

Philosophy of Learning

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### **When Learning Takes Place**

Contrary to the narrow view proposed by Clark (1983), that choice of medium provides no benefit to learning, more recent studies have shown that media used in teaching methods can be highly effective depending on the learner's prior experiences. As demonstrated by Kozma (1991) the importance of symbolism in successful instruction, and the methods in which various mediums can process symbols, cannot be understated. This is reinforced by the idea of Dual Coding Theory, which is concerned with complex neural networks created by the connections of the verbal and imaginal systems within the brain. When combined these two systems create referential connections that allow the brain to associate words with images or assign names to pictures (Paivio, Clark, & Lambert, 1988, p. 163-172). Learning occurs when schemas, based on the aforementioned theory, are built in the brain and stored in long-term memory. It is also important to consider cognitive load as selective attention must be utilized in order to transfer sensory or short-term memory to long-term memory, and control processes such as repetition must be used to strengthen cognitive schemas (Sweller, 2011, p. 37-76). Ultimately, media and technology are integral in the construction of knowledge, but methodology must not be ignored.

### **Teaching Methods**

Over the past century, teaching methods have slowly moved away from a one-size-fits-all approach to more personalized methods of instruction. The advent of Hypermedia and contextualized linking in the 1990's provided, "improved comprehension by virtue of its capability of supporting structured access, rapid

manipulation, and individual learner control” (Dillon, 1998). Prior to the emergence of the world wide web and hypermedia, Fred Keller pioneered the Personalized System of Instruction (PSI). Similar to how Hypermedia is used today in modeling online courses, the PSI method called for the organization of content into sequential units. Learners then progress through the materials at their own pace, with coaching provided after each assessment. Personalized Instruction later led to the development of Programmed instruction, in which subject matter experts design structured lessons to be taught by tutors, student teachers, or paraprofessionals (Molenda, 2009, p. 90-91). Learner control of and student engagement with curated content from subject matter experts in combination with proctors, mentors, or tutors have allowed media and technology to effectively enhance learner construction of knowledge.

### **Learning Theory**

Considering the research, it is difficult to rest on a single learning theory, and perhaps it is even beneficial to take a hybridized approach when practicing instruction. The constructivist approach explained by Clinton and Rieber (2010) demonstrates a series of three classes that get progressively less structured over time. In these classes, the participants self-organize, and higher skill students are expected to mentor those with less experience. There are common goals and expectations, but ultimately the learner decides how to arrive at said goals. While this approach in particular, and constructive approaches in general, are beneficial in the context of a highly social, connected culture, it must be combined with a methodological behaviorist approach in order to master specific learning objectives.

## References

- Clark, R. E. (1983). Reconsidering Research on Learning from Media. *Review of Educational Research*, 53(4), 445-459.
- Clinton, G., & Rieber, L. P. (2010). The Studio experience at the University of Georgia: an example of constructionist learning for adults. *Education Tech Research Dev*, 58, 755-780.
- Dillon, A., & Gabbard, R. (1998). Hypermedia as an Educational Technology: A Review of the Quantitative Research Literature on Learner Comprehension, Control, and St. *Review of Educational Research*, 68(3), 322-349.
- Kozma, R. B. (1991). Learning With Media. *Review of Educational Research*, 61(2), 179-211.
- Paivio, A., Clark, J., & Lambert, W. E. (1988). Bilingual dual-coding theory and semantic repetition effects on recall. *Journal of Experimental Psychology: Human Learning and Memory*, 14(1), 163-172.
- Sweller, J. (2011). Cognitive Load Theory. *Psychology of Learning and Motivation*, 11, 37-76.