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Connectivism: As a Learning Theory for the Digital Age

Distance education is founded on the principle of evolution. Theories have evolved with the various pedagogy of distance education. Connectivism is the most recent theory perpetuating this evolution. This paper will explain connectivism, and discuss how MOOCs contribute to the distance education learning community.

Evolution of Distance Education and Theories

Emerging technology is birthed from existing technology and spawns new depths of interactive learning. First postal correspondence, then television, radio and film, followed by interactive technologies, and most recently Web 2.0 are the vehicles by which information is disseminated (Rodriguez, 2012). Similarly, as new technological advances develop, new theories of learning evolve to meet the need of the learner. Anderson points out three of the most recent theories prominent during the distance learning evolution: (1) The Equivalency Theory hypothesize that mastering one type of interaction (student-student, student-content, or student-teacher interactions) would result in a quality learning experience therefore, preserving effort and resources in the other two types of interaction. (2) Constructivism is a learning philosophy that proposes individual's construct knowledge based on their understanding, background and inclinations. (3) Heutogogy rejects the use of the teacher, emphasizes self-direction, and gives prominence to tools and information sources available on the Internet (Anderson, 2010). These theories were developed to coincide with their environment. However, each has an important role in online education today. Kop & Hill postulates that "new theory builds on older theories without discarding them, because new developments have occurred which the older theories no

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longer explain” (Kop & Hill, 2008, pg. 1). Regardless of the era, changes in pedagogy will continue; theories and technology will continue to cultivate our ability to gain knowledge.

Connectivism

Connectivism is the one of the most recent theories prominent in distance education. This theory posits that knowledge is distributed across networks and the act of learning is largely one of forming a diverse network of connections and recognizing attendant patterns (Siemens, 2008b). As such, obtaining knowledgeable has become less formal and includes knowing where to find information. Siemens asserts connectivism focuses on the process of gathering and depositing information into a learning community using nodes and connections. A connection is any link between nodes; and a node is a component that can be connected to another component. A learning community is a connection point described as a node. Two or more connection points comprise a network (Siemens, 2005). The process of connecting nodes can be as simple as surfing the internet, posting to a blog, tagging an object, or simply reading content. The purpose of the network is to share and find new information of which the learner can make decisions, and continue the process of sharing ideas and information.

The growing interest in online education has prompted an ongoing discussion concerning the difference in learning and knowing. The nature of learning and knowing has been argued as objective, pragmatic and interpretive (Siemens, 2005). Nonetheless, the process of learning does not have to be categorized into a particular approach. The learner is the principle authority on which method best suits their learning style. This theory suits the profile of the mature, career-minded or inquisitive distance education learner.

Connectivism and Distance Education

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The diverse functions of networks, and the gathering and depositing of information within the connectivism theory are palpable to the distance education learning community. Web 2.0 applications and mobile developments serve as connections linking nodes such as experts, peers and learners. Learners have access to academic resources such as Google Scholar, open access journals, Wikipedia, and social software. Individuals with common interests seeking and providing information bring about knowledge by generating, discussing and publishing internet content. Anderson emphasizes the need for “formal education to expand beyond classrooms and bounded learning management systems to embrace and to become involved with the informal” (Anderson, 2010, pg. 34). Connectivism has affected teaching methods, curriculum design, learning structure and educational systems fostering informal learning in distance education. Access and interaction are no longer under the control of the teacher. Experts in the field of distance education, make use of the Web to distribute their ideas and creative work freely to learners.

Furthermore, individuals interested in furthering their education can participate in Massive Open Online Courses (MOOCs). MOOCs are online courses that are conducted outside the realm of traditional academic course content. Rodriguez describes connectivism as requiring facilitators and learners to possess a conceptual change in perspective. MOOCs consist of connections of social networks, field experts, and free online resources build on active engagement by learners who manage their own participation according to personal learning goals (Rodriguez, 2012). The concept of MOOCs increases the pools of expertise and resources by allowing learners to create new learning connections. This interactive environment allows the personal interests and preferences of learners to compel their commitment to learning, instead of

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institutional requirements. MOOCs accommodate the autonomy that is so respected in distance education.

Connectivity in Action

Coursera is an educational technology company that partners with top universities to free offer open online courses. Diversity, autonomy, openness, and emergent knowledge are the founding principles of connectivity in a distance education environment. The corporate vision is to “empower people with education” (Coursera, 2013). Coursera is a global community of thousands of students and facilitators that have mastered the principles of connectivity in distance education. Coursera’s website describes the instructional design as interactive exercises requiring student to retrieve or reconstruct knowledge. Coursera uses a concept called Mastery Learning where students are given multiple chances to learn, demonstrate knowledge, and receive feedback. The concept of connectivity is demonstrated by the use of peer assessments (Coursera, 2013).

Coursera offers 300 MOOC’s in 29 categories created by some of the world’s elite universities. Participating university include Brown University, Duke University, Ohio State, Johns Hopkins, Princeton, Rutgers and UMUC (Coursera, 2013). The popularity of MOOC’s is escalating around the world. The Washington Post reports Coursera will add 29 institutions, sixteen of which are outside the US, to its repertoire including the University of Maryland and Johns Hopkins (Washington Post, 2013). According to the Huffington Post, the American Council on Education (ACE) will recommend credit for five Coursera courses (Huffington Post, 2013).

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Connectivism is making a major contribution to the openness of distance education. This newly formed pedagogy is enthusiastically transforming the way we live, learn and teach. As interactions and resources emerge, knowledge is being distributed across various networks at an accelerating pace. Learners and facilitators are experiencing a new sense of autonomy and accessibility through the principles of connectivity. This new way of learning is gaining popularity worldwide and has added an exciting layer of pedagogy to the evolution of distance education.

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