

Putting what we know about Learning into Practice

The study of the human brain and how it functions is fascinating. Researchers have learned much over the past twenty years, yet educational practice often does not reflect this knowledge. When designing learning experiences for their students, it is vital that educators consider what is now known about how the brain functions and how it processes information. Following are seven important considerations about learning that teachers need to bear in mind when planning learning activities for their students.

Important Considerations about Learning

1. **The brain seeks, creates, and retains patterns.** The brain loves patterns and begins to create them at birth. Early on we learn the patterns for sitting up, turning doorknobs, walking, talking, and so on. In the classroom, teaching can capitalize on this by providing students with patterns for reporting information or patterns for completing tasks.
2. **Learning is social.** Without social interactions, humans cannot learn to speak. Feral children who, at a very young age, are separated from humans and then raised by wolves or apes can never learn human speech if they are reintroduced to human society after the age of seven (or thereabouts). Social interaction in the classroom is purposeful. Students have a learning goal when they interact.
3. **Learning begins with prior experience.** As adults, we find it uncomfortable to be in a setting where the topic being discussed or lectured about has no relevance to us. As an example, an English teacher might find sitting through a lecture on advanced aerodynamics to be boring or even threatening. With no prior experience or knowledge about aerodynamics, this is not surprising. Educators need to bear in mind that students often have no personal connection—background knowledge or prior experience—about much of what is being taught. It is incumbent upon educators to tap into any prior knowledge students may have or to bridge what they do know to what will be taught.
4. **Learning requires risk taking.** When humans learn new information, risk is involved. Robbing students of the opportunity to take risks can lead to little new learning. Low-functioning students often take risks every day. On the other hand, many gifted students rarely are required to take risks in the classroom. Teachers need to provide opportunities for all students to take risks.

5. **Learning involves constructing meaning.** Through learning experiences the brain constructs meaning. As an example, after a review session prior to a test about World War II, a seventh grade teacher asked the class if there were any questions or if there was anything about World War II that students did not understand. "Yes," replied one boy. "I just don't get it. Who was this Pearl Harbor woman and why were men hitting on her?" While this may seem amusing to those who understand the events that occurred at Pearl Harbor, it is important to note that the meaning this student's brain had constructed was not what his teacher had intended. Educators need to guide students as they construct meaning.
6. **Learning mandates active involvement.** Without active involvement, learning does not take place. The brain must be fully engaged and the learner actively involved in the learning experience. It is unwise to expect that students will learn from passive activities such as round-robin reading of the textbook or answering the questions at the end of the chapter.
7. **Learning allows for choice.** Whenever possible, teachers should give students choice in their learning tasks. Teachers can create tasks with limited choice so that students can take ownership of their learning. In addition, it is appropriate, at times, to offer students the opportunity to design their own learning opportunity.

Teachers can make a conscious effort to incorporate into their lessons the seven considerations about learning that are listed above. Their students will benefit from being in an environment where the needs of the brain are satisfied. The following pages contain information about one way to put theory into practice.