# A Personal Philosophy of Learning

Donald L. Krause

University of North Texas

Author note
This paper was prepared for LTEC 5030, Section 086 taught by Dr. Amy Greene

# A Personal Philosophy of Learning

## Introduction

This report represents a brief summation of a philosophy of learning that is based on my personal world view. The philosophy of learning includes an explanation of how human learning takes place, and the learning theory which supports the explanation. Putting theory into action, the philosophy offers a model for teaching. The model describes personality traits that are exhibited by the best teachers, and offers methods for generating the best learning outcomes.

## How Learning Occurs

Learning is an active, not a passive, process. An empirical study by Michel, Cater, and Varela (2009) supported this assertion. "Our results show higher student cognitive outcomes on specific material covered in a class taught with the active learning approach as opposed to one taught with the passive teaching approach" (p. 416). In a meta-analysis of empirical research on the impact of hypermedia on learning, Dillon and Gabbard (1998) concluded that students' learning was positively correlated to an active role in generating their own outcomes.

Learning is more than remembering facts. Included in learning are concepts which cannot be measured or even seen. As examples, a person cannot "see" democracy or criticism, nor "measure" beauty. Therefore, learners do not store direct information of their perceptions, instead they comprehend these perceptions through the use of symbols. Learning is a creative process; the learner is actively creating a personal understanding of the subject matter being learned. The process is not merely "stimulus and response". In between stimulus and response, the learner is active in arranging and rearranging data and concepts, and therefore the response is often unpredictable. The challenge in teaching is to assist the learner in reaching the specific goals that are set out in the curriculum. Therefore, teachers must understand at some level how

the mental processes operate between stimulus and response. The way any individual human learns and understands the world is unique. The theory which provides the foundation for this concept of learning is Cognitivism.

## Theory of Cognitivism

Ertmer and Newby (1993) described Cognitivism as a theory which emphasizes the learner's mental processing in the acquisition of knowledge, as opposed to an external focus on manipulating stimuli in order to produce a desired response. The theory identifies how mental processing operates through a conceptual construct called a schema. The mind uses schemata to place knowledge into long term memory. Winn and Snyder (1996) explained the relationship between short and long term memory in terms of "Chunking".

> Short term memory is limited to roughly seven items. Without chunking, we would never be able to remember more than seven things at once. At recall, we "unpack" each chunk and retrieve what is inside. Chunking is more effective if the items have something in common, or form a spatial or temporal group (Winn & Snyder, 1996, p.82).

Siemens (2005) concurred with this description of schema in Cognitivist theory, although his reference is meant to be pejorative: "Learning is viewed as a process of inputs, managed in short term memory, and coded for long term recall" (p. 2). While this is an oversimplification based on Siemens' bias in favor of other theories, the statement is adequate for a general understanding. Ertmer and Newby (1993) described it this way: "Knowledge can be analyzed, decomposed, and simplified into basic building blocks" (p.58).

In summary, Cognitivism emphasizes how humans process knowledge, that knowledge is symbolic and is in a constant process of moving from short term to long term memory. The theory strikes a balance between two competing epistemological positions: empiricism and

rationalism. Empiricism holds that people are born with essentially no knowledge, and that all learning is based on the learner's interaction with their environment. Rationalism contends that humans are born with untapped knowledge maps, and learning is a process of creating meaning by discovering the knowledge constructs that already exist. (Ertmer & Newby, 1993, p. 54).

Ertmer and Newby (1993) took the position that Cognitivism tends toward the Rationalist view, but I disagree with this assertion. Schemata are also learned constructs, but humans begin to construct them in their minds right away, and the mental processes to create these schemata are unique to each individual and are continuously changing form throughout life. This is one reason why human response can be unpredictable. Statements by Winn and Snyder (1996) support this position.

I embrace Empiricism, because through introspection (which is referenced in Cognitivist theory), I have arrived at my belief that an objective reality exists apart from any requirement to observe it. Mental processes are required to understand that reality. That is my world view, and that is why I believe that Cognitivist theory provides the best framework currently available to explain how humans come to understand the real world. Cognitivist theory can provide guidance as to what personality traits fit best with the role of teacher, and what methods are most effective for activating the learning process and achieving learning goals.

## Personality Traits in Great Teachers

Learning under the Cognitivist theory is not an exact science; it takes time and patience to apply techniques to effectively engage learners. At the same time, teachers need to be able to operate under time pressure. "Effective solutions to practical instructional problems are often constrained by limited time and resources" (Ertmer & Newby, 1993, p. 50). Because "learning results when information is stored in memory in an organized, meaningful manner" (Ertmer &

Newby, 1993, p. 58), teachers need to have excellent organizational skills to structure instruction to tap into students' mental "maps".

An analytical mind is essential to instructional ability under the Cognitivist theory. Teachers need to be able to separate essential information from extraneous information when delivering instruction. "Knowledge transfer is expedited if irrelevant information is eliminated" (Ertmer&Newby, 1993, p.58). However, a good teacher is more than an analyst. Teachers must have the capacity to be empathetic, to actually put themselves in the place of the student, which is another prerequisite for creating shared meaning with the learners.

Instructors must exhibit flexibility and agility when planning and performing learning strategies. Under the Cognitivist theory, they will face situations where, as stated by Winn and Snyder, "learning strategies are not entirely predetermined, which requires that the environments be highly adaptive to student actions" (p. 108). Cognitive theory is not stagnant; it adjusts to ongoing empirical study, new qualitative information, and the introduction of new technology. Therefore, teachers must always be open to new ideas and approaches.

Teachers must have a persuasive speaking style that engages students at the students' particular level of cognitive development and is sensitive to cultural diversity. They must be performers in a sense, weaving a bit of theatricality into each teaching session. This is something that cannot be taught. In order to be successful, teachers must enjoy teaching. Cognitivist theory requires that students be engaged and active. Teachers need to have fun and inject fun into the learning environment.

## Best Teaching Methods

The theory of Cognitivism requires that information be relevant to the learner to effectively engage the mental processes necessary to learning. Learners need to be shown

wherever possible that the study material has relevance to their own lives. The following are some methods to engage learners and achieve positive learning outcomes aligned with the desired strategies and goals.

Proper methods of assessment must be implemented. Assessment needs to measure more than retention of facts. Students must be assessed on how well they solve problems and explain complex concepts. They must be tested on their ability to identify relationships between seemingly unrelated ideas. Assessment should occur at frequent intervals and include meaningful feedback to the learner. Feedback is essential to the cognitive process.

An understanding of analogies, metaphors, and symbols is important. Use of mnemonic devices and gestalt techniques can help arrange information in ways that can be efficiently stored and retrieved from memory. One approach would be to have students arrange subject material in two-dimensional matrices to stimulate the creation of new concept relationships. In addition, students should be encouraged to relate information gained from previous classes to the current class material.

The proper classroom environment is vital. The classroom atmosphere must welcome active student participation. Interaction among students should be encouraged, albeit in a controlled and organized fashion. Creation of shared meaning does not only occur between teacher and student. Valuable learnings can be constructed when students work together.

Lectures are still important in the teaching process. In addition to exposition, lecture time should include demonstrations, stories, role playing, and other interpersonal devices that engage and inspire students. At the elementary school level, more traditional “listen and recite” exercises are still important, and practice is always required to develop basic skills.

In order to continually stimulate the learners' mental processes, a variety of teaching methods should be introduced frequently. Field trips, guest speakers, and movies provide opportunities to change the nature of the learning experience periodically, stimulating different and novel ways of thinking about the subject. Furthermore, it is important to create opportunities to give students control over the learning experience. Teachers can utilize learning technologies to enable interactive, individualized knowledge acquisition that lets students set the pace and order for themselves.

## Conclusion

Simply put, the theory of Cognitivism works; human beings are not automatons that passively and predictably respond to stimuli. My worldview is that an objective reality exists, and we use our mental processes to make sense of it. The best teachers understand cognition and create learning strategies accordingly. This paper has identified personality traits that great teachers should have, including empathy, organization, an open mind, a love of teaching, and a desire to have fun. A number of teaching methods have been offered to bring variety to the classroom and activate the unique mental processes in every learner. Teachers should combine different teaching methods to achieve positive learning outcomes for all of their students.

# References

Dillon, A. & Gabbard, R. (1998). Hypermedia as an educational technology: A review of the quantitative research literature on learner comprehension, control, and style. *Review of Educational Research, 68*(3), 322-349.

Ertmer, P. & Newby, T. (1993). Behaviorism, cognitivism, constructivism: Comparing critical features from an instructional design perspective. *Performance Improvement Quarterly 6*(4), 50-71.

Michel, N., Cater, J. & Varela, O. (2009). Active versus passive teaching styles: An empirical study of student learning outcomes. *Human Resource Development Quarterly, 20*(4), 397-418.

Siemens, G. (2005). Connectivism: A learning theory for the digital age. *International Journal of Instructional Technology and Distance Learning, 2*(1), 3-10.

Winn, W., & Snyder, D. (1996). Cognitive perspectives in psychology. *Handbook of research for educational communications and technology: A project of the Association for Educational Communications and Technology*, 79-112.