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Educational Philosophy & The Role of Technology

ETEC - 500

Learning theories and technology play a vital role when researching and designing effective instruction for the target audience. These theories provide a guideline to identifying measurable learning objectives for effectiveness and assessment of what is to be learned. The technology provides an alternative option to the way instructional material was developed in the past. “The Internet has become more accessible and the creation of content more distributed, the participatory web has enabled a knowledge-building and knowledge-sharing system whose value now stems from many small contributions.” (Etmer & Newby, 2013, p.66). By utilizing one or multiple learning theories along with technology, the designer is tasks to analyze the environment, by which the learning will be engrossed and identify the key goals of that instruction.

In order to successfully create an environment where learning is designed based on effective approaches and strategies, one must first identify instructional problems to address. By identifying and assessing the problem, considerations of learning theories like Behaviorism, Cognitivism, and Constructivism can be evaluated to find the most effective approach to serve as a guide towards creating learning objectives. Once a particular learning theory or theories and learning objectives are identified, abstract frameworks can be created and tailored to influence the learning condition. These abstract frameworks consist of the chosen learning theory or a combination of theories which defines how the learner’s knowledge is received and processed, to then assessed to see what has been learned.

The early stages of instructional design began with the behaviorism learning theory. This strategy is a results-driven theory that focuses on the inputs and outputs of behaviors. According to Dempsey and Reiser (2018), “behavioral learning theory is empirically based, which means that behavior is observed both before and after an intervention such as instruction has been implements, and the observed changes in performance are related to what occurred during the intervention”. (p.53). When using behaviorism theory, instructional materials can include quizzing or feedback to assess what was learned, to be followed up with reinforcement of a passing or failing grade or immediate reinforcement of a response, thus conditioning the learner to demonstrate what was attained.

After behaviorism slightly slowed down, cognitivism was introduced, and this theory focused on the processing of knowledge. “Cognitivism, like behaviorism, emphasizes the role that the environmental conditions play in facilitating learning.” (Ertmer & Newby, 2013, p.51). Unlike behaviorism, this theory influences the learner to processes the information that is learned and mentally categorize and chucking the information for future interpretation. Gaining attention from Gagne’s 9 Events of Instruction, can be utilized when creating instructional material including ice breaker activities to grab attention, to store and make connections and recall information from memory.

Constructivism learning theory followed the cognitivism theory. This theory differs from behaviorism and cognitivism by which the learner collects the information. Unlike behaviorism and cognitivism, “reality is constructed and ultimately determined by the learner; the role of the learner had assumed all responsibility, and the role of the teacher is relegated to designing the learning situation only.” (Central, 2018). Through collaboration and self-interpretation of the information, the learner creates their own ideas of the information given.

With the influence of multiple theories and the use of technology, my educational philosophy will align similar with two theories that I found to be most effective to focus on the learner’s behaviors and the processing of that behavior. I believe using strategies offered by both behaviorism and cognitivism, it will allow each theory to expand on the benefits that the other offers. My role as an instructor would be to identify direct learning objectives and provided directive cues for the learners to provide the desired result that is expected.

One technique to increase the effectiveness of my philosophy would be to include the use of Robert Gagne’s 9 Steps of Instruction. In particularly, to gain attention and recall prior knowledge. As an example, this can be done by providing several short instructional videos that has information chunked in each video, information can be easily memorized. According to Etmer and Newby (2013), “with information that is sized and chunked in such a way that they can assimilate and/or accommodate the new information as quickly and as easily as possible.” (p.52-53). To align with the previous technique of the 9 steps of instruction, another technique is to use Keller’s Personalized Systems of Instruction. Keller’s approach was to focus on module-based learning and my philosophy was also influenced by this teaching model. In one of my examples, I would provide short instructional video clips or modules with quiz to see if the information was acquired by the learner.

Another technique would be to include strategies by Programmed Instruction identified by B.F. Skinner’s. observable behavior concept of conditioning the environment with audio-visual materials. One example can be to add mini quizzes that are built into the video from the first technique, the learner will be asked a question, if the incorrect response is entered, there will be a button on the quiz page that will redirect to that portion of the video to re-learn and increase the chances the correct response will be chosen, thus prompting the learner to find the desired answer. By identifying these strategies of recalling prior learning and prompting desired responses by direct cues through media resources, it creates the appropriate and effective framework approach indicate learning has occurred.

Along with the theories that influenced my philosophy, computer-based instructional materials will also be utilized to enhance the effectiveness of instruction. Gagne’s steps of instruction use (Dempsey & Reiser, 2018)s technology to assess performance. My example of instructional videos will use quizzing to conduct the same assessment. I believe instructional videos offer a convenience for the learner and the instructor to allow knowledge to be absorbed at any time. Training through the use of technology will not only offer another level of support, but it offers an alternative approach verbal instruction cannot provide.

Constructivism theory would not be the best method for this situation, because the situation must follow exact details of viewing instructional material and submitted the correct desired selection. If the learner creates their own interpretation or continually submits the incorrect response it will not be effective and produce negative results because the learner cannot move forward with the instructional material.

While reviewing effective strategies crafted by the behaviorism and cognitivism learning theories to influence my own style of educational philosophy, it opened my vision on effective foundational techniques and effective approaches with the use of technology for instruction design. According to Dempsey and Reiser (2018) these learning theories prove to be the foundation of instructional design. (p.52). By identifying a learning theory or theories when presented with an instructional problem or situation, provides a directional approach to designing effective instructional materials with technology.

**Reflection**

This assignment really helped me connect my previous courses in regards with learning theories. While studying in the other course, I was able to reflect on what was being taught, this class offered the reasons on why we were studying that material. This assignment was really hard but very informative. It was hard because it put me in the shoes of what a designer endures every day on assessing the environment of a class and to find the best approach to effective instruction. Although, I do not design everyday with the designers, I do investigate effectively technology for faculty. After this assignment, I confident that I can utilize the learning theories and techniques to better assist my audience.

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