

Curriculum-Making in an Age of Complexity: The Need for Deliberation

In the recently published book *Engaging Minds: Changing Teaching in Complex Times* (2nd ed.) (Davis, Sumara, & Luce-Kapler, 2008), the authors describe how mechanistic understandings of teaching and learning began to change in the 1970s and 1980s with a shift towards a more holistic idea of learning, coinciding with a broader, transdisciplinary move towards “complexity thinking”. Complexity thinking rejects the use of linear, machine-based metaphors and embraces non-linear, organic notions of understanding (p.76). In this view, learning is not a cause and effect relationship between a teacher and student; the act of learning is one part of a complex system that is dependant on many other parts. If the process of learning can be understood in these terms, I believe the process of developing educational objectives and curriculum can be as well. McCutcheon’s book *Developing the Curriculum: Solo and Group Deliberation* (2002), reaffirms my opinion that contemporary society requires a non-linear and collaborative approach to teaching and learning, and that curriculum development in the 21st century should embrace the inevitable characteristics of simultaneity inherent to the deliberation process.

As we work towards developing curriculum for the future, educators must resist a systematic approach that is too linear, particularly in terms of defining objectives and evaluating the learning outcomes. McCutcheon clearly illustrates the necessity for effective deliberation involved in the curriculum-making process, both in the solo and group processes, with attention paid to Schwab’s fundamental bodies of knowledge (1978). In my opinion, the Tyler rationale should not be disregarded in this deliberative process, however, the behaviorist model that it was associated with is no longer aligned with the kind of complex thinking that exists today. The Tyler rationale provides a structure and direction that can be considered a general guide for creating certain curriculum, but it should be viewed as just one of the many parts to a complicated and challenging system that functions in multidirectional ways as opposed to a unidirectional mode. Considering the significance Tyler placed on investigating external contemporary life in relation to educational objectives, I believe he would have allowed for a less linear structure if developing his model of curriculum in 2008.

Contemporary life for students today includes a persistent growth in digital technologies that have transformed and complicated how students communicate, learn, and think. From very early ages, children interact with new forms of technology and these interactions need to be examined in the same way that human relationships are. The design of digital technologies, such as the social networking sites that “millennial students” (Tucker, 2006) gravitate towards, allow for multidirectional conversations that occur in multidimensional spaces (Davis, et al, 2008) and epitomize the non-linear structure of our multi-tasking society. Although the technical designs of these new digital forms have been constructed with great precision and order on the inside, the outside forms present potential levels of interaction that surpass linear limitations and restrictions. Metaphorically speaking, elements of the Tylerian model remain embedded within the less predictable interface of the exterior. The mileus Schwab defined within his description of commonplaces (1978) now need to be extended into virtual reality, thus new methods and strategies will eventually be incorporated into teachers’ practical theories of actions.

The deliberative approach to curriculum-making is complicated, time-consuming, and stressful... but there is really no other way to achieving the best solution. The process allows educators to embrace a Gestaltian view of teaching and learning, as Senge (1990) elaborated on within his analysis of systems thinking when he stated that, “...reality is made up of circles, and when we see straight lines, we limit ourselves as systems thinkers and misunderstand reality.” It is this lack of linearity in both Senge’s and McCutcheon’s research that inspired me to draw connections to complexity theory and contemporary systems of communication. In fact, the visuals Senge uses to describe systems thinking are similar to those found in the work of contemporary artists (eg. Julie Mehretu, Ingrid Koenig) who explore these interrelationships in abstract forms, and they have also become prevalent in my own artistic practice.