The background of the slide is a vertical gradient from orange at the top to purple at the bottom. Overlaid on this is a complex network of white lines connecting various sized white and light-colored circular nodes, creating a web-like structure that suggests interconnectedness and relationships.

Smarter Together: How Our Relationships Enhance How We Think

UNM Advisor Institute
September 24, 2024

Key Concepts

Cognitive Apprenticeship

Tacit Knowledge and Re-enactive Empathy

Social Encoding Advantage

Groupiness

Transactive Memory Systems



THE EXTENDED MIND

The Power of
Thinking Outside
the Brain

ANNIE M. PAUL

Where did this
come from?

Ways of extending our brains beyond our skulls:



Bodies

Thinking with Sensations
Thinking with Movement
Thinking with Gestures



Surroundings

Thinking with Natural Spaces
Thinking with Built Spaces
Thinking with the Space of Ideas



Relationships

Thinking with Experts
Thinking with Peers
Thinking with Groups

Thinking with Experts: Cognitive Apprenticeship

Modeling

Demonstrating the task while explaining it aloud

Scaffolding

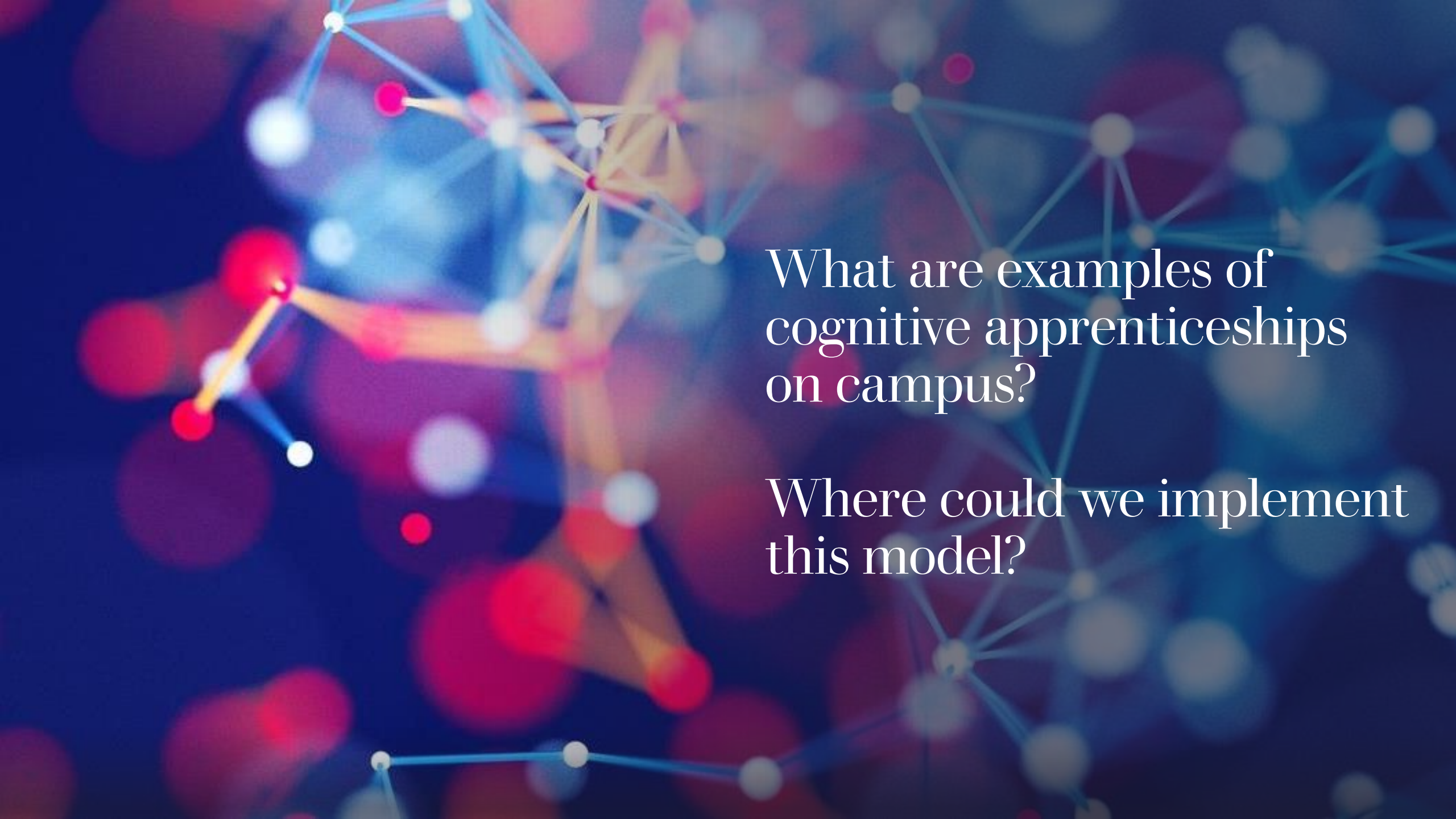
Structuring an opportunity for the learner to try the task themselves

Fading

Gradually withdrawing guidance as the learner becomes more proficient

Coaching

Helping the learner through difficulties along the way



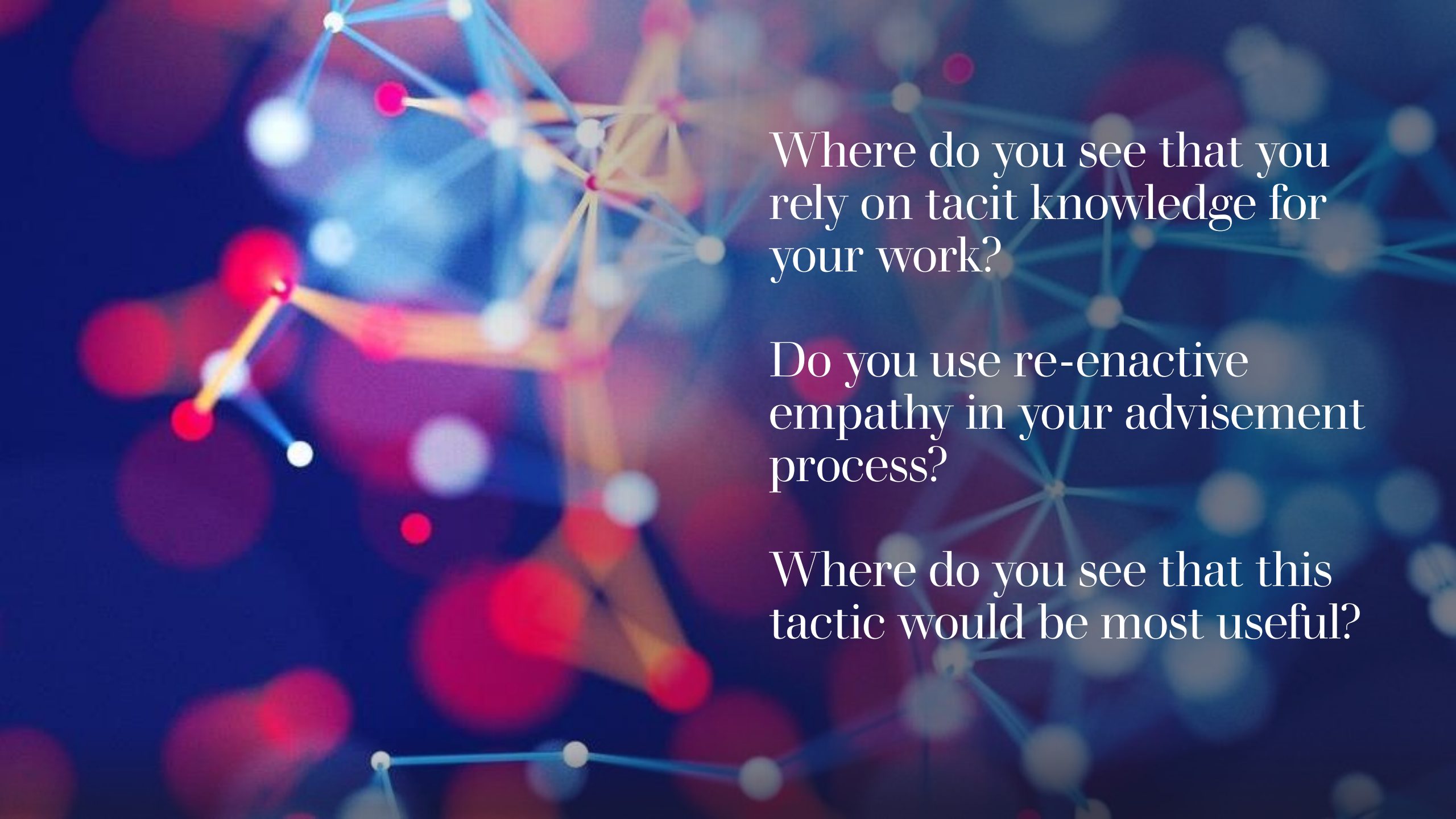
What are examples of
cognitive apprenticeships
on campus?

Where could we implement
this model?

Thinking with Experts: Tacit Knowledge and Re-enactive Empathy

- Tacit knowledge automatization is why Serena Williams can't help you with your tennis serve.
- "In the era of knowledge work, it's not only the case that learners and novices must become more assiduous imitators; instructors and experts must also become more legible models."
- Re-enactive empathy is the process of reenacting what it was like to be a beginner yourself to more deeply appreciate the challenge facing the learner.
- Break the process down into steps, and then break those steps into micro-steps.





Where do you see that you rely on tacit knowledge for your work?

Do you use re-enactive empathy in your advisement process?

Where do you see that this tactic would be most useful?

Thinking with Peers: Social Encoding Advantage

Our brains store social information differently (and more accurately) than non-social information. Utilizing the social information systems in our brains enhances our ability to both learn and convey information.

- When we teach someone else, we engage with the material/concepts in a different way.
- When we argue with each other (with mutual respect), we are more creative and productive.
- Exchanging stories with peers helps us develop a well of vicarious experience to draw from beyond our own.





Where do you see peer engagement in action on campus?

Where do you imagine you could use it in your area?

Thinking with Groups: Groupiness

- More formally "entitativity," groupiness is the level at which a collection of people is considered a group.
- Ways to foster groupiness include:
 - Learning together
 - Training together
 - Feel together
 - Engage in rituals together



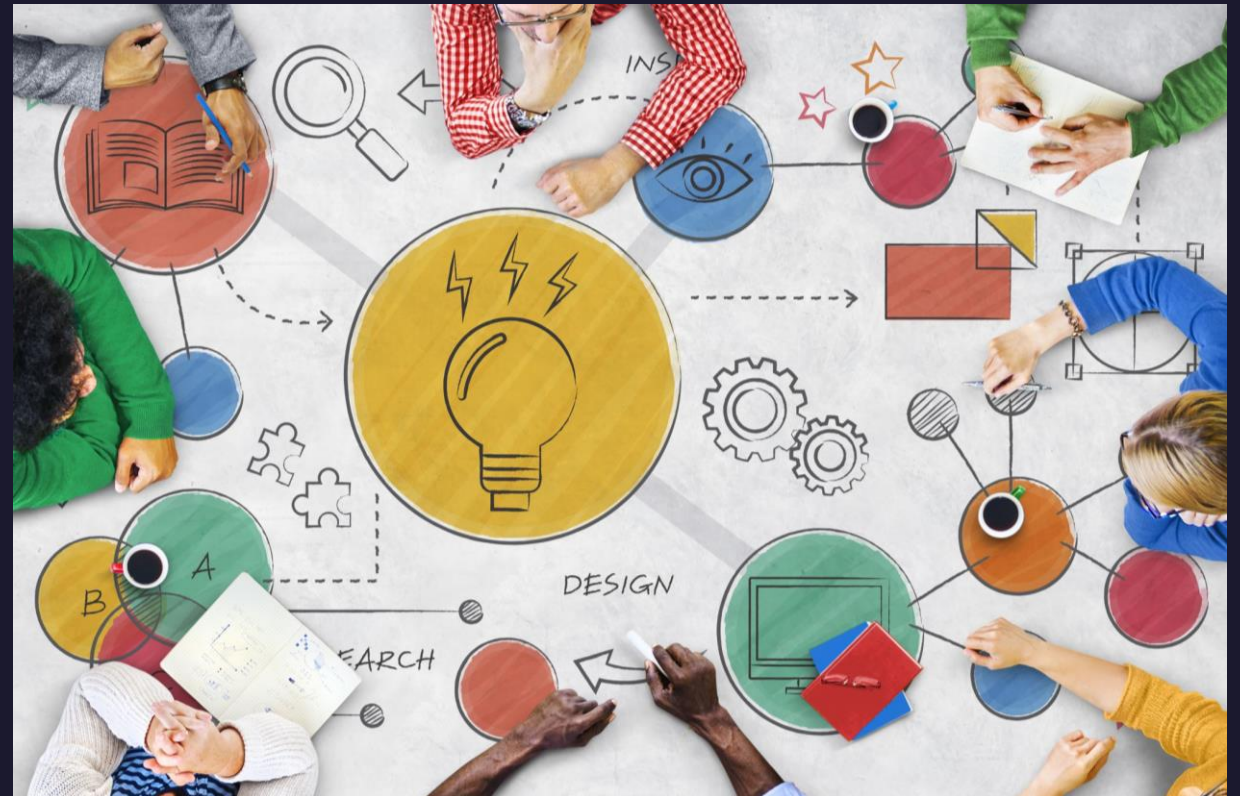



What would you rate your level of groupiness with your team?

What are ways to enhance groupiness in your unit or across the university advisement community?

Thinking with Groups: Transactive Memory System

- Instead of relying on everyone to remember everything, a transactive memory system relies on everyone to know who in their group is the expert on each thing.
- Offloads some cognitive load and allows people to develop expertise on specific subjects.
- Most effective when implemented deliberately and when there is strong group cohesion and trust.





Where do you see transactive memory systems operating?

Are there ways this can be more effectively implemented in your unit? Across campus?



Sources

Nearly everything that was said with conviction during this presentation comes from:

Paul, A. M. (2021). *The extended mind :The power of thinking outside the brain* (First Mariner Books paperback edition). Mariner Books.

The Serena Williams example comes from:

Marcal, K. (2021). *Mother of invention: How good ideas get ignored in an economy built for men*. Abrams Press.



Thank you

Rachel Perovich

rperovich@unm.edu

UAEC Room 170A

