

Rethinking Innovation in Asia Pacific Higher Education

Deane Neubauer
Professor Emeritus, University of Hawai'i Manoa
Co-director APHERP



Disruptive Innovation

- ◆ The prevalence of disruption in American Innovation over the past dozen or so years
- ◆ Christensen: “The theory of disruptive innovation has significant explanatory power in thinking through the challenges and changes confronting higher education. Disruptive innovation is the process by which a sector that has previously served only a limited few because its products and services were complicated, expensive, and inaccessible, is transformed into one whose products and services are simple, affordable, and convenient and serves many no matter their wealth or expertise. The new innovation does so by redefining quality in a simple and often disparaged application at first and then gradually improves such that it takes more and more market share over time as it becomes able to tackle more complicated problems.”

Patterns of Innovation

- ◆ More Christensen:
- ◆ Sustaining innovation: “improvements to products that enhance performance in dimensions traditionally valued by consumers. They make existing products and services better.”
- ◆ Disruptive innovation: “change the value equation. Initially, disruptive innovations under-perform mainstream products, but offer some advantages of cost and ease of use. They cause fundamental changes in the marketplace”
- ◆ The need to situate innovations within broader patterns of change

A Typology of Change: Genuine Novelty

- ◆ Genuine novelty often involves new ways of “experiencing the world,” creating entirely aspects of processes, and institutions. In this sense the Internet is a paradigmatic innovation that has profound implications for how we communicate, create, and retrieve information globally. Innovations such as these, along with their consequences, make it useful to ask how innovation of this form novelty affects overall processes of change (Castells, 2009).

Typology of Change: Combinations

- ◆ **Combinations**—A feature of contemporary globalization are that occur by combining older ways of behaving with what's new, sometimes combining two or more ways of doing things. On-line banking and shopping, for instance, bind together traditional shopping and banking with 24-hour high-speed computer access from home or anywhere in the world. This new combination eliminates the need to travel to shop or bank, producing new ways to accomplish these traditional activities, ways that have considerable impact on individual time management, social organization, jobs, consumption patterns, etc.

Typology of Change: Extinction

- ◆ Some of the changes being wrought by globalization bring practices, values and patterns into being while causing others to disappear. Legacy patterns and institutions gain a particular focus as existing practices resist the movement toward extinction.

Typology of Change: Predicaments

- ◆ Predicaments differ from problems in that they lack definitive “solutions” to conflicting issues constructed within them.
- ◆ To escape predicaments often necessitates engaging in activities at another level of logical construction.
- ◆ Problems and predicaments are often confused and conflated with each other.

Innovation within Higher Education: A Changing Ecology

- ◆ Changes in Characteristics of Learners
- ◆ Changes in Roles and Responsibilities of Faculty
- ◆ Changes in Methods of Instruction and Learning Processes
- ◆ Changes in the Content and Focus of Instruction
- ◆ Changes in Political and Economic Environments of HE
- ◆ Changes in Frameworks of HE
- ◆ Changes in Processes and Values of Certification, Credentials and Accreditation
- ◆ Changes in Policies that Frame and Government HE

Proposing a Research Schema for Innovation in HE

- ◆ We propose a set of research projects with APHERP—to be termed “research clusters”—to explore at various empirical levels the reach and effect of innovations suggested by the changing ecology.

Dimension of Change	Type of Changes			
	Novelty	Combination	Predicament	Extinction
Nature of learners				
Roles and responsibilities of faculty				
Methods of instruction and learning process				
Content and focus of instruction				
Pressures on higher education				
Frameworks in higher education				
Certifications, etc.				
Policies and Metrics				

Back to MOOCs as Innovation

- ◆ One, how extensive are the changes involved? As innovations, how significant are they in affecting the institutional patterns and behaviors that they are disrupting?
- ◆ Two, are they truly novel in that they supplant previous forms of the phenomenon, in this case “traditional” higher education institutions—at least in some important respects? Or, are they more aptly characterized as combinatorial, such that some genuinely synthetic “product” emerges from the innovation—in this case, the integration of MOOCs into the curricula of conventional institutions.
- ◆ Three, to what extent are MOOC’s themselves transitional? In the world of constant and continual innovation have MOOC’s played a role in recasting strands of innovation within higher education that may lead to even more far reaching kinds of changes?
- ◆ Four, casting back to some of the previous points of the paper, what are likely to be the normative consequences of such changes with respect to our existing patterns of presenting higher education throughout the world?

Big Data

- ◆ MOOC's may be an early manifestation of the entry of big data into both lower and higher education
- ◆ MOOCs and much of the rest of the disrupting movement have grown out of this increasingly dysfunctional relationship between older institutional forms, emergent societal needs and the intervening forces of knowledge society transformation. In some respects every major innovation in knowledge technology adds to the “transformational burden” of higher education.

Big Data in Education

- ◆ Big Data projects are individualizing the focus of a variety of applications in genuinely novel ways—promising that individual characteristics can increasingly be accommodated within knowledge applications in ways that significantly increase the direct benefits to individuals, defined by their own unique qualifications and attributes.
- ◆ Analogy of “individualized” education with “individualized medicine.”
- ◆ Economics, efficiencies and effectiveness of big data approaches to individual engagements.

Implications

- ◆ Strong appeals to individual learners
- ◆ Abilities to substitute high data engagement models for high cost classroom alternatives
- ◆ Importance of emergent big data experiments that range from national security, to controlling traffic, to plotting consumer behavior, to conducting elections
- ◆ The critical questions focus on us as practitioners in, protectors and advocates of, and innovators within our own legacy institutions.