INTRODUCTION TO

CONNECTIVISM

BY GEORGE SIEMENS

A Learning Theory for the Digital Age



Department of Teacher Education
Shippensburg University

Han Liu, Ph.D.

Background

- Like "searchology", " connectivism" is also a newly coined term trying to explain learning phenomena in the digital age.
- Connectivism addresses issues having arisen in learning in the context of Internet era, especially Internet 2.0 era.
- Connectivism roots in principles explored by chaos, network, complexity and selforganization theories.
- Here is the author of "Connectivism" who is working in the cooperate world.

Connectivism Principles

- Learning and knowledge rests in diversity of opinions.
- Learning is a process of connecting specialized nodes or information sources.
- Learning may reside in non-human appliances.
- Capacity to know more is more critical than what is currently known
- Nurturing and maintaining connections is needed to facilitate continual learning.
- Ability to see connections between fields, ideas, and concepts is a core skill.
- Currency (accurate, up-to-date knowledge) is the intent of all connectivist learning activities.
- Decision-making is itself a learning process. Choosing what to learn and the meaning of incoming information is seen through the lens of a shifting reality. While there is a right answer now, it may be wrong tomorrow due to alterations in the information climate affecting the decision.

A Chain Reaction of Change

- Technology is altering (rewiring) our brains. The tools we use define and shape our thinking.
- Know-how and know-what is being supplemented with know-where (the understanding of where to find knowledge needed).
- When knowledge, however, is needed, but not known, the ability to plug into sources to meet the requirements becomes a vital skill. As knowledge continues to grow and evolve, access to what is needed is more important than what the learner currently possesses.

Limitations of Behaviorism, Cognitivism, and Constructivism

- A central tenet of most learning theories is that learning occurs inside a person (i.e. brain-based).
- These theories do not address learning that occurs outside of people (i.e. learning that is stored and manipulated by technology).
- They also fail to describe how learning happens within organizations

Blogging as an Example of Connectivism

- Including technology and connection making as learning activities begins to move learning theories into a digital age.
- Experience has long been considered the best teacher of knowledge. Since we cannot experience everything, other people's experiences, and hence other people, become the surrogate for knowledge. 'I store my knowledge in my friends' is an axiom for collecting knowledge through collecting people

Chaos Theory

 Chaos is the breakdown of predictability, evidenced in complicated arrangements that initially defy order. Unlike constructivism, which states that learners attempt to foster understanding by meaning making tasks, chaos states that the meaning exists - the learner's challenge is to recognize the patterns which appear to be hidden. Meaning-making and forming connections between specialized communities are important activities.

Questions to Explore

- How are learning theories impacted when knowledge is no longer acquired in the linear manner?
- What adjustments need to made with learning theories when technology performs many of the cognitive operations previously performed by learners (information storage and retrieval).
- How can we continue to stay current in a rapidly evolving information ecology?
- How do learning theories address moments where performance is needed in the absence of complete understanding?
- What is the impact of networks and complexity theories on learning?
- What is the impact of chaos as a complex pattern recognition process on learning?
- With increased recognition of interconnections in differing fields of knowledge, how are systems and ecology theories perceived in light of learning tasks?

Conclusion

- Connectivism presents a model of learning that acknowledges the tectonic shifts in society where learning is no longer an internal, individualistic activity.
- How people work and function is altered when new tools are utilized.
- The field of education has been slow to recognize both the impact of new learning tools and the environmental changes in what it means to learn.
- Connectivism provides insight into learning skills and tasks needed for learners to flourish in a digital era.

Reference

- Connectivism: A Learning Theory for the Digital Age
- http://www.elearnspace.org/Articles/connectivism.htm
- Coonectivism Video
- http://www.elearnspace.org/media/connectivism_Web_2/player.html