Learning, Understanding and Conceptual Change Essay

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We must consider the foundational ideas in regards to learning each and everyday with instruction. With educational technologies this is essential as we constantly reflect and develop our instruction keeping in mind the differing levels of all learners within a space. It is incredibly important with the use of technology in the classroom to serve all students at the level and style of learner they step into your room as. Learning is not a separate entity from technology, we can use technology to serve every learner from beginner to expert. Careful and purposeful understanding and direction must be used to give students all that they need and deserve.

Upon diving into my research it has become fascinating to reflect on the learning process of experts and novices, how greatly they differ in ways I have never thought on. To begin, we may assume from the outside looking in,the sooner a student is able to arrive at a conclusion, the more fluent they are at a particular learning process. As stated in our reading, "An important characteristic of expertise is the ability to retrieve relevant knowledge in a manner that is relatively "effortless." This fluent retrieval does not mean that experts always accomplish tasks in less time than novices; often they take more time in order to fully understand a problem" (Bransford, Brown, Cocking, 2000, p. 41). In actuality, experts tend to take more time because they are more focused on understanding the problem and form a deeper grasp on the larger picture, rather than the novice learner tending to perform faster but skimming the surface to retrieve answers. In reference to our reading and the example of chess experts, the experts within this study had a higher level of strategic thinking moves because they have more background knowledge and more hands on experience with chess. "Research shows that it is not simply general abilities, such as memory or intelligence, nor the use of general strategies that

differentiate experts from novices. Instead, experts have acquired extensive knowledge that affects what they notice and how they organize, represent, and interpret information in their environment" (Bransford, Brown, Cocking, 2000, p. 31). In a sense, the chess experts have seen more "moves" in their lifetime than a novice learner. This important factor made me reflect on my own teaching methods and if I am truly walking into school each day thinking of what background knowledge and experiences each student has on the learning that is planned for the day. Keeping the experiences student centered is something I have felt strongly pulled to remember to do through this reading of novice and expert learners.

To best support our students, educators must build a community of learners within the classroom. They should work to create a safe space in which students feel the drive and confidence to get away from the"right" answers, and focus on solving problems, building on one another's knowledge, and holding each other accountable to drive the learning in class. "Teachers must attend to designing classroom activities and helping students organize their work in ways that promote the kind of intellectual camaraderie and the attitudes toward learning that build a sense of community. Both cooperation in problem solving and argumentation among students in such an intellectual community enhance cognitive development" (Bransford, Brown, Cocking, 2000, p. 25). This idea of an intellectual community brought me to something I explored for the first time in my kindergarten class last year. We referred to it as accountable talk. Students were tasked with using specific sentence starters such as, " I politely disagree with you because___," or "I would like to add on to what____ said." Holding discussions and interactions in this way allowed for a true sense of safety and community within my classroom. I

found myself sitting back and watching kindergarten students no longer raising their hands, actually looking at the student speaking, and responding in a purposeful way in which they were truly engaged in the other student's thinking rather than solely focused on getting out their own idea. Lastly, assessment is an important part of instruction we must continue to develop as educators. "Many approaches to curriculum design make it difficult for students to organize knowledge meaningfully. Often there is only superficial coverage of facts before moving on to the next topic; there is little time to develop important, organizing ideas" (Bransford, Brown, Cocking, 2000, p. 42). As educators we must focus on getting away from simply teaching the facts, and assess in different forms which allow for students to apply knowledge to their outside everyday life and for future experiences in their educational endeavors.

References:

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