

## Chapter 42

# Disruption and Innovation in Global Higher Education as Viewed Through the Lens of Complexity Theory


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### ABSTRACT

*The focus in 21st century society is knowledge-based: learning is critical, and information will continually become obsolete. The success of global higher education institutions will demonstrate their ability to manage networks of knowledge and to collect, document, and analyze data involving complex systems, thereby exhibiting adaptability and agility with complexity. In addition, technical innovations will alter the skills and knowledge needed to succeed in the workplace and society. Yet disruption and innovation are often the menu of the day, creating chaos and disorder. Complexity theory impacts all the critical aspects of global higher education.*

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## INTRODUCTION

Global higher education leaders must manage enormous complexity especially when dealing with disruption and innovation as viewed by complexity (Altbach, 2016; Mense, Lemoine, Garretson, & Richardson, 2018). Therefore, three dimensions of management are critical for success: (1) Global higher education organizations are increasingly rigid and less autonomous and bound by their own institutional policies and procedures as well as state and federal laws (Christensen, Gornitzka, & Ramires, 2019; Qureshi & Nair, 2014); (2) Global higher educational organizational environments are increasingly complex, less able to adapt and be agile (Cheng, Cheung, & Ng, 2016; Heckroodt, 2016); and, (3) Global higher education organizations are increasingly dependent on technology (Tekleselassie, Roberts, & Richardson, 2014). Along with increasing global competition, technology adds complexity and uncertainty to the organizational environment, often driven by disruption and innovation (Finardi & Rojo, 2015). Increasing global interdependencies and the accelerating pace of change demand more flexible, adaptive, and agile global higher education institutions (Gornitzka & Maasen, 2014).

A new management approach based on complexity science advocates a shift from the “command and control” style of management to a “sense and response” style. This implies a shift from building skills to predict and control outcomes to prescient abilities to be forward-thinking and responsive in recognizing patterns and adapting quickly (Carlisle & McMillan, 2017). Thus, the focus needs to be on flexibility, learning and development of new knowledge instead of specific management solutions (Ramus, Vaccaro, & Brusoni, 2017).

Technology has disrupted the traditional, formal processes of higher education, particularly in the global marketplace. The twin forces of technology and globalization have created an environment of increasing complexity for leaders in higher education (Siu & Garcia, 2017). Colleges and universities have long been contributors to the knowledge economy and as such have been at the same time acted upon by global forces and have been actors on the global stage in providing services through cross-border initiatives that are often comprised of sites located not within the institutional nations of origin but at locations throughout the world, even on other continents (Stafford & Taylor, 2016). That those cross-border initiatives can be provided through distance learning technologies opens the possibilities for vast new markets, with the promise to cut costs while providing services to tremendous numbers of students worldwide (Wilkins & Juusola, 2018; Youssef, 2014).

The combined forces of technology, new generations of students, uncertainty in the job market and economy, globalization, and all that they imply for global higher education have created a landscape of tremendous complexity with strategic directions difficult to predict (Zhu, 2015). The fact that these forces interact on a global scale creates non-linear change with the appearance of chaos owing to the many degrees of interdependence and interconnectivity (McChrystal, Collins, Silverman, & Fussell, 2015). This increase in complexity in the higher education sector implies a need for leaders who have the cognitive complexity to lead strategic design and implementation initiatives in the coming years (Buller, 2015; Everhart & Seymour, 2017).

## Background: Globalization and Higher Education

Globalization has influenced and been influenced by institutions of higher education that have been involved early and often in the promotion of cross-border communities that revolve around the creation and the sharing of knowledge (Amin, 2016)). Additionally, globalization has created a need for universi-

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