Chapter 2
Adopting Complexity Leadership in University Research and Innovation Management:
A Framework Proposal

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ABSTRACT

The aim of this chapter is to provide an alternative perspective to managing universities' capacities for change through the lens of complexity leadership, more specifically in the realm of research management. It does so by developing and proposing a leadership framework underpinned by three dimensions: complexity leadership principle statements applicable to the university setting; the attributes, roles, and leadership functions of university agents to best support the needs of a complex context and organization; and general guidelines on how to activate the change process towards more collaborative, responsible, and sustainable research actions. The chapter's intended contributions are two-fold: to contribute to the growing yet underexplored literature on complex leadership in managing change in the university setting and to propose an actionable framework that can boost the contributions and sustainability of higher education institutions.

DOI: 10.4018/978-1-7998-8279-4.ch002

INTRODUCTION

The COVID-19 pandemic has shaken the world to its core with its devastating effects on health, employment, and social life. Governments and institutions have been forced to revisit and redraw their strategies in an effort to recover and mitigate its long-term implications. Higher education is one of the many sectors that have been gravely affected by the health crisis, generating risks and losses but also opportunities for change and improvement.

The pandemic has also had major implications for higher education institutions. It has disrupted face-to-face classes and forced the migration of education delivery to online or blended settings. This became a serious challenge for brick-and-mortar universities with underdeveloped staff capacities and infrastructure to accommodate digital instruction. Inequalities of digital access and participation also became more prominent among the student population, providing more strain into the already challenging scenario. With widespread job losses threatening their revenue, privately funded universities also have to contend with the financial sustainability of the organization by resorting to austerity and cost-reduction measures. Besides the real public health risk of infections, many prospective and ongoing mobility students were steeped in worry, anxiety, and uncertainty regarding the many facets of life (personal, family, and social) and the successful and timely completion of their courses.

The other face of this grim scenario is the increased relevance of the university's academic research function. Indeed, it has played an essential part in tackling the pandemic through knowledge generation, mobilization, and dissemination on matters related to public health, the economy, and social life more generally. There is evidence of an increase in research collaborations, outputs, and science diplomacy efforts (Lee & Haupt, 2020) towards producing a vaccine and tackling COVID-19's social and economic aftermath. Indeed, the university's research mandate has become a critical component in overcoming the challenges brought about by the pandemic[1].

For Schuetzenmeister (2010), the complexity of interdependencies between research and society calls for the need to establish a structure of research management. Overall, research management is identified as a form of 'boundary work' that can operate at the policy level (through science policies), strategic level (by mediating between research and political agenda), operational (through the administration of research organizations such as universities), and project levels (through the organization of research groups, centers, and departments). The multidimensionality of research management and the involvement of different agents in this arrangement reflect a degree of complexity that calls for a different approach to leadership and management, which several scholars allude to as 'complexity leadership' (Marion & Uhl-Bien, 2007; Uhl-Bien & Marion, 2009; Uhl-Bien, Marion, & McKelvey 2007). As opposed to traditional bureaucratic systems oriented towards performance, control, and accountability, complexity leadership allows for not only flexibility and creativity (Uhl-Bien et al., 2007) but also simplicity, efficiency, results-oriented approaches, and room for manoeuvre more appropriate for the rapidly changing and unpredictable environment of a knowledge-based society. As research becomes a multi-agent endeavour and increasingly responds to wicked societal problems, there is a greater interest in adopting an ecosystems- and complexity-based perspective that goes against reductionism and compartmentalization (Gregory, Atkins, Burdon, & Elliott, 2013).