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Education, Philosophy, and Technology: An Analysis

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Having been an educator in a K-12 classroom for fifteen years, I have developed a unique theory of education that is not so different from the classic models highlighted in this analysis, but more inclusive. I view learning as a complex jigsaw puzzle with thousands of pieces that fit together to form a whole education. Perhaps this is because I am a huge fan working puzzles and can identify certain pieces as foundational and vital to solving the whole. For instance, the first pieces I gather are all the edges, including the four corners, as they serve as the framework and give me a clue as to the orientation of the puzzle. If learning is a puzzle, technology serves as one of the corner pieces of the whole. The other three corner pieces I would term as connections, application, and creation. Once the framework is in place, including the cornerstones, the puzzle begins to materialize as each piece links to another. Let’s say our puzzle is 1500 pieces, of which 150 are corners and edges. The rest, the 1350 remaining pieces are the teaching methods, strategies, tools, and assessments, which form the complete learning outcomes of an individual. However, that whole puzzle is not possible without the four corners which support the learning (those listed above). I also believe that the more challenging the puzzle, in other words, the more rigorous the material and tasks, the better chance for successful learning to occur.

Behaviorism plays a foundationally important role in learning, as B.F. Skinner theorized, but most will agree that observation and conditioning alone do not ensure an ideal education. Effective learning can also occur, often times, by accident. Think of a

child who doesn’t realize that touching a hot stove burner will him cause great pain and

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harm. If that child reaches up and places his fingers on the live burner, he will learn the hard way the consequences of doing so. It’s almost guaranteed he will learn, not by observation and repetition, but by cause and effect, and never make that painful mistake again. There is absolutely no observation involved in this scenario, yet the child will have effectively learned his lesson. While behaviorism and its many elements have a vital function in the learning process, empirically based learning limits other forms of learning, such as constructivism and newer instructional learning models. In an online article in *The Behavior Analyst,* the author agrees that behaviorism is limited in its scope, contending that, “behavior analysis is unlikely to flourish unless behavior analysts understand a good deal more about the cultural and other contextual features of the environments in which they work” (Krapfl, 2016). He later points out the phrases “classical conditioning” and “control” (Skinner, 1938) as two key terms connected with behaviorism and notes their negative connotation in the modern general public. While control and conditioning can and do play a role in learning, specifically with routine and repetition, we have come a long way since 1938 and technology has certainly broadened the scope of classic learning models. I practice behaviorism concepts certainly, but add a myriad of other theories and practices in order to broaden and incorporate many techniques of learning into curriculum.

Blended Learning is defined as combining “traditional face-to-face class time experience…with new innovative learning technologies that have the power to democratize learning”, according to Jessie Woolley-Wilson, CEO, President, and Chair of Dreambox Learning. In a Tedx Rainier on YouTube (2013), Woolley-Wilson

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claims that her goal is to provide a quality, equitable education for all children. She lists three major contributing elements of blended learning, but focuses on the implementation of intelligent *adaptive* computer programs that learn the student as the student is learning. The result is that students can learn at their own pace, and therefore access a more equitable education. On the other hand, our ETEC 500 textbook devotes very little time to the notion of blended learning, calling it a “dilemma” and blasting it as “woefully inadequate” for a number of reasons. The authors claim that blending learning focuses too much on a formal learning environment, and not enough on real world learning settings, such as work, recreational, and travel environments, for example, which is where most learning happens (Reiser & Dempsey, 2012). Relating to my own philosophy of teaching and learning, I draw mostly from the blended learning model, in that I integrate technology almost every day into my face-to-face instruction, for example, our online curriculum, StudySync, Google and its many applications, Word for planning and projected instruction, and the use of video and audio production as both instruction and assessment. But I mix the technology up with more behaviorism models such as teacher lectures, modeling on the whiteboard, and note-taking by hand to improve writing and listening skills, to name a few. My students don’t get as many out of the classroom learning opportunities as I would like, but we do organize a number of field trips each year, as well as arrange community service hours, job shadowing, and internships. In this sense, I agree with Rieser & Demsey (2012) that around 90% of learning happens outside a classroom.

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The early 1990’s gave rise to the theory of constructivism, which simply put, suggests that learning is a process of creating something meaningful (Reiser & Dempsey, 2012), or as I see it, making something constructive through a series of experiences, connections, and interactions with others. One particular precept of constructivism that closely mirrors my own educational philosophy is that people learn through certain challenges, ***puzzlements***(refer back to opening paragraph of this paper), and problem solving. Constructivism also stresses the social aspect of learning, including collaboration and involvement in both academic and not academic communities, key components of the CA Common Core State Standards. While the principles of constructivism are straightforward and fairly easy to grasp, some critics that they are too broad, too general and may lead to less than desirable learning outcomes, meaningless activities that are nothing more than “busy work”, and learning opportunities that favor the White middle class and overlook high-minority schools, to name a few (Reiser & Dempsey, 2012). That said, bringing technology into the mix of support for constructivism in practice allows for certain barriers to be broken for the disadvantaged and/or the inaccessible. As noted in the 2017 National Education Technology Plan Update:

Technology can empower educators to become co-learners with their students by building new experiences for deeper exploration of content. This enhanced learning experience embodies John Dewey’s notion of creating “more mature learners.”…Side-by-side, students and teachers can become engineers of collaboration, designers of learning experiences, leaders, guides, and OFFICE OF Educational Technology 29 catalysts of change. (pp. 28-29)

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Constructivism in conjunction with technology and the Internet can even out the playing field and contribute to more equitable access to instruction and performance and therefore, more potential for successful learning for all students.

I draw from the principles of both behaviorism and constructivism as teaching models on a daily basis. Blended learning isn’t so much a philosophy as it a practice, but I do theorize that technology is a major cornerstone of education and blended learning cannot function without computers and the Internet. With every major core subject at my current school site using online programs and texts, and every student issued a ChromeBook, there is no turning back to life before the Internet. As an educator, I have to evolve as instructional technology evolves in the K-12 sector, or be left behind the wave of the 21st century education. My hope is that the human experience of making connections and learning together will not be overshadowed by the super computers of tomorrow’s classroom, and that technology will serve to enhance the educational and personal and relationship of the teacher and the student, not destroy it completely.