Feel - Know - Play - Discern

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Embracing Embodied and Experiential Learning

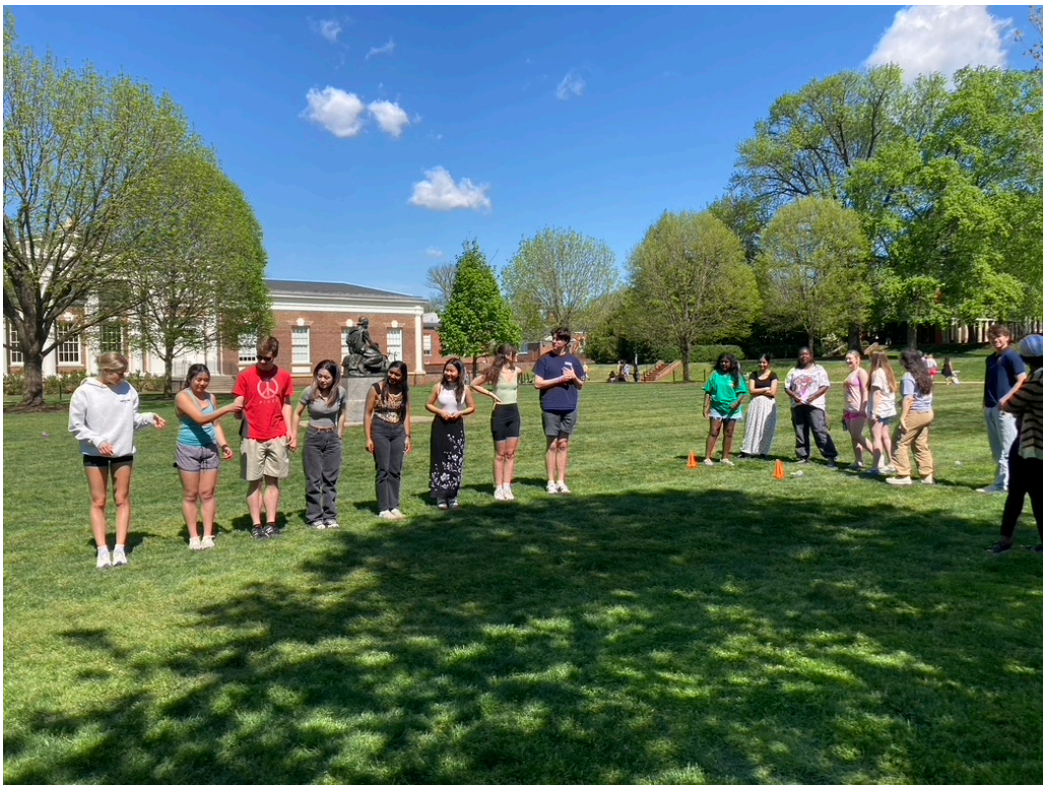
As educators, we strive to create transformative learning experiences that resonate long after our students leave the classroom. It's not just the content we teach, but the process and narrative we embody along with our students each semester. Such rich pedagogy engages our students' cognitive, emotional, and embodied ways of knowing, embracing the profound human experiences woven with somatic sensations and emotions. When rightly adopting a holistic perspective on intelligence and cognition, learning becomes cyclical, nonlinear, and antithetical to the banking model of education. By centering learners' embodied experiences in our coursework, we cultivate deep, sustained growth through play, reflection, application, and experimentation. Play fosters curiosity and intrinsic motivation, while reflection solidifies understanding and promotes metacognition. Application and experimentation enable students to transfer knowledge to novel situations, reinforcing learning and developing adaptive expertise. Through craft, discussion, investigations, and collaborative activities, students can articulate their

perspectives, challenge assumptions, and collaboratively construct knowledge, fostering a deeper appreciation for diverse viewpoints and strengthening their communication skills across disciplines.

Let’s consider the embodied cognitive idea of mirroring. Mirroring refers to how our brains have a built-in capacity to mirror the behaviors, actions, and mental states of others. This neural mirroring plays a crucial role in extending our minds beyond our individual brains. Firstly, mirroring facilitates understanding. When we unconsciously mirror someone's expressions, movements, and behaviors, it allows us to better grasp their intentions, emotions, and thought processes. This creates an intersubjective bridge between minds. The students simulating stakeholders in a city over how to implement housing retrofits to enhance resilience to extreme heat in the aftermath of deadly heat waves attributed to climate change rely on mirroring to communicate intentions, assuage fears, and otherwise interpret complex information in real time while under duress.

Secondly, mirroring enhances coordination and rapport. People who mirror each other's body language and speech patterns experience greater empathy, synchronization, and cohesion. This behavioral mirroring is key for smooth social

interactions. As you can see in the image, simulating cultural and linguistic constraints on communication during problem solving scenarios can be a bitter affair.



Thirdly, mirroring aids learning. Students learn better by mirroring their professors' gestures, as it helps embody the concepts taught. Professors can glean the extent to which a student engages with and understands processes and ideas by observing their body language. Experts also unconsciously mirror each other when collaborating, boosting their collective intelligence. Lastly, mirroring shapes group cognition. When group members mirror each other's mannerisms, it leads to stronger "collective intentionality" - a more unified and cohesive group thinking and decision-making process. We see students tasked traversing simulated lava flows with limited resources learn to balance effectiveness, efficiency, and equity as they mirror movements, cadence, and language to get everyone to safety. In essence, through the neural mechanism of mirroring, our minds extend beyond our isolated brains into our embodied interactions with others - including images of others. This socially-distributed cognition transcends the limits of any single mind.

Theoretical Foundations

The scholarship of teaching and learning emphasizes embodied learning through various frameworks. Kolb's Experiential Learning Cycle underscores the iterative process of concrete experience, reflection, conceptualization, and experimentation, aligning with principles of play, reflection, application, and experimentation. Eyler's work highlights the emotion-learning connection, necessitating emotionally resonant experiences for knowledge acquisition and retention through discussion, collaboration, and self-expression. Paul's book The Extended Mind explores the influence of bodies and environments on cognition, advocating for physical activities, manipulatives, and immersive simulations to leverage embodied learning. Ciarrochi and colleagues offer insights on emotion regulation, proposing adaptive responses that promote growth, meaning, and satisfaction of basic needs for competence, connection, and relatedness. This aligns with Wigfield and Eccles' notion of expectancy theory, suggesting individuals are motivated by valued outcomes, fostering intrinsic motivation and adaptive emotion regulation strategies in learning environments that cultivate competence, connection, and meaning.

Embodied Learning Across Disciplines

Embodied learning engages students' senses, emotions, and physicality, cultivating multidimensional understanding. In literature, improvising characters' emotional arcs through movement enhances empathetic textual connections and self-awareness. Science students internalize abstract concepts by constructing and manipulating tangible models, bridging theory and application while documenting embodied thinking. Nursing simulations hone emotional intelligence for high-stress care scenarios through practiced responses and reflective debriefs on decision-making processes. Social science role-plays foster perspective-taking and navigating diverse emotional contexts, with reflection on how embodied presence influences interactions. Across disciplines, these immersive, multi-sensory approaches deepen practical skills and engagement. Reflective practices nurture metacognitive awareness of students' affective, cognitive, and behavioral experiences. We create resonant learning environments by incorporating physical interactions, simulations, and self-study of embodied thinking patterns. Students viscerally connect concepts, develop empathy, and gain self-knowledge through

embodied learning's synergy of minds and bodies. This multidimensional approach enriches the educational journey, empowering students as holistic learners and critical thinkers.

Cycle Time

At the start of class, students reflect on their current emotional state through a journal prompt, anticipating the challenges of working collaboratively on an ill-defined problem. This reflective observation phase allows students to connect with their emotions and set the stage for the concrete experience to follow, including setting expectations for learning based on prior experience in the course. Next, students are moved from their home teams and randomly sorted into two groups. These new groups, populated by colleagues they normally work with and by people they rarely, if ever, have worked with, are tasked with assembling a wooden puzzle according to a diagram within a time constraint. As they grapple with the challenge, I observe their behaviors and group dynamics for later discussion and feedback,

noting the extent to which they apply emotional intelligence concepts such as self-awareness, self-regulation, social awareness, and relationship management. Various friction points arise during this phase: miscommunication between teammates, teammates talking over one another, a lack of active listening, teammates not being heard, misinterpretation of the diagram, mis-measurement of the wooden puzzle pieces, tension over how best to organize the team's efforts, disagreements about how labor should be divided in assembling the puzzle, and more. These challenges provide opportunities for students to practice emotional intelligence skills in real-time, such as managing their emotions, communicating effectively, and resolving conflicts. After the activity, students debrief back in their home teams, discussing their experiences, emotions, and connections to the theoretical frameworks. This reflective observation phase allows students to abstract conceptual understanding from their concrete experiences, setting the stage for future active experimentation and application. Through this iterative cycle of experience, reflection, conceptualization, and experimentation, students not only develop technical skills related to problem-solving and teamwork but also cultivate emotional intelligence competencies that will serve them well in their personal and professional lives.

The Stakes of Embodied Learning

Embodied and experiential pedagogies unlock transformative learning, transcending disciplinary boundaries. We cultivate emotionally resonant experiences facilitating knowledge acquisition, retention, and transfer. We foster essential emotional intelligence, empathy, and adaptive problem-solving skills for navigating complex personal and professional landscapes. We do this when we rightly recognize the wonder and efficacy of embodied teaching and learning. When engaging students' whole beings - minds, bodies, and emotions - we create indelible educational experiences resonating long after exams. We equip stents with lifelong growth capacity, enabling resilience, creativity, and emotional agility in an ever-changing world; durable skills not only at the core of the liberal arts, but other disciplines as well. Incorporating play, reflection, application, and experimentation taps into students' intrinsic motivation. Through discussion and collaboration, they articulate perspectives, challenge assumptions, co-construct knowledge, appreciate diverse viewpoints, and strengthen communication skills. Students come to expect success though iteration and innovation, thereby valuing their coursework through a virtuous circle. In closing, I humbly ask that you envision embodied learning's visceral sights, sounds, and sensations filling students' minds. Aligning pedagogies with expectancy theory, emotional

intelligence, and embodied cognition fosters competence, connection, meaning, adaptive emotion regulation, and sustained engagement. For in those moments - never to occur the same way again - lie the seeds of profound and lasting transformation. Thank you.