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
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
  - They 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
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 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