'Design Thinking' and Higher Education

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By Steven Bell

As an advocate for the position that higher education benefits from studying the lessons of business and selectively implementing those ideas that help corporate and non-profit entities to prosper, I was pleased to come across Inside Higher Ed’s report [www.insidehighered.com/news/2009/12/02/business] on the publication of the multi-part work The Business of Higher Education (Praeger), edited by John C. Knapp and David J. Siegel. The author observed, correctly, that “many college and faculty leaders bristle at the suggestion that the institutions -- and their students -- would be better off if only institutions operated more like their counterparts in the private sector.”

That’s why I propose a model that may meet with the approval of those who think higher education is just fine ignoring business models: design thinking. For starters, it’s an idea with origins as remote from business as design itself. While their work is hardly nonprofit, designers are rarely found destroying the competition, maximizing profit margins and exploiting their employees. Few of the designers I know personally would fit the negative perception of corporate America held by many academicians. Design thinking is about helping people and organizations to solve their problems for long-term satisfaction, not achieving efficiency for short-run gains.

While it is true that more businesses are adopting design thinking as a model for achieving better results, enhanced innovation and improved service to customers, as evidenced by several new books about innovation design [online.wsj.com/article/SB10001424052748703298004574445542063652858.html] and design thinking [www.businessweek.com/magazine/content/09_40/b4149000502236.htm] targeted for the business market, the ideas behind design thinking emerged from the methods that are common to nearly all design fields, be it industrial, graphic, instructional or any other design profession. These basic operating principles constitute a process that might be expressed most simply as the way that designers approach problems and achieve solutions. Designers think of themselves as problem finders more so than problem solvers because their solutions start with a deep understanding of the problem requiring a solution.

What can design thinking offer to higher education? In a word, change. Not just change for the sake of creating change or trying the latest fad, but thoughtful change for the higher education institution that wants to position itself to better withstand the challenges presented by both old and new competitors. Change not just for technology’s sake, but change based on better
understanding students and putting into a place a mechanism for institution-wide innovation. (I'll provide some examples later.)

The seminal work on design thinking [www.worldcat.org/title/art-of-innovation-lessons-in-creativity-from-ideo-americas-leading-design-firm/oclc/45263895?referer=brief_results] The Art of Innovation (Currency/Doubleday, 2001) came from a business outsider, Tom Kelley, then general manager of IDEO [www.ideo.com], one of the world’s leading design firms. Those interested in learning more about design thinking are well advised to start with Kelley’s book, as it introduces the “IDEO Method,” a five-step approach to understanding how designers think. In a nutshell, the process requires its practitioners to internalize the following:

- **Understand:** be an empathic thinker and put yourself in the shoes of your student or whomever it is that you provide a service to.
- **Observe:** watch people in real-life situations to better understand how they really use a service or product and those things that both please and frustrate them.
- **Visualize:** brainstorm with colleagues to identify new ideas and concepts that will give those you serve or teach a better (learning) experience.
- **Prototype:** take time to explore multiple iterations of an idea before exposing those you serve or teach to a potential solution or enhancement.
- **Implementation and Evaluation:** be thoughtful about when and how to implement a new idea and invest time to evaluate its impact, and then re-design as needed.

For those who need a faster introduction to design thinking, take 22 minutes to watch "The Deep Dive [www.youtube.com/watch?v=M66ZU2PCicM]," an episode of “Nightline” that profiled how the staff at IDEO tackle a new problem and develop a solution. As one learns from this video, the designers at IDEO are experts in using the design thinking process to identify and approach problems and then develop elegant solutions to them. That’s how IDEO has designed everything from the mouse you use nearly every day to NASA equipment to toothpaste dispensers and microwave ovens.

As the design thinking method gained popularity, IDEO added organizational consulting to its product design business, and now works with health care and K-12 education systems on restructuring and re-engineering workflows to eliminate dysfunctional practices and improve user experiences. One recent book about design thinking, Change by Design, by Tim Brown, CEO of IDEO, reads more like Zen philosophy than it does a how-to for businesspeople out to rule the world.

But even those who count themselves among higher education’s anti-business faction may benefit from another new book on design thinking authored by -- shudder -- a business school dean. The Design of Business [www.fastcompany.com/pics/best-business-books-2009#7] by Roger Martin, dean of the Rotman Business School at the University of Toronto, is a good example of a business book that even the most business-phobic humanist could enjoy reading. To be certain, there are a number of case studies profiling businesses that achieved success with design thinking, but there is still much food for thought for those who think their school or department could do better.

For example, Martin elegantly explains how businesses emerge and evolve, through a multi-stage process he describes as the “knowledge funnel.” It begins with a mystery in which the fledgling innovator seeks to build a better mousetrap, such as how to organize all the world’s information [www.google.com/corporate/index.html]. The business creates a heuristic or an
intuitive sense of how to solve the mystery that allows it to offer an initial product or service. As it moves out of the exploration stage, it develops an algorithm to operate the business so that the core solutions are efficiently exploited.

To illustrate this end stage of the knowledge funnel he points to companies like McDonald’s. What started as mostly a guess that Americans would eat fast food became a highly mechanized process that is easily replicated with great efficiency. McDonald’s has no interest in stimulating employee creativity or innovation; just keep the burgers and fries coming. But blindly adhering to algorithms can cost dearly when a competitor, like Subway, brings new thinking and imagination to the same mystery.

The problem, according to Martin, is that some organizations are operated primarily by intuition while others are rigidly controlled by algorithms. His core message is that organizations guided by design thinking achieve a balance between the two so that both intuition and algorithms merge to keep the organization searching for and solving new mysteries while avoiding the extreme exploitation that leads to obsolescence. When they “satisfice” [en.wikipedia.org/wiki/Satisficing] for exploiting old ideas, businesses are ultimately confronted by upstart competitors exploring new mysteries. Thus emerge disruptive innovations offering products or services that better meet people’s needs.

It’s a cycle that endlessly repeats itself, and higher education is equally susceptible. Consider higher education’s long reign using the same delivery and organizational structures after hundreds of years. It now is pressured by new competitors [www.getinfo.kaplan.edu/index.aspx?gclid=CPPOtOC6_p4CFQKdnAodtDRHJA&source=305042&ve=60724&ysmwa=%5bysmwa%5d&cid=158720332&se=google&kw=kaplan%20university&m=Exact&ef_id=2214:3:s_4246feb338d5f1de40865ebaabf634f9_2935527596:SztvodBbriUAABTmrjUAAACA:200912] many of them for-profit businesses offering low-cost, convenient options that leverage advanced educational technologies. The new mystery is how to deliver higher education in ways that are both affordable and sustainable, and that meet the needs of a new generation of both traditional and nontraditional learners.

Are there ways in which design thinking could help America retain its place as the crown jewel of the world’s higher education system? Admittedly, higher education is a unique industry owing to the vast independence of its primary employees, the faculty. Each faculty member is in his or her own way an independent agent trusted with the responsibility to deliver learning to the students and pursue a highly individualized research agenda. Learning is not a McDonald’s hamburger that can be manufactured on demand guided by a scientific algorithm designed to assure a predetermined outcome. What faculty do in classrooms is largely guided by intuition; there is no algorithm for great teaching.

Despite the differences that distinguish colleges and universities from the corporations that Martin profiles in his book, design thinking is a potential solution by which higher education institutions could create the balance between intuitive and algorithmic methods. But to make that happen both faculty and administrators need to take a closer look at what design thinking can do for organizations.

Martin’s book offers a case study that provides a good example: the turnaround at Procter & Gamble. In 2000, when A.G. Lafley was appointed CEO, P&G had lost market leadership to newer competitors across a wide range of its consumer products. Like higher education in 2010, P&G’s expenses were soaring while Walmart and others introduced cheaper, lower quality
private-label products that attracted consumers away from P&G’s more expensive branded goods. Lafley needed to boost innovation at P&G while simultaneously becoming more efficient; a blending of the intuitive and algorithmic sides of the organization.

In 2001 he appointed Claudia Kotchka to turn P&G into a design thinking organization. He invited outside designers to assist with the development of new products, a strategy not previously invoked at P&G, and by 2006 about 35 percent of P&G’s new products had origins outside the company. Perhaps the most critical change was obtaining a deeper understanding of the company’s consumers. Hair care product team members began to visit salons and homes to see how the products were actually used, and listened to the suggestions and complaints of consumers. Within three years of Lafley’s arrival P&G was achieving growth and recapturing market share in nearly every brand category.

The parallels between P&G at its weakest and the plight of many contemporary colleges and universities seem strong enough to suggest that design thinking is an idea worth considering. What might it look like to do so?

To follow the Procter & Gamble example, in higher education students endlessly evaluate courses, but what’s lacking is a committed effort to observe students as they learn and to then listen to their concerns. In a design thinking culture, faculty and administrators would empathically put themselves in the place of the students at their own institution and elsewhere to fully understand how to improve what happens in and beyond the classroom.

Consider the perplexing conundrum presented by scholarly publishing. Faculty members produce research that, in order to achieve tenure, they give away to journal publishers. Publishers, particularly in science, technology and medicine, edit and package faculty’s intellectual property and sell it back to higher education institutions at high prices that require constant increases to library budgets. Despite years of discussion about the scholarly communications crisis, we still have only partial and little used potential solutions.

The scholarly communications crisis presents what Martin would describe as a “wicked problem”, one that requires more than analytical or intuitive thinking. In his book The Opposable Mind, Martin states that when neither option A nor B works, design thinkers must create option C that blends A and B, offering a new and completely untested solution. Proposals to solve the scholarly communications crisis tend to fall into two camps: different pricing models and open access. The former attempts an analytical solution by transferring the existing system to a new price model so money changes hands differently. The latter attempts an intuitive solution by encouraging scholars to distribute their manuscripts through free (to the reader) distribution systems. Could design thinkers develop a C solution?

The design thinker would start by unraveling the real problem that fuels the crisis, which might well be the nature of the research and tenure system itself. Identifying the problem is paramount. The design thinker (or design team) would talk to all the parties involved and learn as much as possible about the scholarly communication process from the experts, both authors and publishers.

Next, the design team would bring back for analysis all the pieces of information, and process it in a brainstorming (“deep dive”) session. Out of the brainstorming would emerge prototypes for a new or modified system of scholarly communications. The design team would implement the prototypes deemed to have the most promise. The prototype that most closely approaches a “C”
solution would emerge for implementation. That C solution might be some combination of a change in the tenure process and what counts as scholarship, a de-emphasis on publication in high-impact journals, an editing and publication process in which some publishers could participate, and options for self-publishing and archiving that are simpler, with clear benefits to faculty. In other words, some combination of existing practices and untested ideas that offers a completely new solution.

Design thinking is no panacea for all that ails higher education. Resolving challenges such as low retention and graduations rates, escalating textbook costs, an overdependence on adjunct faculty, lean budgets, for-profit competitors and myriad other problems will take more than a business as usual approach. However, higher education is not a business, and faculty and students will always respond caustically if they believe corporate solutions are being foisted on them by an unsympathetic administration.

This is where design thinking can make a difference. It’s more than a short-term strategy for boosting profits. It’s a roadmap for future-proofing one of society’s most valued resources. And since it involves no acquisition of or investment in sophisticated new technology, only a desire to try a new way of identifying and tackling institutional challenges, it’s right for the times. Those who want to engage with these ideas can begin with the Deep Dive video mentioned above or choose from a host of blogs [www.google.com/reader/bundle/user/08813111501988070402/bundle/Design%20and%20UX%20Feeds] written by experts in design thinking and user experience.

In 1972 Cohen, March and Olsen introduced the Garbage Can Theory [en.wikipedia.org/wiki/Garbage_can_model] of decision making as an effort to create a predictive model for how decisions are made in higher education organizations. The model describes colleges and universities as “organized anarchies” that make their decision by heaping multiple solutions into garbage cans. The detached solutions in the garbage present no utility until a problem presents itself to which one of the solutions could be attached. For too long the organized anarchy label has proven itself relatively accurate in describing what derails progress in higher education.

Design thinking, based on the premise of correctly identifying the problem before developing solutions, is as far removed from the garbage can theory as a decision making model can be. What is relatively the same since Cohen, March and Olsen devised their model is that higher education still confronts what Martin calls the “wicked problem,” a challenge that is not merely complex but is characterized by ambiguity, shifting qualities and no clear solution. Design thinking may be just what higher education needs to clean up its garbage can.

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