

Learning theories paper - ET504, Fall 2014 (by Doug Vass)

Overview: “Cogito ergo sum” or in English “I think, therefore I am” was written by philosopher Rene Descartes early in the 17th century. This proposition became a fundamental element of western philosophy and still remains the underpinning of most epistemological belief systems for learning. By removing the politics, philosophical agendas, and “the mutual incomprehension” (Phillips & Siegel, 2013, “1.3 Paradigm wars,” para. 1) across the history of education (and learning) this outlines the epistemology behind learning as Piaget’s constructivism. Whilst Jean Piaget’s work on cognition was a result of his “genetic epistemology related to his developmental research” (Phillips & Siegel, 2013, “1.2 The different bodies of work,” para. 5), he also framed how he believed knowledge was organised in schemata and the processes in the brain as it accommodates and assimilates new knowledge (Leonard, Noh, & Orey, 2007, “Piaget’s constructivism”). As a result of more recent research on the brain/mind differential and “because each of our minds are driven by a brain with unique representational ability” (Damasio, 2002, “Confronting the self”, para. 2), the author will argue that learning about metacognition or “thinking about thinking” is critical for learners to learn via constructivism.

Contributors: Jean Piaget was the original philosophical creator of this epistemology as traditional views of learning, at the time in the 1950s, did not value the importance of play nor the learner as central to the process. However, others such as Dewey and Vygotsky have influenced the format of constructivism as it has developed over the years and led to specific pedagogies and learning approaches. As Ertmer and Newby (1999) argue, all learning whether achieved by cognitivism, constructivism, or behaviourism, is still learning (p. 52). Hence the author proposes that all educational philosophers have contributed to constructivism.

Major Principles: Constructivism refers to the concept of learners constructing knowledge for themselves, where each learner individually (or socially) creates meaning based on their own prior knowledge and cognitive constructs. As Hein (1991) puts it “constructing meaning is learning; there is no other kind”(para. 2). What Hein also adeptly describes is that whilst this epistemology is student or learner centred it also requires the central construct that “there is no knowledge independent of the meaning attributed to experience (constructed) by the learner, or community of learners”(para. 4). Hence the radical, anti-Platonic view that there is no such thing as knowledge independent of the knower, only knowledge we construct for ourselves as we learn (Hein, 1991, “Constructivism”, para. 4).

Application: Numerous pedagogies such as project based learning, challenge based learning, active-learning, learning by doing, and discovery learning are all models of constructivism. The teacher’s role is as a facilitator rather than the instructor and all approaches should place the learner at the centre of the process. A common pedagogical model used in primary ethics education is the community of inquiry model; a flawless example of constructivist learning where students literally build and challenge their logical thoughts about a concept with others. In 1985, Matthew Lipman described participation of children in a community of inquiry as:

If some children offer generalisations, others may offer counter-instances; if some voice opinions without reasons, adequate reasons are promptly requested. They gradually come to discover inconsistencies in their own thinking. As time goes on, they learn to cooperate with one another by building on one another's ideas. (p. 37)

References

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