Philosophy of Learning

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Notes:

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Defining what learning is, remains an elusive target. Many of the adages and rules of thumbs that instructors use are often contradictory and oversimplified. This paper will try to encapsulate the taught this author's limited teaching experience as given him on the topic of learning.

It could be said that that the brain is modular. One metaphor of the brain would be that of an iPhone. In an iPhone, several desperate applications doing wildly different processes are running in at the same time. In a person's mind "different applications can have different and contradictory beliefs in them" (Kurzban, 2011). A person's behavior is determined by what applications are running and "on all the details of which modules are currently active" (Kurzban, 2011). The different theories of learning may at first seem wildly different and sometimes contradictory. However, if the brain is indeed modular, each approach can be applicable in some instances and utterly irrelevant in others. It is important to understand all the theories.

Overview of the Major Theories of Learning

The three major theories of learning are the behaviorist, the cognitivist and the constructivist viewpoints.

Behaviorism

Behaviorists ignore the cognitive processes within the mind and attempt to measure the "the form or frequency of observable performance" (Ertmer & Newby, 1993). While the rise of cognitive psychology has shown that people have a rich inner life, there is still much to learn from this theory. For infants and children in the sensorimotor and preoperational stages, behaviorist strategies are often the only way to teach a child. An infant should be taught not to put their finger in an electric socket because it will hurt them. A child's mind is not capable of

understanding the principles of electromagnetism. Infants also seem to be good at teaching their parents in a behaviorist fashion. They giggle and smile when a person is doing something they like and scream and cry when they are not.

Behaviorism remains an effective tool in teaching children how to act. Yes, there is value in teaching "love and logic" by teaching children the reason why someone should behave in a certain way. However, this can only go so far. Rewarding proper behavior and punishing inappropriate behaviors remains the most effective last resort method if all other methods fail.

Another lesson parents and instructors can learn from behaviorism is the role of the environment in learning (Ertmer & Newby, 1993). Research shows that part of the gap in between lower-income homes and high-income families is that "by age three, it is believed that children growing up in poor neighborhoods or from lower-income families may hear up to 30 million fewer words than their more privileged counterparts" (Bergland, 2014). This gap gives students from privileged backgrounds a considerable advantage when they get into the classroom. In schools, the environment of a student is also critical. Classroom management, as this author has experienced, is critical for students to learn. No lesson plan works when students are unable to focus on the instruction of the class.

Still, behaviorism can only go so far. People do have inner lives. That is where the next two theories come into play.

Cognitivism

Cognitivists focus on how to learn from the perspective of "internal mental structures" (Ertmer & Newby, 1993). In the concrete operational phase where children still have difficulties with abstraction, a cognitive strategy may be the most appropriate. To understand some of the more abstract concepts seen later in life, students must learn the basic facts in a set of schemas

that reflect the "real world." For students to chuck their knowledge, it is best that they have "relevant prior knowledge in long-term memory" (Kozma, 1991). Constructivist learning is emphasized in standardized testing environments of the modern school.

Far too often, we dismiss the need for rote memory in the modern education system at the younger ages. The New York Times columnist, Thomas Friedman, puts it best in his book *The World is Flat* in an interview with Bill Gates defends the "more rote-oriented learning systems" in countries like "China and Japan." (Friedman, 2005, p 351) He quotes Gates saying "I have never met a guy who doesn't know how to multiply who created software . . .Who has the most creative video games in the world? Japan!" (Friedman, 2005, p 351) Often the rush to teach "critical thinking" may lead instructors to minimize the need to learn basic facts. It is important to "understand things in order to invent beyond them." (Friedman, 2005, p 351) Mastery of tasks such as standardized tests are important, but they should not be the end goal of learners. This is where the constructivist viewpoint is useful.

Constructivism

Constructivists then to focus the need to create "meaning from experience" (Ertmer & Newby, 1993). When people enter the formal operational phase, constructivist strategies are highly effective. In this phase, learners actively "explore complex topics/environments and that will move them into thinking in a given content area as an expert user of that domain" (Ertmer & Newby, 1993). Instructors in this phase use less direct teach strategies, and learners are put in more experiential tasks.

Constructivist teaching strategies often require considerable investments in time and resources, but they often are very effective. A flight simulator will teach a pilot how to fly better than thousands of hours of reading. Learning in this fashion is difficult to quantify. How do you

measure how much someone learned in a summer internship? Constructivists strategies work best in combination with behaviorist and cognitive strategies.

Conclusions

It is essential for instructors not use one "theory over the others" but to become "well versed in each" (Ertmer & Newby, 1993). Learners and instructors must be willing to be flexible and to learn to experiment. Ultimately, keeping an open mind and acknowledging what one doesn't know is just as important as the knowledge someone already knows.

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