

# Between Chaos and Control: Creating High-Performance Cultures in Universities and Colleges

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## Abstract

The economy of the 21<sup>st</sup> century requires individuals who are skilled at analyzing problems from an interdisciplinary perspective, generating innovative ideas and thinking creatively. Higher education institutions are attempting to respond to this challenge by launching creative campus initiatives. The hallmarks of these initiatives include increasing opportunities for interdisciplinary collaboration, cross-cultural exchanges, internationalization, and the integration of the arts into the curriculum and campus life.

The introduction of creative campus initiatives into the traditional discipline-based university and college structures represents a management challenge, since these initiatives tear down the barriers and walls between and among disciplines and structure knowledge dissemination in new ways. Higher education administrators are being asked to rapidly develop knowledge and skills in innovation management: They need to be able to assess an institution's capacity to absorb and integrate this type of innovation, to establish appropriate organizational structures supporting creative campus initiatives, and to promote norms and values of high-performance cultures. Understanding the tools, techniques and processes of innovation management in business, can assist higher education administrators to successfully master these tasks. Drawing upon principles of effective innovation management utilized by such corporate leaders as IDEO, 3M and Research in Motion, this paper will develop a blueprint to successfully launch creative campus initiatives in academia and enable their long-term sustainability.

## Introduction

“There is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success than to take the lead in the introduction of a new order of things [1].”

The capacity for higher education institutions to innovate has historically been viewed in a rather skeptical light. According to van Vught [2], there are four organizational characteristics of higher education institutions which influence the sector's innovation capacity: (1) Authority and power is concentrated in hands of the professoriate, (2) the building blocks for the organizational structure are the professional disciplines, (3) decision-making is distributed among a broad range of stakeholders, and follows a negotiated consensus-building approach, and (4) educational administrators have a limited power base.

Clark [3] argues that innovation is sparked by the professoriate, and is concentrated within the discipline as semi-autonomous organizational units. However, disciplinary silos and walls

constitute barriers to the effective and efficient diffusion of innovative ideas across a higher education institution [4]. At the same time, radical, comprehensive and system-wide innovation is difficult to achieve in higher education institution, as decision-making powers are decentralized and as the implementation of innovative initiatives is dependent upon the consensus of a wide range of stakeholders.

Based on this analysis, successful innovation in universities and colleges is dependent upon encouraging activities which expand beyond disciplinary boundaries and upon the development of an institutional framework which sets strategic directions for innovation and integrates different innovation initiatives. The need for integrative mechanisms to foster innovation in contemporary higher education has led, for example, to the establishment of the European Institute of Innovation and Technology, an EU think tank which brings together professors, researchers and entrepreneurs to solve pressing societal problems – climate change, migration and renewable energy.

It is vital that higher education institutions meet the innovation challenge: Florida [5] highlights that creativity and innovation are the key drivers of the new global economy, and universities and colleges have to prepare learners with the new set of competencies that are required for the creative economy.

In this presentation, I will outline a blueprint for the successful development and launch of creative campus initiatives in higher education institutions. This blueprint has been developed based on a review of essential tools, mechanisms and techniques that have proven vital in fostering innovation in businesses such as IDEO, RIM and 3M. It is composed of seven high level principles or levers designed to orchestrate an integrated approach to innovation management while simultaneously providing fertile grounds for a wealth of innovative ideas to flourish. These levers include: (1) developing a compelling vision and strategy, (2) weaving a tapestry of stories, (3) mapping out the pathway towards innovation, (4) creating boundary-spanning structures, (5) building innovation laboratories, (6) creating an organizational culture supportive of innovation and (7) aligning the leadership style for successful innovation.

I will illustrate these principal levers with best practices that showcase how universities and colleges, caught in the midst of an evolutionary process directed towards unleashing the creative potential of academia, have successfully responded to the innovation challenge. Best practices of milestone innovations in academia include for instance the MaRS Project and the Centre for Integrative Thinking at the University of Toronto (Canada), the Design Reaktor Berlin Project (Germany), collaborative projects among European Universities under the auspices of the Erasmus Program, and the introduction of creative campus initiatives at Vanderbilt University, the University of Alabama and Columbia University.

### **Definitional framework**

Prior to entering the discussion, two terms will need to be defined – the creative campus initiative and innovation. The creative campus initiative is as an overall framework which subsumes innovative activities and programs designed to foster student creativity. The creative campus initiative varies widely in terms of its complexity and scope: Some higher education institutions view the integration of the arts into the curriculum as the core element of the creative campus initiative. In other higher education institutions, the creative campus initiative refers to a comprehensive systemic change with multiple features: it envisions a re-organization of traditional knowledge structures - from disciplines to interdisciplinary structures. It aims to

create a more vibrant physical campus environment through animating space with the visual and performing arts. It seeks to enliven the curriculum through the integration of creative thinking, an appreciation of diversity and an international dimension.

For example, the University of Kent (Great Britain) concentrates on the integration of the arts into campus life: it has created a labyrinth as a place to foster inspiration in creative writing. In contrast, Vanderbilt University and the University of Alabama champion a comprehensive creative campus initiative which seeks to foster student creativity through changes in the curriculum, campus space, interdisciplinary collaboration and community development:

“Creativity thrives on those campuses where there is an abundant cross-cultural exchange and a great deal of ‘border activity’ between disciplines, where collaborative work is commonplace, risk taking is rewarded, failure is expected, and the creative arts are pervasive and integrated into campus life [6].”

This paper will focus on providing useful tools for the development and implementation of system-wide comprehensive creative campus initiatives. In this context, I will employ Bessant and Tidd’s [7] definition of innovation as “the process of translating ideas into useful – and used - new products, processes and services (p. 29).” There are four main types of innovation: *production innovation* (leading to new products and services), *process innovations* (improving production and delivery processes for products and services), *management innovations* (improvements in administration and management), and *market innovations* (creation of new markets). The creative campus initiative represents a service innovation (in the form of new curricular activities). It challenges higher education administrators to review their service delivery processes adopting a student-centric approach, and it generates management innovations focused on creating opportunities for collaborative learning.

### **Develop a compelling vision and strategy**

Academic leaders have to formulate a strategic vision which explicitly commits the university or college to the pursuit of innovation and the realization of the creative campus initiative. This strategic vision is a reflection of the organization’s aspirations - it sets the long-term directions for the institution. The strategic vision defines the institutional identity and infuses the higher education institution with a sense of purpose.

The need to actively drive the innovation agenda by setting strategic directions underlies the new product development of many private sector companies. It is at the root of such breakthrough innovations as Apple’s iPod, 3M’s Post-it Notes or Toyota’s and Honda’s hybrid engines. Leaders create the climate for innovations to emerge as part of their strategic vision to branch out into new territory and develop innovative products and services. Intel captures its focus on continuous improvement and innovation in the following strategic vision: “At Intel, we believe in being open to big ideas and inspired innovation that will change the world. This idea of openness is at the very core of who we are as a company [8].” A strategic vision focused on innovation can function as a key element in attracting an entrepreneurial workforce and investors to the company. At the same time, the strategic vision represents a unifying platform for aligning the company’s resources, strengths and capabilities towards innovation.

Higher education institutions are heeding the call for creating a strong focus on innovation as part of their institutional strategic plans. For example, the Strategic Plan of the Nova Scotia Community College [9] provides an excellent illustration of how the drive towards innovation has become enshrined in the strategic vision of the College: “NSCC learners will blend learning, community service and work in ways that put them at the innovation edge of the global economy, where the world places a premium on knowledge, imagination and skill, in essence

education without boundaries (p.5).” Another example is provided by the Manifesto [10] created in connection with the European Year of Creativity and Innovation: the Manifesto sets out the strategic direction for European higher education institutions pledging support for universities where students and teachers engage in creative thinking and in learning by doing. Universities and colleges are seen as stewards and ambassadors of creativity and innovation - as such they are responsible for educating the citizens of tomorrow who will thrive in global learning society.

Another key ingredient promoting innovation in the private sector is the quest to establish a customer-centric company – all business processes, operations and outputs are designed to meet the needs of the customer. Ridderstråle and Nordström [11] highlight this “customer first” philosophy in the new global economy: “We have to start competing on the basis of feelings and fantasy – emotion and imagination... To succeed we have to surprise people ... (p. 228).” Akito Morita, chairman of Sony, states that the development of the Sony Walkman was only possible, through an almost intuitive understanding of the customers’ needs. In a customer-centric business culture, employees value their customers and find ways not only to meet their needs, but to surprise them and create a memorable consumer experience [12].

If this lesson is applied to higher education institutions, academic leaders are advised to craft their strategic vision for innovation focusing on students’ needs. Learners take centre stage in the establishment of a creative campus, since they have to be equipped with the knowledge, skills and competencies to succeed in the new global economy. A good example of a student-centric approach to education for innovation is provided by Sheridan College [13]:

“Our approach is to provide freedom and encourage everyone at Sheridan to explore, take risks, engage in stimulating and provocative dialogue and provide learning that bridges disciplines. Creativity and innovation will be institutional hallmarks, stimulating new approaches and sparking the generation of shared solution (p.11).”

#### **Weave a tapestry of stories**

A second important lever for effectively orchestrating a drive for innovation in academia is a well-planned and executed communication campaign that addresses the information needs of different institutional stakeholders – students, faculty members, administrators and external community partners. Academic leaders will need to develop a communication plan which provides key messages to institutional stakeholders as different milestones are reached in the innovation strategy and its implementation.

It is essential that the strategic intent to develop and implement innovations, such as a creative campus initiative, is communicated throughout the institution for several reasons: first, academic leaders need to inform institutional stakeholders about shifts in the institution’s strategic direction, and explain and illustrate how this shift in direction builds a stronger competitive advantage for the university and college. The creative campus initiative is driven by the pressure to equip students with the new requisite skills and competencies required to flourish in the creative economy of the 21st century.

Second, academic leaders have a better chance of achieving buy-in for the creative campus initiative, if they can identify and illustrate how this initiative will affect each stakeholder: For example, students’ achievements may be presented not just in a grade report but rather in a learning portfolio at the completion of studies. Faculty members may be engaged in cross-disciplinary teaching.

Thirdly, academic leaders will only be successful in promoting the creative campus initiative, if they can engender a sense of passion for the innovation in the heart and soul of institutional stakeholders. Management theorists, such as Adamson, Pine and Van Steenhoven [14] and

Boyce [15] underline the importance of capturing people's passion, imagination and emotional support for an innovation: "In order to be effective, strategy must not just inform, it must inspire. And people are never inspired by reason alone...p. 37 [14]."

Fourthly, regular communication about the creative campus initiative has the potential of breaking down silos and walls between and among the academic disciplines, as students, faculty members, and administrators recognize that they are involved in a joint journey towards a new destination – the creative campus. In order to enhance the demolition of disciplinary silos, academic leaders may encourage students, faculty and administrators alike to collect stories about their experiences and lessons learnt, as creative campus initiatives are developed and implemented.

IBM found that far too much valuable business knowledge was lost, as employees did not communicate their best practices across departmental boundaries. IBM now actively promotes the collection and retention of knowledge across the organization through storytelling by establishing a repository of employee stories that is available for input and review company-wide. Designer Neumeier [16] highlights that the collection of organizational stories can greatly rally support for a leader's vision and proposed innovation strategy:

"While revolution must be led from the top, it rarely starts at the top. The spirit of revolution already exists in the hearts and minds of motivated employees and loyal customers. It shows up in the individual stories that employees tell about the work that they do. And it shows up in the individual stories that customers tell about the products that they love. Often a leader need only act as a kind of managing editor, shaping the stories to align with a shared vision (p.88)."

Fifthly, academic leaders have a much better chance of ensuring that the higher education institution speaks with a united voice, if they have taken care in crafting a comprehensive communication plan and are committed to regularly updating students, faculty and administrators about the progress made towards the development and implementation of the creative campus initiative.

In devising the communication campaign, academic leaders can draw upon some valuable lessons from the business sector in terms of crafting particular messages: Management theorists, such as Denning [17], Jacobides [18] and Adamson, Pine and Steenhoven [14] point out how business leaders seek support for their organizational strategy using different forms of storytelling. In reviewing companies in the financial services, textiles, construction and technology sector, Jacobides [18] found that organizational strategy can best be devised and communicated as a playscript, a narrative that identifies the protagonists and antagonists in the sector, outlines the main business conflict between and among the players, the plots and sub-plots which drive their interaction, and how the company is poised to seek competitive advantage in this situation.

Fog, Budtz and Yakaboylu [19] outline how organizations like Nike, Lego, Harley Davidson and NASA identify their core story encapsulating their principal value proposition, and subsequently build internal and external company communication based on the core story. For example, LEGO's core story focuses on *learning through creative play*, Nike's core story centers on the *will to win*.

Sheridan College [13] provides an excellent example of driving the development of the creative campus initiative through clearly defining its core story. Sheridan's value proposition is its commitment to help students "shine brighter" – to assist students in developing their

professional and personal potential in journeying towards the establishment of the creative campus.

### **Map out the pathway towards innovation**

“Innovation can be a disorderly process, but it needs to be carried on in an orderly way. The truly good manager finds the means to manage the disorderly innovation program in an orderly way without inhibiting disorderly effectiveness (p.49) [20].”

Lewis Lehr, CEO of 3M, highlights in this statement the dynamic tension inherent in managing innovations processes – managing chaos in an orderly fashion. Effective innovation managers are skilled at outlining a general framework for innovation by identifying high level goals, allocating resources and establishing critical parameters and decision points without interfering with the generation and proliferation of creative ideas and innovations.

Companies such as 3M, Hewlett Packard and Lego employ stage-gate models to structure their new product development process. The process is divided into a number of phases including idea generation, idea screening, concept development and testing, marketing strategy development, business analysis, product development, market testing and commercialization [21]. Cross-functional teams working on new products have to produce specific deliverables at the conclusion of each stage. A decision to proceed to the next stage in the model is made, if a favourable evaluation is reached: for example, a business idea may be screened out as it does not fit with the company’s overall strategic direction. Product development will not occur, if the market analysis shows little consumer interest.

A systematically-structured innovation process can greatly enhance a higher education institution’s success in developing and implementing the creative campus initiative. A clearly structured innovation process represents a useful tool to clarify and communicate basic expectations about deliverables, proposed timelines, critical decision points and mechanisms to evaluate proposed ideas and projects under the creative campus initiative.

A successful realization of the creative campus initiative challenges academic leaders to dedicate human and financial resources to support this initiative. Aside from managing and supporting the routine operational realities of the institution, academic leaders make a conscious decision to align resources to support the innovation. Academic leaders can map the institution’s strength *en route* to the creative campus using Amabile’s *et.al.* [22] assessment model (KEYS) which measures an organization’s climate for creativity. This initial assessment will give academic leaders an indication about existing champions that would support them in their quest for innovation.

Academic leaders may wish to establish an innovation board. This organizational body can effectively steer the innovation process and be responsible for making decisions at the completion of the various stages in the innovation process. As an integrative mechanism, this board would be composed of academic leaders championing the innovation process as well as the service areas impacted by projects under the creative campus initiative. The innovation board would ideally be chaired by the university or college president in order to underline the importance of the strategic direction towards innovation and the creative campus.

### **Create boundary-spanning structures**

Marshall McLuhan [23] stated “that the medium is the message”. Interdisciplinary collaboration has been recognized as the fertile breeding ground for break-through innovations. Haring-Smith [24] indicates that “creativity thrives in an unbound arena where...free dialogue can exist among people who have different frames of reference (p. 26).” Given that the medium is the message, academic leaders will need to incorporate boundary-spanning dialogues and

exercises as a vital element in managing the innovation process. Cross-boundary collaboration is used by 3M, Dow and General Mills who organize venture teams composed of specialists from a number of business areas to develop new product ideas.

The Design Reaktor Berlin [25] project is an outstanding illustration of this type of dialogue: The project constituted a joint undertaking between the Technical University of Berlin and the University of the Arts. In 2007, fifty-two businesses, 81 students from six different disciplines and professors from fashion and product design, digital design, photography and film, and communications engaged in a two-week long multidisciplinary workshop aimed at developing innovative new products. This collaboration resulted in the development of 52 product prototypes ranging from a measurement device for steeping tea, a music ear drop, lampshades with novel design to handsoap. At this time, this experiment in open innovation resulted in 6 patents for new products.

### **Build an innovation laboratory**

The launch and development of creative campus initiatives in academia can be greatly enhanced by the establishment of an innovation laboratory. Innovation laboratories are physical spaces specifically designed to foster creative thinking, by incorporating areas for collaboration and areas of individual project work. Office furniture and movable barriers are designed for spatial re-configuration. Innovation laboratories recognize how décor, colour, lighting, and layout stimulate creative thinking. They are equipped with large writing spaces, tools for visioning exercises, and advanced information technologies supporting brainstorming and team work.

Companies like Prada, British Petroleum, Phillips, IBM and Boeing utilize innovation laboratories to seek new approaches to product development, service delivery, design and marketing. The Fraunhofer Office Centre for Innovation in Stuttgart (Germany) built a unique office setting called the Interactive Creativity Landscape (ICL) intended to research and model the office of the future: the spatial lay-out of the office matches the different phases in the creative thinking process – preparation, incubation, illumination, elaboration and evaluation. The ICL contains an interaction zone, an action zone and a retreat zone. The preparation phase involving problem recognition is marked by convergent thinking – the interaction zone accommodates the need for information exchanges by providing opportunities for team work and access to different communication channels. Divergent thinking is the hallmark of the incubation and illumination phases – the retreat zone addresses the need for individual work by providing “separated, individually adjustable cocoon-like space that aims at producing privacy for the individual user (p.295) [26].” IDEO opens up its innovation laboratories to outside visitors, particularly outside clients. Designers engage in brainstorming sessions with visitors: they gain up-to-date knowledge about the successful design solutions and are able to develop continuous improvements [27].

Current innovation laboratories in academia have taken different forms: The MaRS Project [28] is an innovation laboratory affiliated with the University of Toronto (Canada), which brings together leading edge researcher in biotechnology, venture capitalists and market intelligence, in order to promote new business start-ups in the biotechnology sector.

An innovation laboratory communicates a higher education institution’s commitment to reflective practice, creative thinking and innovation. Thus, Lewis and Moultrie [29] argue that “the most significant benefit of each facility is the degree to which it is a physical reinforcement of the strategic intent of the organization to be innovative and creative (p. 81).” Innovation laboratories allow students, faculty and administrators the opportunity to step out of the daily

realities of their work, to observe these practices, to network with community stakeholders and to jointly develop improvements to teaching, learning and research.

### **Create an organizational culture supportive of innovation**

Hitt *et.al.* [30] emphasizes how leaders who want their companies to excel at innovation need to instill in employees an inquisitive entrepreneurial mindset which is focused on identifying innovation and new growth opportunities. In an entrepreneurial organization, it is not just senior management at the apex of the organizational hierarchy who are in charge of seeking the next big idea, but rather it is each and every employee from the shop floor to the boardroom who is involved in this activity: "Your most important job as an entrepreneurial leader is not to find new opportunities or to identify the critical competitive insight. Your task is to create an organization that does these things for you as a matter of course (p.317)." Therefore, the development and implementation of a creative campus initiative in academia relies on enhancing the creative potential of each individual in the academic institution.

The drive towards successful innovation in higher education is facilitated by teaching and empowering students, faculty and administrators to think creatively. Dyer, Gregersen, and Christensen [31] argue that entrepreneurs like Steve Job (Apple), Jeff Bezos (Amazon), Mike Lazaridis (Research in Motion) and Michael Dell (Dell Computer) have mastered five basic discovery skills which lead them to innovative insights: these discovery skills include associating and combining ideas from different fields, questioning the status quo and seeing new possibilities, observing the business behavior of customers, suppliers and competitors, exploring and experimenting with new ideas and testing new ideas by seeking input from a diverse group of people. While these entrepreneurs deploy these discovery skills naturally, individuals can learn these skills with practice.

The principles of reflective practice have to be embedded into the DNA of higher education institutions in order for innovations to flourish. Reflective practice requires faculty, students and administrators to observe organizational processes and practices as a neutral observer, to examine the strengths and weaknesses of these processes, and to identify and implement improvements. The active engagement with daily processes is temporarily suspended in order for review and reflections on improvements to occur.

Academic leaders can choose multiple pathways to encourage reflective practice: Verdonshot [32] views appreciate inquiry as a useful starting point – appreciative inquiry encourages stakeholders in higher education to identify what the institution already does well in terms of the creative campus initiative (best practices), to envision an alternative future (what might the institution do?), to construct the future (what would be ideal?), and to implement the change. Academic leaders may ask institutional stakeholders to compare and contrast the past and the present best practices in innovation with a preferred or ideal future state of the creative campus. Based on his work with the Electrolux Group, Ringland [33] would advise academic leaders to engage institutional stakeholders in brainstorming exercises aimed at fleshing out detailed future scenarios of the creative campus.

Crosnan [34] suggests that the creative capacity of students, faculty and administrators in higher education institution can be greatly enhanced by engaging them in improvisation exercises: for example, individuals are provided with a series of different objects and materials and are asked to combine these materials to develop a new usable product.

Designer Neumeir [16] recognizes the importance of teaching people parallel thinking, the ability to view and analyze an organizational issue from multiple perspectives. He argues that

groups can engage in more constructive dialogues and group processes when developing, analyzing and implementing new ideas using de Bono's six thinking hats.

Higher education institutions in Europe are engaging in collaborative efforts to develop and teach courses in innovation: for example, the Savonia University of Applied Sciences worked jointly with higher education institutions in 8 European countries to prepare a case-based curriculum focused on fostering entrepreneurship and innovation for students in forestry and environmental science [35].

### **Align the leadership style to the innovation process**

Leaders in academia have to incorporate an appropriate leadership style that is supportive of innovation: Hitt *et.al.* [32] see the entrepreneurial leader in the private sector as a gatekeeper who insulates and protects fledgling new ideas from premature intrusion and opposition. Entrepreneurial business leaders allow employees to take risks and protect individuals from negative political pressures. 3M states that it is vitally important to give people a sense of direction, a shared vision about the company, and then allow people the freedom to develop innovative products. Micro-management of people stifles creativity and is completely contraindicated in an organization that wants to unleash the entrepreneurial spirit of its people.

According to Senge [36], leaders assume the role of designers, stewards and teachers in building a learning organization focused on innovation. In the role of teachers, leaders slowly refrain from any authoritarian ambitions to control subordinates. As teachers, they help others in gaining a better understanding of the organizational realities. Leaders as teachers challenge preconceived assumptions about organizational life. As stewards, leaders first and foremost serve the organization and its people. Leaders nurture a healthy organizational environment. As designers, leaders develop the social architecture of the organization shaping its purpose, mission, core values and objectives. According to Moss Kanter [37], leadership which fosters entrepreneurship in organizations requires a participatory leadership style coupled with collaborative decision-making between leaders and employees.

### **Conclusion**

Andriopoulous and Lewis [38] and Khazanchi, Lewis and Boyer [39] argue that managing innovation requires the ability to successfully steer the organization between opposing forces – those that support the exploration of new ideas and those that address the exploitation of existing company capabilities.

Based on their work with design firms, the theorists point out that managers must balance the four inherent tensions in the innovation process: (1) the tension between ensuring the short-term economic survival of the company and the need for flexibility and the adaptability to a changing economic marketplace, (2) the tension between constraints on resources and design options versus the exploration of new possibilities, (3) the tension between diverse viewpoints of individual designers and the cohesiveness of the design team and (4) tension between passion for the design of novel products and the need to develop products on time and within budget. Tipping the balance to the extreme ends of each continuum can be detrimental for the business: for example, the design firm may become too fond of designing novelty products that are too costly for the manufacturing process, will be rejected by the client and will thus deplete the financial coffers of the firm

Academic leaders will have to gain skills in balancing activities aimed at innovation and activities aimed at managing the daily operations of the academic enterprise. They have to learn how to balance the need to establish control over organizational processes while at the same time creating slack to allow institutional stakeholders to experiment, explore and innovate. DeWit and

Meyer [40] refer to this endeavour as the management of tension between chaos and control. In this paper, I have provided a blueprint composed of seven levers which will allow academic leaders to steer higher institutions between chaos and control towards successful innovation.

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