

How Research on Learning Can Inform Our Teaching

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The Premise

- Teaching is about *helping people learn*
- *Anything* you do to help people learn is teaching
- Understanding how people learn can help you be a more effective teacher

Plan for Today

You will ...

- Get a whirlwind tour of some research-based perspectives on learning
- Consider the implications of that research for your own teaching and learning

In other words ...

- You'll learn about some “tools to think with”, and get *some* practice using these tools.



Learning as a Constructive Process



- New knowledge is constructed through adding to, or changing, *existing* knowledge structures, that is ...
- Learners must be able to connect what they're learning to what they already know
- Learners must be given the opportunity to bring *existing* understandings to the fore in making sense of new knowledge/experiences
- The clincher: This includes their doubts, questions, uncertainties, misconceptions

Learning as an Interactive, Social Process



- We learn through our interactions with our environment and each other
- It's through our interactions with our environment and others that we:
 - Explicate and explore/test our own understandings
 - Recognize ways in which our own understandings and perspectives fall short
- Learners must be given opportunities to learn from and with each other

Learning as an Emotional Process



- What we learn is closely tied to our emotions
- Emotions can impede or enhance learning
 - Can interfere with the encoding and retrieval of knowledge
 - Can provide additional context that helps with knowledge retrieval
- Means learning is more effective when we acknowledge, and work with, emotions

Engagement as Essential



- Engagement is necessary if we want learners to participate in a way that leads to learning
- Includes cognitive, behavioral, relational, and emotional engagement
- Engagement can be fostered through
 - “Just right” challenge/feelings of competence
 - Autonomy/self-directedness/control
 - Interest/meaningfulness
 - Social motivation/relatedness
 - Creativity/self-expression
 - Sense of progress

Motivation as Critical



- Our “understanding goals” determine what (and whether) we learn from an experience
- Learners must be motivated to learn something if they’re to learn it
- We’re motivated to learn something when:
 - We perceive that what we’re learning is *valuable/relevant*
 - We believe we’re *capable* of learning it

Learning as Situated in Context



- Knowledge is tied to the circumstance in which it's constructed and subsequently used
- If we want learners to be able to use the knowledge they're developing, we have to give them opportunity to apply/use it in context ...

... or at the very least, reflect upon what they've learned and how they'd apply it.

Expertise as a Way of Thinking



- Experts' knowledge is organized around core concepts, “big ideas”, or “ways of thinking” in their domain
- These core concepts/big ideas/ways of thinking shape:
 - The way they perceive/encode new information
 - The way they reason/problem solve
- If we want students to develop this expertise, we must make these “ways of thinking” explicit.
- The catch: Experts' don't always know what they know

Unconscious
Incompetence



Conscious
Incompetence



Conscious
Competence



Unconscious
Competence

The Perspective In Sum (the Tools in Our Toolbox)

- Learning as a constructive process
- Learning as an interactive, social process
- Learning as an emotional process
- Engagement as essential
- Motivation as critical
- Learning as situated in context
- Expertise as a way of thinking



Your Turn

- Which of these “tools”/perspectives are you most drawn to working with or learning more about, and why?
- What are one or two examples of how you might apply these tools/perspectives in your own work?
- Which of these tools/perspective do you think poses the greatest challenges, and why?
- What additional questions does this raise for you regarding how we can help students learn?

My Invitation to You

- View your time as a graduate student as:
 - A really incredible opportunity to learn more about learning and teaching
 - Just the beginning of this “learning journey” (the learning never stops!)
- Pick a few of these perspectives that particularly resonate and:
 - *Practice* working with them in your teaching
 - Use them to guide your own inquiry (as a learner *and* a teacher)

My Invitation to You

- Examples questions you might continue to ask yourself as you continue to learn about teaching and learning:
 - How can I get students to explicate/bring to the fore their existing knowledge/understandings?
 - What opportunities can I give students to learn from and with each other?
 - What emotions might be at play for my students? What would it mean to create an emotionally supportive environment for my students?
 - How engaged *are* my students, and why? How can I help them be more cognitively, behaviorally, and/or emotionally engaged?

My Invitation to You

- Examples of questions, cont'd:
 - How can I help students perceive and buy into the value/relevance of what they're learning?
 - How can I support students in developing a belief in their ability to learn/grow?
 - How can I give students the opportunity to practice using what they're learning (in the the way they'll eventually use it)?
 - What *are* the core understanding/big ideas/ways of thinking of my domain ... and how can I help students develop these?

Learning More ...

- Go to DU's Office of Teaching and Learning website (otl@du.edu) to find more teaching resources, learn about upcoming workshops, etc.
- Enroll in the online, self-paced course "Teaching at DU" (contact Kathy.Keairns@du.edu if interested)
- Check out books such as:
 - How Learning Works (Ambrose, Bridges, DiPeitro, Lovett, Norman)
 - What the Best College Teachers Do (Bain)
 - Facilitating Seven Ways of Learning (Davis and Arend)
 - Creating Significant Learning Experiences (Fink)
 - How People Learn (National Research Council)
- Contact me (Virginia.Pitts@du.edu) if you'd like to talk about any of this further or are interested in a Teaching Consultation or Student Feedback Session