

Education 173
Cognition and Learning in
Educational Settings

Constructivism



Fall Quarter 2007



What is Constructivism?

- A Philosophy of Learning—an Epistemology
- Many Varieties of Constructivism
 - Not a coherent theory
- Knowledge is the Result of an Inventive Process

Ideas Are Constructed

- Philosophical Idealism
 - Reality is in our heads
- Psychological Constructivism
 - The mind invents reality
- Sociocultural Constructivism
 - The categories of our experience are given to use by our culture



Where is the Mind?

- In the Individual
- In the Social Actions of Communities?
- Both?
- Degrees of Constructivism
 - One extreme: Radical constructivism
 - There is no external reality
 - Another extreme: Naïve realism
 - Minds have direct access to external truth

The Learner Must Construct Knowledge

- Is Constructivism:
 - A theory of learning
 - Or a theory of teaching?
- Is Lecturing Compatible with Constructivism?
 - It is if the student is actively processing the lecture, and constructing meaning from it.
- Are Student-Centered Approaches More Likely to Assure Knowledge Construction?
 - Maybe so

Situated Cognition

- Knowledge is:
 - Bound to the context in which it is learned
 - Deeply enmeshed in cultural institutions, roles, tools, and symbols
 - Made meaningful by its uses
 - Limited in transferability
- Situated Cognition Theory Connects (And Corrects) Psychology with Anthropology



Implications of Situated Cognition Theory

- Questions Abstract (Context-Free) Assessment and Instruction
 - Promotes “authentic” assessment
 - Promotes “authentic” instruction
- Questions General (Context-Free) Cognitive Abilities
 - Does intelligence make sense?
- Questions Broad Transfer
 - Does transfer really happen?
 - Is it difficult?
- Suggests that Teachers Should “Situate” Knowledge in Multiple Contexts



Implications of Constructivism for Teaching

- Emphasizes
 - Students’ point of view
 - Prior knowledge as foundation for new learning
- Promotes
 - Discovery learning
 - Real-world problems
 - Authenticity
 - Cooperative learning, such as jigsaw




