

How People Learn

Adapted from: Donovan, M.S., Bransford, J.D., & Pellegrino, J.W. (Eds.) (1999). *How people learn: Bridging research and practice*. Washington, D.C.: National Academies Press.

Key Findings

- 1. Students come to the classroom with preconceptions about how the world works. If their initial understanding is not engaged, they may fail to grasp the new concepts and information that are taught, or they may learn them for purposes of a test but revert to their preconceptions outside the classroom.**
- 2. To develop competence in an area of inquiry, students must: (a) have a deep foundation of factual knowledge, (b) understand facts and ideas in the context of a conceptual framework, and (c) organize knowledge in ways that facilitate retrieval and application.**
- 3. A "metacognitive" approach to instruction can help students learn to take control of their own learning by defining learning goals and monitoring their progress in achieving them.**

Implications for Teaching

- 1. Teachers must draw out and work with the preexisting understanding that their students bring with them.***
- 2. Teachers must teach some subject matter in depth, providing many examples in which the same concept is at work and providing a firm foundation of actual knowledge.***
- 3. The teaching of metacognitive skills should be integrated into the curriculum in a variety of subject areas.***

Designing Classroom Environments

How People Learn proposes a framework to help guide the design and evaluation of environments that can optimize learning (Figure 2.2). Drawing heavily on the three principles discussed above, it posits four inter-related attributes of learning environments that need cultivation.

- 1. Schools and classrooms must be learner centered.***
- 2. To provide a knowledge-centered classroom environment, attention must be given to what is taught (information, subject matter), why it is taught (understanding), and what competence or mastery looks like.***
- 3. Formative assessments—ongoing assessments designed to make students' thinking visible to both teachers and students—are essential. They permit the teacher to grasp the students' preconceptions, understand where the students are in the "developmental corridor" from informal to formal thinking, and design instruction accordingly. In the assessment-centered classroom environment, formative assessments help both teachers and students monitor progress.***
- 4. Learning is influenced in fundamental ways by the context in which it takes place. A community-centered approach requires the development of norms for the classroom and school, as well as connections to the outside world, that support core learning values.***