

Learning with Novices and Experts

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In a general sense, learning can simply be viewed as gaining knowledge on a particular topic or skill and then being able to successfully apply that knowledge based on understanding. At times, students may find it difficult to apply learned knowledge, which poses the question of whether or not learning actually took place and to what degree? As educators, we must continuously strive to engage students in meaningful activities that promote learning and understanding based on the subject matter. We must recognize and incorporate the most effective methods into our classroom that will ultimately create successful learners who can demonstrate the application of learned knowledge. Classrooms are comprised of students with different experience levels and different learning styles, so we must first define learning and then examine how the learning processes of experts and novices differ.

The simple definition of learning, as defined by *Merriam-Webster's* dictionary, is “the activity or process of gaining knowledge or skill by studying, practicing, being taught, or experiencing something.” (Learning, 2015). One could assume that by successfully performing a practiced activity taught to us or by going through a process in which knowledge and skills are acquired through experience, the predicted outcome would be learning. However, as Bransford, Brown and Cocking (2000) explain, there is a different school of thought where “...behaviorists conceptualized learning as a process of forming connections between stimuli and responses” (p. 6). Certain factors such as hunger, rewards, and punishments, were thought to drive our motivation to learn. (Bransford et al. 2000, p. 6). In the late 1950's a new field emerged called cognitive science which places “emphasis on learning with understanding.” (Bransford et al., 2000, p. 8). I believe *learning* encompasses all three of these factors.

Now that learning has been defined, let's examine how the learning processes of experts and novices differ. Each student in every classroom is unique, it's not a "one size fits all" environment. There are distinguishable differences between novice and expert students. Based on the type of student, implications may arise when it comes to learning and instruction. Bransford et al. (2000) found that "People who have developed expertise in particular areas are, by definition, able to think effectively about problems in those areas. Understanding expertise is important because it provides insights into the nature of thinking and problem solving" (p. 31). Not only do general abilities and strategies differentiate experts from novices, the extensive knowledge that an expert has acquired can affect their reasoning and problem solving abilities and how they "organize, represent, and interpret information in their environment" (Bransford et al., 2000, p. 31).

The dilemma, as an educator, is how to design and develop a curriculum that encompasses both categories of students. Activities combined with purposeful and meaningful tasks, must be implemented so that all students remain engaged and focused, thus allowing learning to occur. Let's take for example, a hands-on activity that requires novice and expert students to work together on the same team to achieve a desired outcome. Experts can provide extensive knowledge in a particular area which in turn may provide increased learning and understanding not only for the novice, but the expert student as well. The novice student may incorporate various problem solving skills based on his/her limited knowledge which may provoke the expert student to look at achieving the desired outcome differently, promoting additional learning and understanding.

Each student type enters into a situation with preconceptions of not only each other, but the task itself. By working together on producing a common desired outcome, each student's way of thinking about a situation can be altered and different ways of understanding new ideas can develop. As educators, we must determine which types of tasks and activities are most purposeful and what will effectively contribute most towards the student's understanding and learning whether he/she is a novice or expert student. Bransford et al. (2000) stated "New ideas about ways to facilitate learning—and about who is most capable of learning—can powerfully affect the quality of people's lives" (p. 5).

We briefly examined the meaning of learning and different views of how people learn and understand. We took a look at novice and expert students and how they may complement each other in a learning situation and how their perceived way of entering into a situation may be altered based on their understanding of new ideas. In order to promote learning and understanding and enhance the educational experience for both novices and experts, educators must maintain student engagement and incorporate meaningful and purposeful activities into the curriculum. The goal of an educator is to create successful learners. This will become increasingly important as we delve into the area of educational technology and how technology can be used to promote and enhance the educational experience for both novices and experts.

References

- Bransford, J., Brown, A.L. & Cocking, R. R. (Eds.), *How people learn: Brain, mind, experience and school* (pp. 3-27). Washington, D.C.: National Academy Press. Retrieved from <http://www.nap.edu/openbook.php?isbn=0309070368>.
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