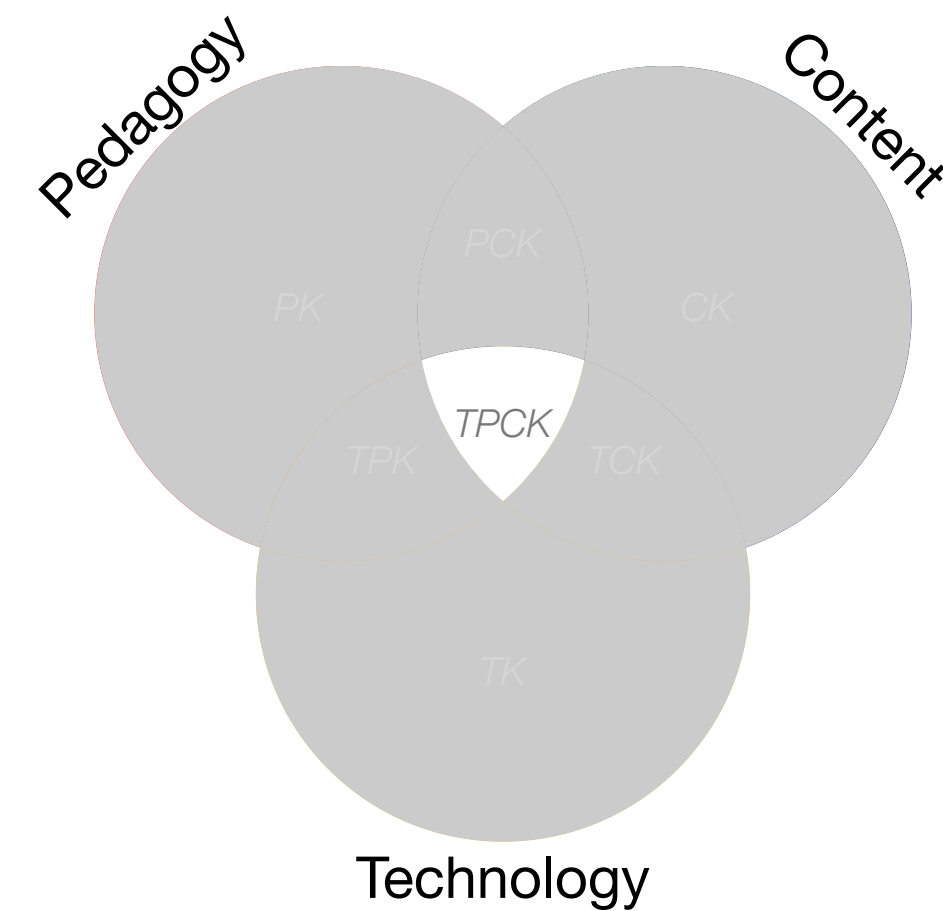
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Choosing the First SAMR Ladder Project: Three Options

- **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:**

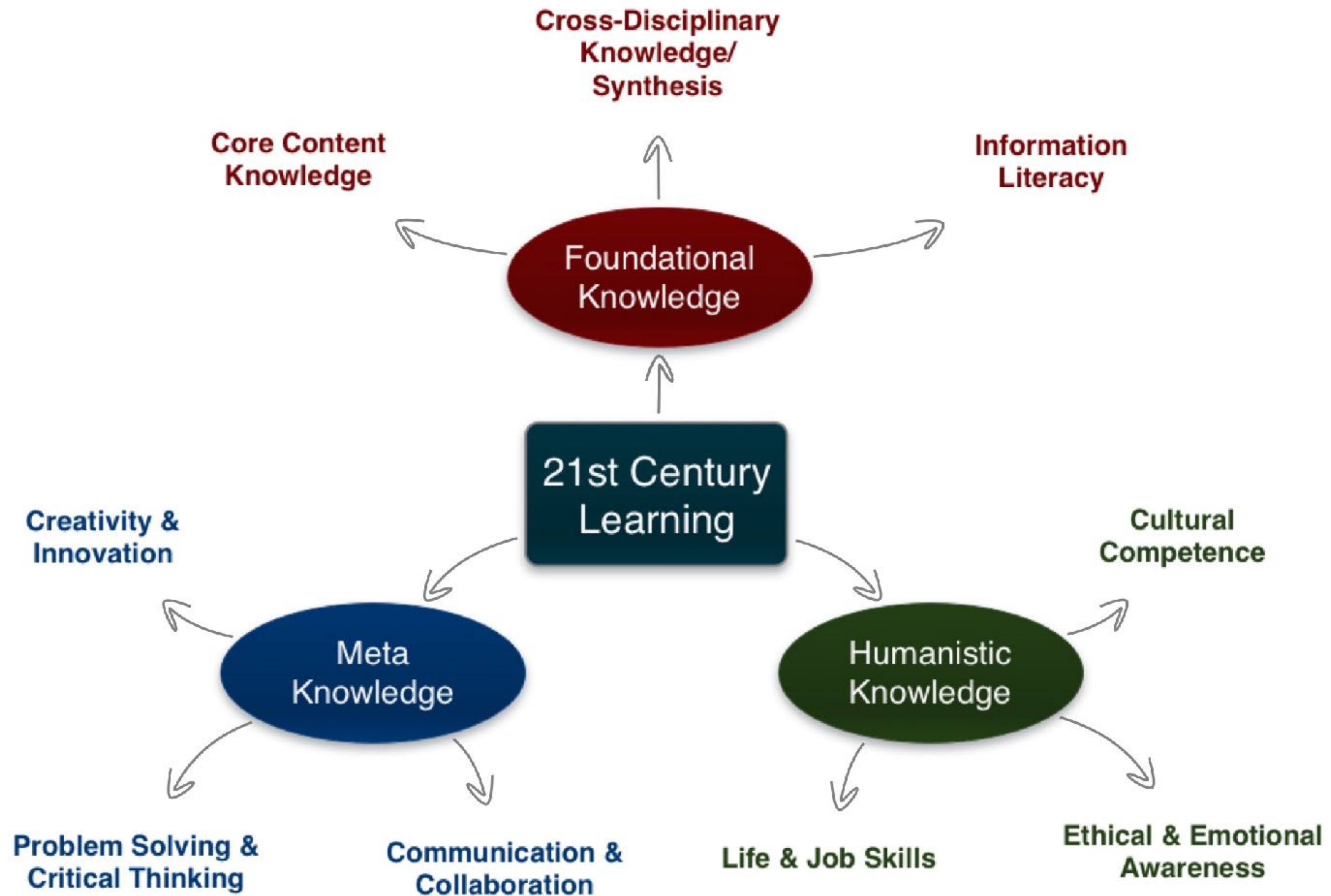
- Is there a topic in your class that a significant number of students get stuck on, and fail to progress beyond?

- **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?

S to A: The Value of Shared Practices

- Checklists
- Augmented Note Taking Strategies
- Visualization Methods (5 Primary Domains)
- Simple Blogging
- Simple Digital Storytelling Video
- Flipped Classroom – Materials Creation
- Flipped Classroom – Peer Discussion/Instruction Methods
- Simple Interactive Fiction
- LMS Practices



A to M: Refraction

- Pick:
 - A Content Area
 - A 21C Learning Skill
 - A Shared Practice
- Create a SAMR Ladder that looks at a topic in 1. through the lens of 2., focused into actual practice by 3.

M to R: Communities of Practice and Personal Learning Networks

- Internally: *School as Community of Practice*
 - A **domain** of shared interest, commitment, and competence;
 - A **community** where joint activities, discussions, information sharing, and help processes are focused around and by the domain;
 - A **practice** with a shared repertoire of resources, such as experiences, stories, tools, and problem-solving approaches.
- Externally: *Individual Personal Learning Networks*
 - Loosely structured around a range of tools, individually chosen - no two PLNs are the same;
 - Usually online, but may involve face-to-face components (e.g. meetups);
 - Resources may range from professional society websites, to educator blogs, to Facebook groups, to Twitter feeds;
 - Involvement may range from primarily reading sources, to participating in discussions, to authoring new materials.

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

Bookmarks



RSS Feeds

Discussions



Microblogging

Blogging

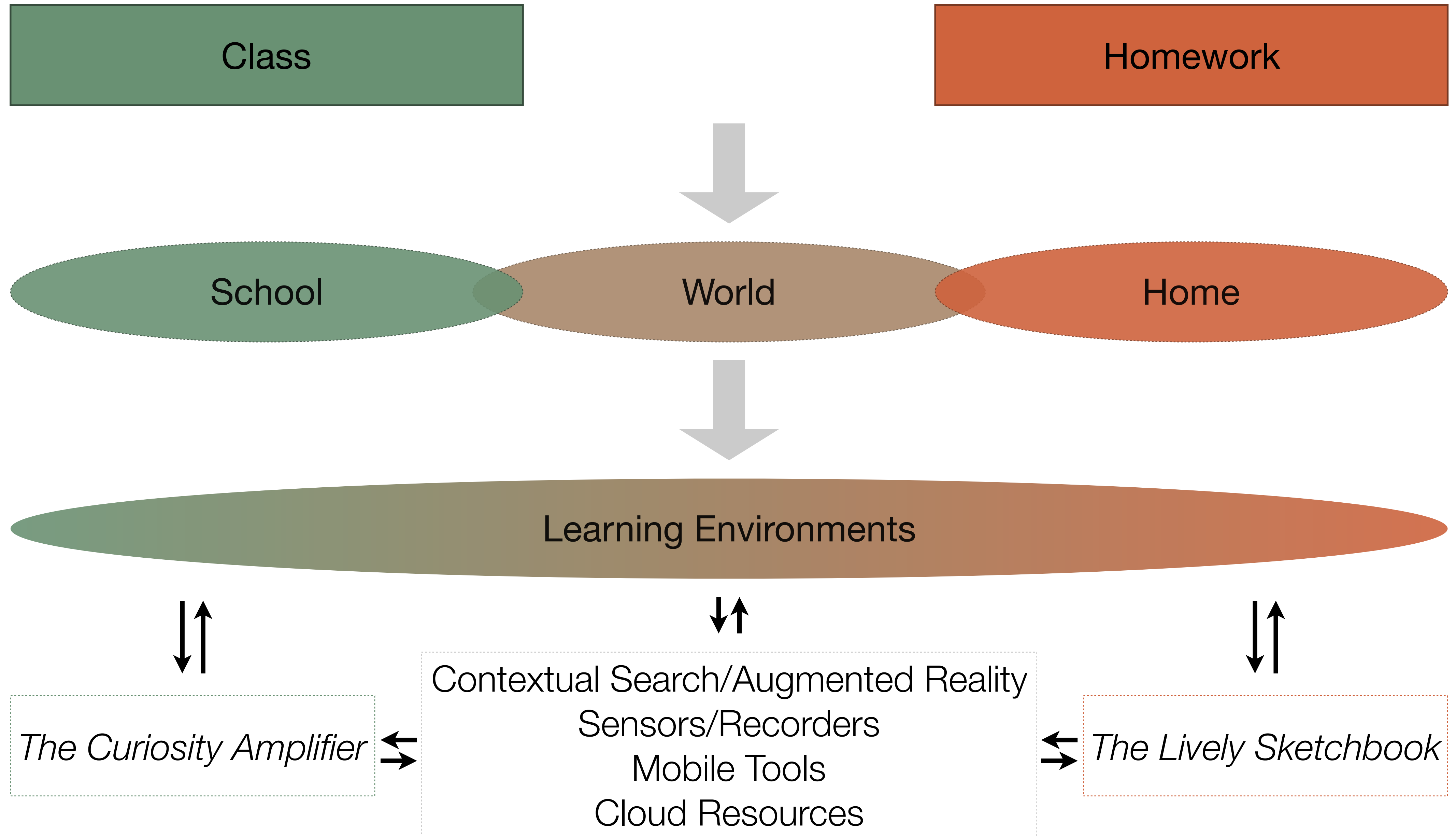


Wikis

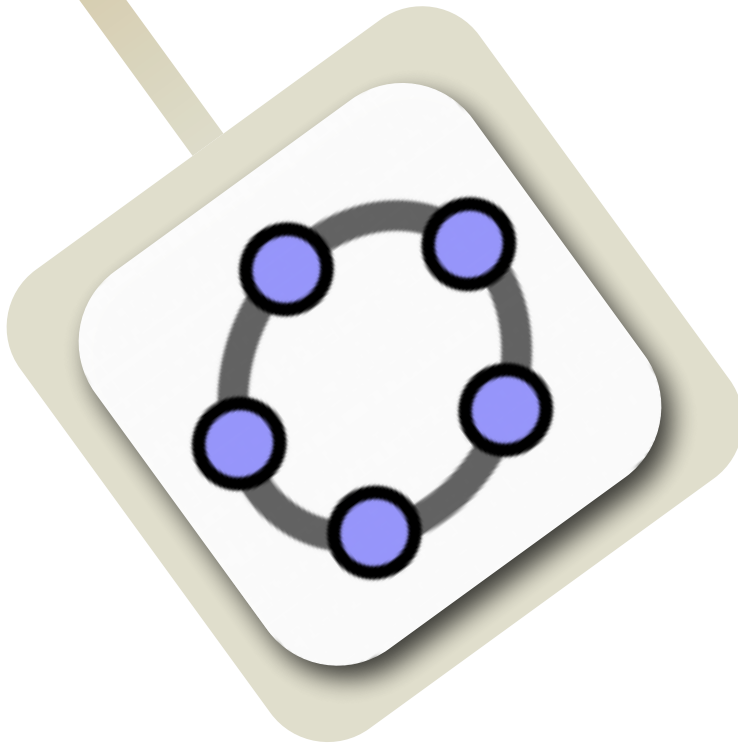
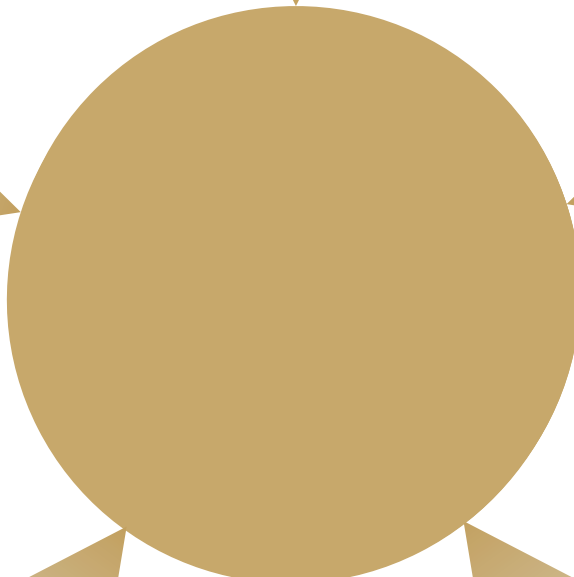
Telepresence

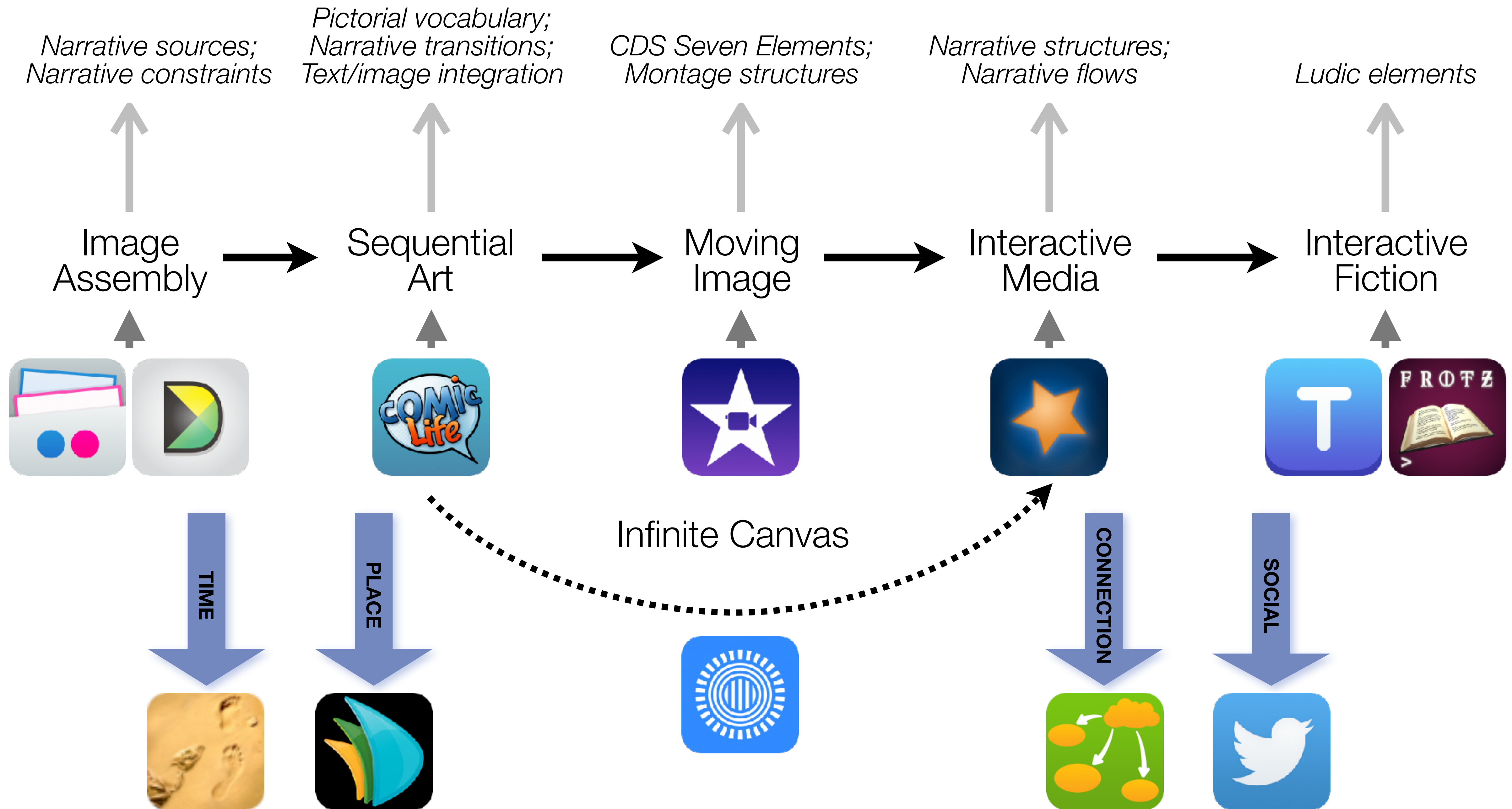


File Sharing



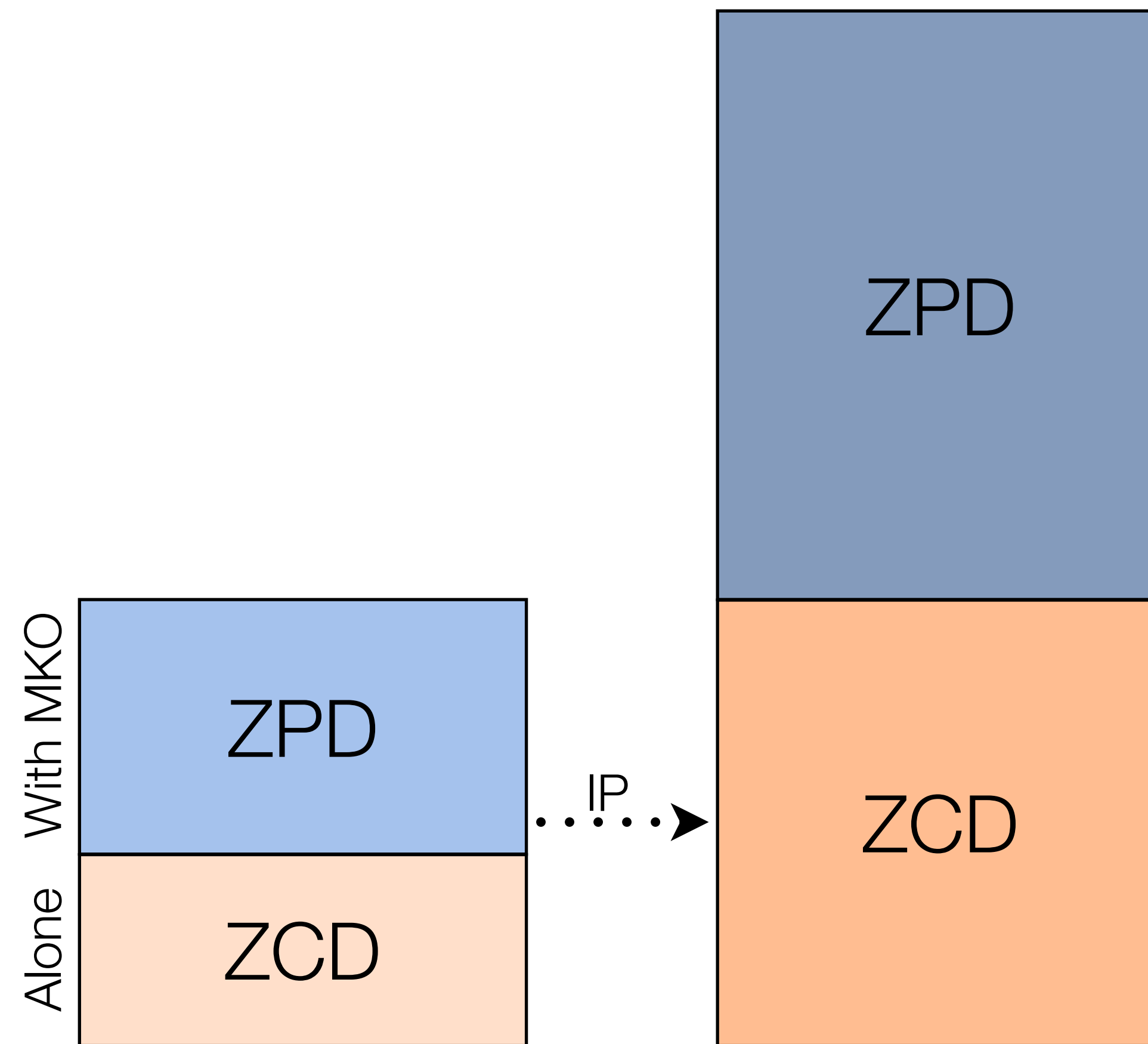
Visualization



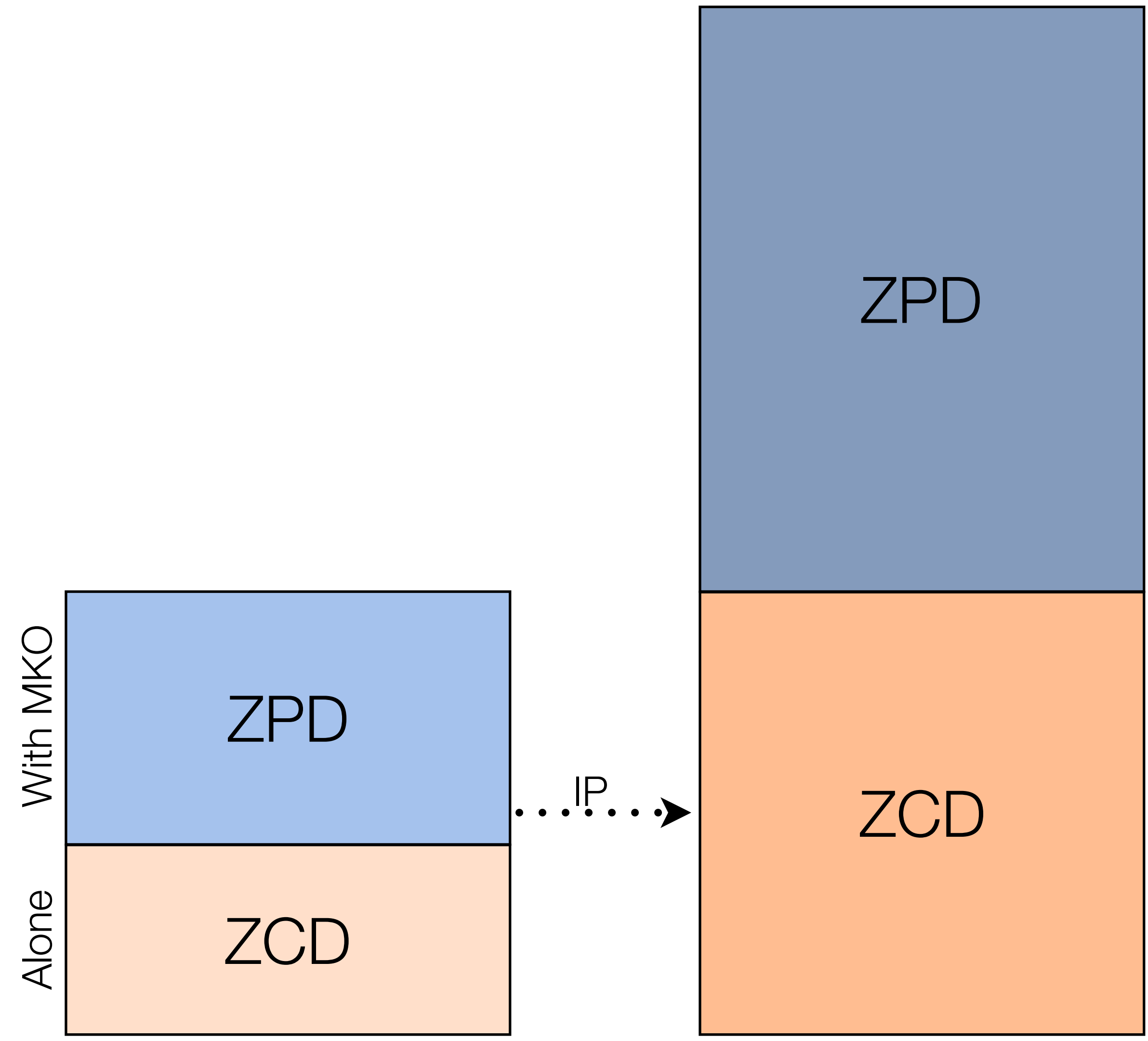


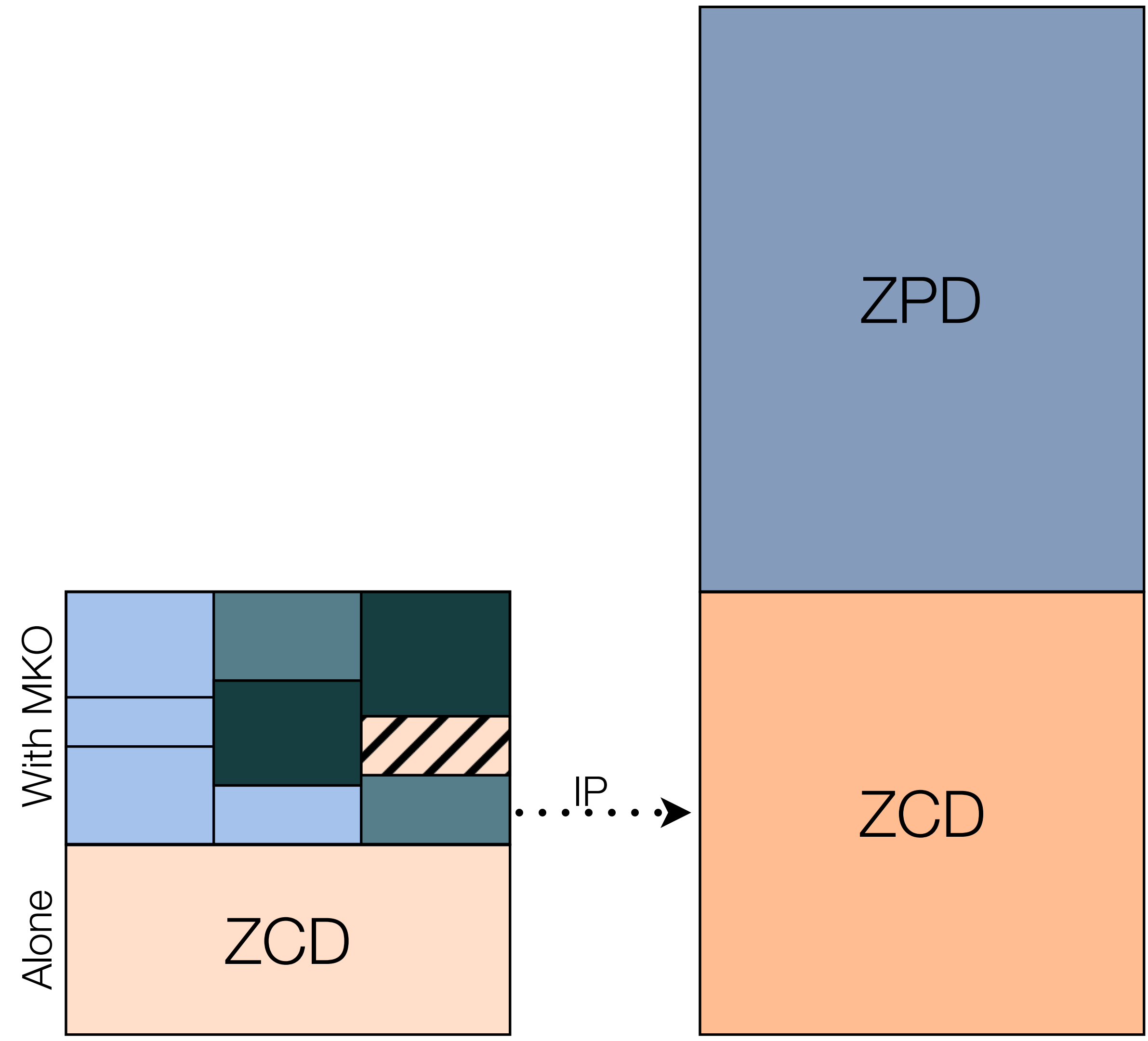
Formal Definition of **Game** (Salen & Zimmerman)

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



- Zone of Proximal Development (ZPD):
 - Region between:
 - what a learner can accomplish independently (the Zone of Current Development, ZCD)
 - what they can accomplish with assistance from a “more knowledgeable other” (MKO)
- “...what a child can do with assistance today she will be able to do by herself tomorrow.”
- This is an iterative process:
 - The ZCD and ZPD change over time;
 - Independent practice (IP) is required to close the loop.





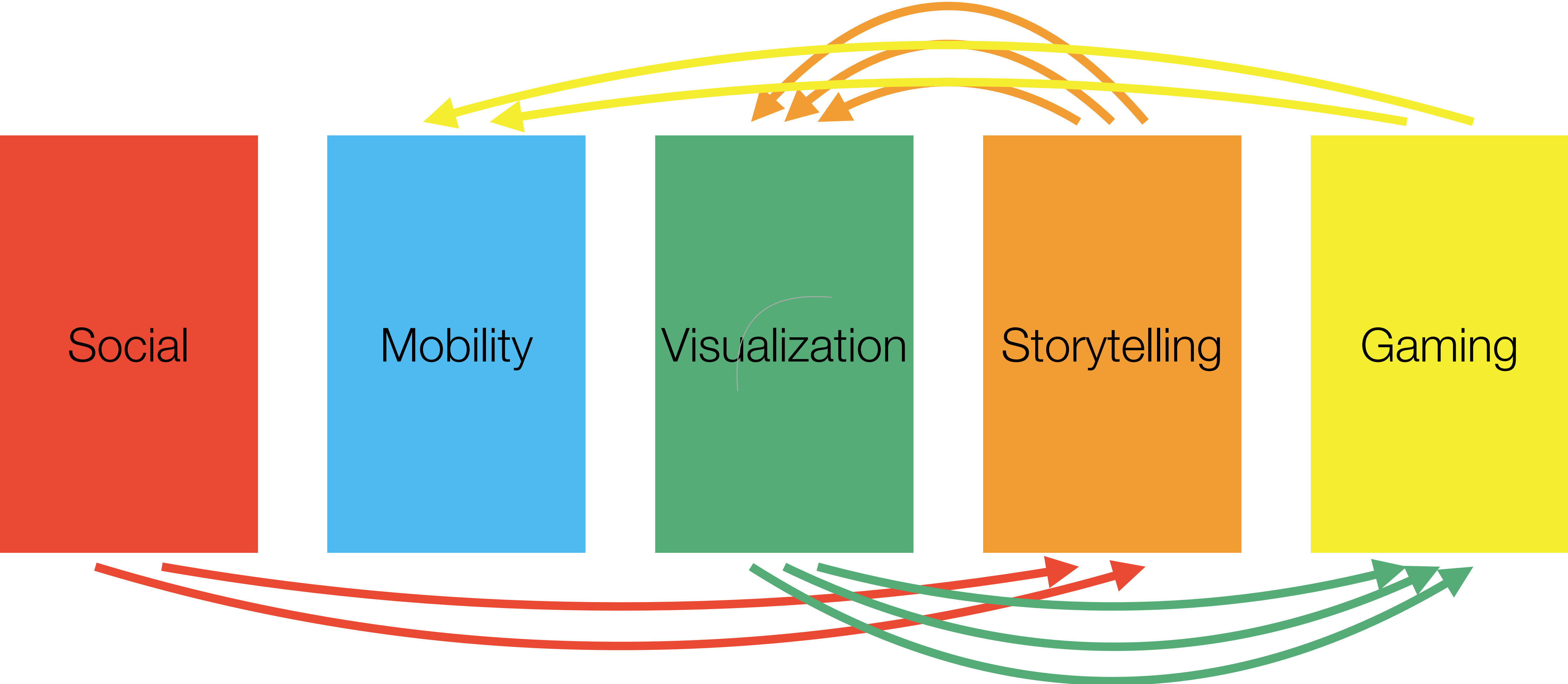
The EdTech Quintet – Associated Practices

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

The EdTech Quintet – Associated Practices

Social	Provides diversity to the ZPD
Mobility	Creates the context for the process
Visualization	Aids in segmenting ZPD, bridging gaps
Storytelling	Aids in the integration of the ZPD
Gaming	Provides frameworks for independent practice

Diversifying Practice: Weaving through the EdTech Quintet



A Prototype Teacher Leader PD Design

- Session 1 (Social): SAMR ladder + lightweight wiki, blog
- Session 2 (Storytelling): poetry poster, news social stories, arts explanation video
- Session 3 (Visualization): historical storymaps, Shakespeare network maps, GeoGebra machines for understanding
- Session 4 (Gaming): Twine IF, lightweight sim
- Session 5 (Mobile): ARG w/environmental sensors

Hippasus



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