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Book Review

Engines of Innovation: The Entrepreneurial University in the Twenty-First Century

Joseph R. Bell

Holden Thorp and Buck Goldstein, *Engines of Innovation: The Entrepreneurial University in the Twenty-First Century*, Chapel Hill: UNC Press, 2010, 154 pages. List price \$25.00

Engines of Innovation: The Entrepreneurial University in the Twenty-First Century is an exploration into the design of a collaborative academic institution where silos of discipline-specific competency and tradition disappear and innovation reigns supreme. The book's influence could ultimately revolutionize the structure of academia while simultaneously mounting an attack on the world's monster problems. The book provides insights into successful innovation-focused academic programs, renowned academic leaders and entrepreneurs, and offers strategies for creating truly innovative and entrepreneurial campuses. Scattered throughout the book, and emphasized in the final chapter, the authors discuss how donor giving has evolved and what institutions can do to advance campus initiatives and address the desires of this new breed of donor.

The authors set the tone and urgency for their message in the introduction by quoting Rahm Emanuel, former chief of staff for President Obama, who said, "You never want a serious crisis to go to waste." The authors then comment that universities have a major responsibility as "engines of innovation." They also go on to pose the question, "Are our great research universities ready to assume the responsibility that has been placed upon them?" Their answer is "that they [great research universities] have no choice. . . ."

The book is divided into two distinct sections. The first section (Chapters 1–5) is about innovation. Here, the authors discuss the components necessary for the entrepreneurial university—an aspirational perspective. The second section (Chapters 6–11) shares specific strategic and execution insights, along with recommendations for organizational structure and accountability.

The opening sentence in the first chapter sets the tone for the entire book in stating, "Events have conspired to place our great universities in an either enviable or terrifying posi-

tion. . . ." The chapter focuses upon the responsibility of the universities of the 21st century to take on the world's great problems, and the multidisciplinary diversity necessary to achieve success. The authors encourage universities to break from traditional, hierarchical structures. The chapter goes on to provide a glimpse of what is to come in the remainder of the book.

The second chapter, "Entrepreneurial Science," establishes the book's premise: that science needs to take on a more collaborative, multidisciplinary approach if the world's great problems are to be addressed. As we all have heard, and in many cases experienced, breaking down the silos in academia is a challenge, but a necessary challenge for the 21st-century university. From funding issues to the new student-learner, the paradigm for our universities is changing.

"Translational sciences," discussed in Chapter Three, describes sciences that bridge the gap between academia and the "outside world." The chapter highlights engineering programs and the applied sciences, the up-and-coming medical research institutions, and colleges of business. The authors state that translational disciplines create businesses and then cite the success of MIT having started more than 5,000 companies that account for over \$230 billion in annual sales. A nexus that is mentioned in this chapter, though understated in the book, is that between the engineering and business schools—but more on that later. The chapter highlights successful programs like Stanford and the Deshpande Center at MIT. Here, and throughout the book, the authors effectively use practical and interesting success stories.

The importance of social entrepreneurship is covered in Chapter Four, noting a decade ago few recognized the term. The authors hold that social entrepreneurship is the intersection of sustainability and accountability, though acknowledge that the definition continues to be a moving target. In the chapter, they discuss the compelling nature of social entrepreneurship and its ties to donor motivations. Once again, the authors offer compelling examples of campuses embracing successful social entrepreneurship initiatives.

In Chapter Five, the discussion turns to the elimination of departments, even commenting that the most radical approach would be to "blow [them] up." It is one of the most compelling chapters of the book, pushing the envelope on

traditional university structure. The authors offer reasons not to take this approach, but more importantly, they provide commentary on why new centers of innovation are necessary. A successful example is complemented by a series of observations on why changing the fabric of universities is important and how change might be accomplished.

In Chapter Six, "Leadership," the authors begin by claiming that innovation starts with entrepreneurial thinking—and entrepreneurial thinking begins with individuals rather than departments or committees. The chapter goes on to list key leadership traits exhibited by academic visionaries interviewed by the authors. Words like *culture*, *strategy*, and *execution* are prominent. The profile of John Hennessy, president of Stanford, is a great read.

In addressing faculty attributes, the authors in Chapter Seven, identify and define the differing roles assumed by research faculty. From the public scholar, one with the ability to connect to a mass audience, to the entrepreneurial scholar, one more accustomed to asking forgiveness than permission, to the engaged scholar, one who creates service-learning opportunities, the chapter highlights the diverse skills and tact employed by varying academic roles.

Chapter Eight offers a notable discussion around the difficulties in reaching consensus in an academic setting. The authors recognize the challenge but embrace the devotion faculty has for their discipline and institution. They offer an insightful look at the tenure process, its value, its evolution, and its challenges. The remainder of the chapter covers cultural change, why it does not happen overnight, and again, offers suggestions on strategy and implementation.

The following chapter asks if entrepreneurship can be taught and then defers to Peter Drucker, who asserts that entrepreneurship is based upon concept and theory, and reaffirms that, in fact, entrepreneurship can be taught. The authors propose a strong preference for both the position of entrepreneurship within the university and the scope of its offerings. This is by far the most thought-provoking chapter in the book.

"Accountability," the title of Chapter Ten, talks mission and fit, but most compelling is the lack of weight the authors assign to external rankings. They are quite frank in their beliefs as to what drives academic rankings. Recognizing that each campus is unique, the authors embrace the fact that the design of campus entrepreneurial initiatives really becomes recognition of institutional autonomy and diversity.

In closing, the final chapter, "The New Donors and University Development," presents a wonderful discussion into the legacy being created by Bill Gates and his philan-

thropic intent. Donors, large and small, are motivated very differently today than was the case with historic giving. In coming full circle, today's donors truly fit the mold of supporting projects that address the world's monster problems.

The authors conclude that the silo mentality must give way. For innovation to flourish within the institution there must be room within the institution for the entrepreneur.

This book is a quick and enjoyable read. The authors accurately highlight concerns many in the field of entrepreneurship have observed or encountered over the years within their academic institutions. Articulation of these concerns by these extremely credible academic leaders gives credence to the struggle and should open a serious dialogue as academic institutions move into a new era of student, funding, research, and abundance of other 21st-century issues.

Chapter Nine especially challenged me to examine my preferences, having a long and, I believe, rich history in both private sector and academic settings. As business faculty, I began to take on a protectionist posture but came to realize much of what the authors propose would have more closely aligned with my needs as a student-learner—even some 30 or so years ago. In any event, I was a bit disappointed in the less-than-expected role the business school played in the book. In addition, Chapter Nine's importance may have benefited from an earlier appearance in the book. I also believe the book could have been further enhanced by a chapter devoted entirely to scientific research and its relationship to market opportunity, though I may be reaching a bit for more depth than the authors intended. *Engines of Innovation: The Entrepreneurial University in the Twenty-First Century* has drawn a line in the sand and challenges institutions to reinvent themselves. Be bold, blow up the silos, and take on the world's monster problems!

The book is a must read for all university leadership. It is very engaging for faculty, entrepreneurial or otherwise, and serves as a road map for future giving and fundraising. Be wary, colleagues, as the entrepreneurial community already has a copy of *Engine of Innovations*. I was introduced to this book via a recommendation from a friend and former colleague. He is an entrepreneur, medical doctor, and entrepreneurship educator and activist. He was quite inspired by the book and shared it with me. Since reading the book, I too have embraced the message the authors offer and I have shared the book with a number of academic administrators and colleagues. In closing, I would like to thank the authors for deftly putting in writing what has needed to have been said for some time now. Please feel free to pass on a copy.



About the Author



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