

WHAT RESEARCH TELLS US ABOUT HOW PEOPLE LEARN

1. All learners arrive at any learning situation with their own often quite elaborate ideas, explanations & theories. They are far from “blank slates.”
2. Learning is an active process of engaging & manipulating objects, experiences, ideas & conversations.
3. Learners “construct” their own understanding of the world based on their experiences, motivations, cultural and social interactions with peers and others.
4. Complex ideas develop over a long period of time.
5. Learners must encounter multiple learning experiences that encourage them to: a) question their assumptions, b) struggle with new ideas, and c) apply their new understandings in different contexts.

Some Useful Quotes

“Learning is about making connections”

— K. Patricia Cross, 1999, Alliance for Community College Innovation

“Surprise is triggered when our schemas (conceptual frameworks) fail...and this prepares us to try to understand why the failure occurred.”

— Made to Stick, by Chip Heath & Dan Heath

“However, the research also shows clearly that ‘usable knowledge’ is not the same as a mere list of disconnected facts. Experts’ knowledge is connected and organized around important concepts...it supports understanding and transfer (to other contexts) rather than only the ability to remember.”

— How People Learn, John D. Bransford, Ann L. Brown, and Rodney R. Cocking, editors, 2000)

...“what are, or should be, the aims of science teaching? While there can be many possible answers to this question, it is our view that one of the main aims of science teaching, at any level, is to help people make better sense of their world. Better in that in acquiring a new perspective on a topic or situation the learner considers it to be more satisfactory, that is, more intelligible, plausible and useful, than his or her earlier ideas.”

— Roger Osborne

from Taking the Plunge, edited by Wynne Harlen

“If all we needed was the real world, we wouldn’t have education.”

— Chris Dede, Harvard

