

How People Learn

In the National Research Council study of how people learn (Bransford, Brown, Cocking, editors, 2000), there were three findings.

1. Students “come to the classroom with preconceptions about how the world works” which may interfere with learning.
2. To learn, students need a deep foundation of knowledge, a conceptual framework with which to understand, and a method of organizing their knowledge.
3. Teaching practices congruent with a metacognitive approach to learning include those that focus on sense-making, self-assessment, and reflection on what worked and what needs improving. These practices can increase the degree to which students **transfer their learning to new settings and events.**



Photo of UTK faculty in a flexible classroom

What is active learning?

Active learning is commonly understood to mean that students are doing more than listening. It is defined as anything “that involves students in doing things and thinking about the things they are doing” (Bonwell & Eison 1991).

The National Engagement of Students Satisfaction (NSSE) has been tracking student engagement in the classroom and on campus for over a decade. “Students at institutions at which faculty emphasize doing research with students and adopt the kinds of educational practices consistent with deep approaches to learning report making greater progress in key learning outcomes areas, especially in the area of general education.” (Byerly 2007).

Deep learning can be facilitated by learning tasks such as:

- Discussion with others
- Real world experience
- Applying knowledge
- Reading widely
- Finding patterns

By modeling responsible preparation and respectful discourse, faculty will create an atmosphere reflective of these values, thereby enhancing the quality of learning.

Idea #1 Gaming

Introduce or review material through games. If in class, bring candy or a similar reward for the winning team. Online classes: create badges!

For templates, visit <http://jeopardylabs.com/> and <http://jc-schools.net/tutorials/ppt-games/> (basic templates for games such as jeopardy are adaptable for higher education).

Idea #2 Concept Mapping

Students can organize information in a variety of ways. Here are some online templates.

Bubbl.us: "Easily create colorful mind maps to print or share with others."

Mindmeister: "Free web-based collaborative mind mapping software for brainstorming and project management."

Exploratree: "A free web resource where you can access a library of ready-made interactive thinking guides."

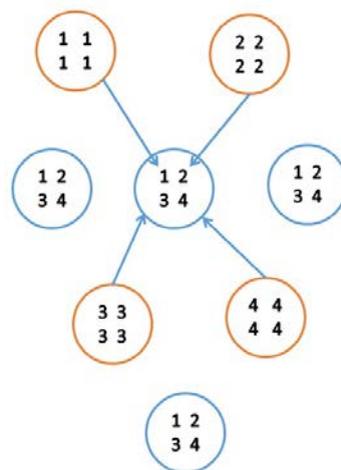
For more on mapping and graphs, see our page at: <http://tenntlc.utk.edu/using-visuals-mind-mapping-and-graphs/>

Idea #3 Jigsaw

Count off and create groups of three or four students to address or research different aspects of a problem or question.

When student groups have arrived at the answer, then students re-arrange into new groups that have one "expert" from each of the previous groups.

In new groups, students share and evaluate a variety of responses to the question.



#4 More Ideas:

Visit our "how to" page at

<http://tenntlc.utk.edu/teaching-pedagogies/how-to-pedagogy-sheets/> for guides on other techniques such as: Case Studies, Peer Teaching, Problem-Based Learning, and Service Learning.

Active Learning benefits to faculty

—Include stronger achievements in student learning, more interesting classes for all, greater opportunity for faculty and student creativity and critical thinking.

Students can reach higher cognitive levels of learning, student motivation is enhanced, and difficult concepts can be explored in depth.

And cautions to faculty

—It takes some time and effort and changes in pedagogy should be planned and staged, not undertaken all at one time. Consider a "low risk" (short, structured activity) versus a "high risk" approach (extended, student-driven, complex activity).

Bibliography

Bransford, J. D., Brown, A. L., & Cocking, R. R. (Eds.) (1999). *How People Learn: Brain, Mind, Experience, and School*. Washington, D.C. National Academy Press.

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Beverly, A. (2007). "Student Learning and Faculty Research: Connecting Teaching and Scholarship." American Council of Learned Societies. https://www.acls.org/uploadedFiles/Publications/Programs/ACLS-Teagle_Teacher_Scholar_White_Paper.pdf