

The Learning Process

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Learning is the process that individuals go through that leads to understanding. In education, students learn from experiences that they are involved in through their teacher and teachers also have the opportunity to learn from their students. Each individual learns differently and at different paces but for everyone, the goal of learning is understanding.

The learning process should be approached through different lenses and address student experiences, prior knowledge, student interest and include new experiences the students can learn from. “One of the earliest studies of expertise demonstrated that the same stimulus is perceived and understood differently, depending on the knowledge that a person brings to the situation.” (Bransford, Brown, and Cocking, 2000, pg. 32). The way people learn new information is highly influenced by their experiences and their perception of the new material, and every person brings a different perspective. Educators have an opportunity to use the differing experiences of students to incorporate real life examples and make the learning experience more meaningful to students. By eliciting prior knowledge from students before they are introduced to new information, we can better understand where the students are coming from and give our students a more successful learning experience.

Critical thinking is another key part of the learning process. By teaching students how to find answers to questions and not just memorize facts, we are allowing our students to be lifelong learners and problem solvers. These skills are critical in jobs and in independent life. In my own experiences as a teacher, I have frequently come across the issue that “textbooks are filled with facts that students are expected to memorize, and most tests assess students’ abilities to remember those facts.”(Bransford, 2000, page 9) instead of emphasizing problem solving and knowing how to find answers to questions they have about the world around them. Until this year, that was how our science curriculum was organized. By lecturing students, having them take notes, memorize vocabulary and processes, then testing them on their knowledge of those concepts. Fortunately, the science standards are changing as we recognize “experts’ knowledge is connected and organized around important concepts (e.g., Newton’s second law of motion); it is “conditionalized” to specify the contexts in which it is applicable; it supports understanding

and transfer (to other contexts) rather than only the ability to remember.” (Bransford, 2000, page 9). The new curriculum in my district allows students to experience a phenomenon in class, through a lab investigation, video, or demonstration. That phenomenon then drives the unit of study. Students ask questions, investigate real-world experiences, and make connections to their own lives and to their own experiences outside of class. This new curriculum makes what students do in class more meaningful and gives students control over their learning in a way they may not have had in the past.

These foundational ideas of learning, understanding, and conceptual change are important to consider in a program of study that focuses on educational technologies. I think incorporating technology is critical in current times. Technology is a part of everyday life whether you are a student or a professional. Of course, education through technology should be approached with the same ideas of teaching critical thinking, problem solving, using prior knowledge and student perspective as any other form of education. People have different perspectives when it comes to technology, so understanding those perspectives is a key part of teaching with technology. I am very fortunate to have a set of Chromebooks that my students can use in class. One thing that I am always noticing is that there is a wide range of technological knowledge that students bring the classroom and in turn “the same stimulus is perceived and understood differently, depending on the knowledge that a person brings to the situation” (Bransford, 2000, page 32). I often see students approach problems in a variety of ways and one of my favorite parts of teaching with technology is seeing students share their knowledge with classmates, (and their teacher) which shows both learning and understanding.

Only with meaningful, applicable learning experiences that call on prior knowledge will people be able to learn new concepts that will lead to understanding and conceptual change. The challenge for educators is to be able to effectively design these experiences for their students, and successfully teach them to use critical thinking and problem solving skills that will be required well after their educational careers.

References:

Bransford, J., Brown, A.L. & Cocking, R. R. (Eds.). *How people learn: Brain, mind, experience and school* (pp. 9-32). Washington, D.C.: National Academy Press. Retrieved from <http://www.nap.edu/openbook.php?isbn=030907368>.