

DESIGN IN PRACTICE: SCENARIOS FOR IMPROVING MANAGEMENT EDUCATION

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ABSTRACT

Despite the increasing attention given to design in business, Design Thinking has had little impact on the quality of business school education. Building upon the foundations of long-standing critiques of management education and the potential for student-centric learning, the authors propose that the use of *Design in Practice* can significantly improve the learning experience. The contribution concludes with an outline of the tenets of this vision that underpin their current work in management and corporate education.

KEYWORDS

Case Studies, Design Thinking, Management Education, Learning Technologies, Pedagogy

1. INTRODUCTION

In the following contribution, we argue that *Design in Practice* offers a fundamentally different approach to improving the quality of business school education. We begin our discussion with a quick review of the traditional critiques of business education. We then explore the relevant tenets of design thinking to pinpoint the processes and the methods that can address these shortcomings. We conclude with an expose of our own practice in business schools, ExecED and corporate education.

Business school programs continue to tout the "success" of innovative design oriented companies like Apple, Google and Whatsapp.¹ Certain programs insist upon the financial performance of these examples, others the nature of their products, and others still the quality of their leadership. Few apparently offer insight into how little their success might actually depend on applying the traditional principles of management. To what extent can design thinking offer business schools an alternative vision of management education?

1.1 Pedagogical Challenges

Various authors have well documented the long standing issues with the MBA in particular and management education in general. These challenges hinge as much on the pedagogical choices that have been made as the reluctance of business schools to adapt their programs to new market challenges. Let's review a number of these issues before evaluating the value propositions of design thinking.

One principal issue with business school education is its reliance on case study methodology that favors the notion of "one best way". Markulis (1985) notes that traditional case studies are most often sterile, impersonal, outdated, and subject to instructor bias. Burns (1984) argues that case study methodology reflects normative prescriptions rather than the real-life conditions in which companies succeed or fail. Most industries and markets today are not characterized by clearly defined problems and ready-made solutions, but by challenges (declining profits, underemployment, engagement...) of which understanding the nature of the problem is the major hurdle.

Another issue deals with the choice of business disciplines that focus on a limited number of analytical skills and competencies. The skills needed to address of multitude of business challenges, ranging from hyper-competition to dealing with mass personalization, are often missing from traditional programs. Bennis

¹See for example The Tuck School's "Deconstructing Apple", Harvard's "The Online Economy", or IE's Masters in Management

and O'Toole (2005) claim that the focus of graduate business education has become increasingly shortsighted—and less and less relevant to practitioners.

A third objection addresses the inability of most programs to account for the uncertainty that characterizes most markets today. Snowden and Boone (2007) suggest that the majority of business problems that can be solved through the use of “best practices” have been, while the complexity of the problems that linger require different forms of decision-making. Whereas most business programs privilege inductive or deductive reasoning, neither is associated with the third level thinking associated with innovation.

A fourth criticism revolves around the project work given in class and out which emphasizes an unrealistic view of teamwork. Roger Martin of the University of Toronto suggests, “We teach a very narrow form of collaboration, which is to find somebody who thinks like you and then work together” (Dunne et al, 2006). This approach has little in common with corporate practice where physical meetings are expensive, time-consuming and often very difficult to arrange. In the modern workplace, managers are continually struggling with discontinuous time, competing on different agendas, and being evaluated on work accomplished outside the meeting room.

In a similar vein, the notion of productivity has changed. Sinofsky (2013) suggests that traditional visions of management based on hierarchy, top-down decision making and strategic planning are dubious mirages in markets flattened by the presence of ubiquitous information, connectivity, and mobility. In this view, productivity can best be studied today in gauging a manager’s ability to act effectively upon real-time information.

Finally, teaching methods favor analytics rather than practice. Students who lack the experience to properly analyze and contextualize working knowledge poorly digest the codified, abstract premises that provide the staple of most management education programs. Mintzberg (2004) argues vigorously that teaching MBA students best practices won’t help them learn how to manage, *‘Organizations are complex phenomena. Managing them is a difficult, nuanced business, requiring all sorts of tacit understanding that can only be gained in context’*.

The introduction of learning technologies has done little to address these challenges. The progressive introduction of Learning Management Systems (LMS), MOOCs, and now mobile applications has failed to address the pedagogical challenges to management education. By simply mirroring existing courses and approaches, learning technologies have often amplified the challenges in providing more effective designs to learn about business. These additional challenges include:

E-learning pushes students out of the classroom, but it doesn’t remove the need to take into account the context in which students learn. Context itself is a shell - learning not only occurs in a context, it creates context through the qualities of interactions between students and their professional environments (Sharples et al., 2007). In short, the pedagogical value of learning technologies isn’t found in the applications themselves, but in how students, faculty and organizations use these technologies to engage with their professional communities.

Attempts to improve digital technologies without accounting for the specific nature of higher education appear as ill-fated as efforts to improve the classroom by limiting or banning the use of mobile phones, tablets and personal computers in class. The two are inherently intertwined in the modern classroom - we can’t keep telephones out of the classroom no more than we should keep the classroom out of technology.

Many examples of learning technologies today try to mimic the conditions of either the classroom environment, or the workplace without taking into account the specific constraints that each environment imposes. The nature of both the work and learning places - the vision, the space, the participants, and the outcomes - go a long way to explaining the challenges of doing real work in the classroom, and effective continuous learning at work. The goal of technology might best be served by not mimicking either “place” but by providing a bridge between the two where real-life business challenges can be brought to school, and learning outcomes can be rapidly applied in the workplace.

To date learning technologies have simply reproduced the inductive or deductive logics inherent in business education. Whether they integrated multiple choice exams or discussion around business cases, learning technologies have rarely helped elucidate the nature of wicked problems. As we have argued previously, one of the critical success factors for learning technologies are engaging the students, retaining their attention, motivating them to invest in the experience at hand, and encouraging the physical application or reproduction of targeted skills (Schlenker, 2014).

2. DESIGN IN PRACTICE

Design thinking challenges the assumption of business as usual in order to create new connections (Brown, 2009). Design thinking encompasses the mental processes that are commonly used to design products and services. The associated process begins by analyzing behaviors and motivations, and then integrates the technical, financial and commercial considerations that shape the life of a project. In management, design thinking is applied to project-based work that addresses complex or “wicked” problems (Dunne, 2006).

The roots of Design Thinking can be traced back from classical concerns with participatory design that favor integrating use studies into project prototyping (Di Russo, 2012). In his work on “user-centered design,” Norman (1998) stresses the need to take into account user's objectives and motivations in “making things visible”. In *The Sciences of the Artificial*, Simon (1996) suggests that design is a process that aims to improve the value of artifices like products, services and systems.

The Design Thinking process can be juxtaposed with the tenets of traditional management. Roger Martin (2004) suggests that the focus on classical management is in improving repetitive tasks, whereas the design approach models work on a project to project basis. The nature of work itself is most often classified within well-defined roles, where a design approach sees work inherently as a collaborative exercise. Management theories proposed problem-solving models that are either deductive or inductive, while design theorists privilege “abductive” approaches.

Managers evaluate an activity's importance by the size of its budget and its staff, whereas design thinking suggests that success is tied to unbundling wicked problems. Management practice uses constraints to define the scope of action, where, as designers see constraints as opportunities to redefine the scope of potential activity. Finally, and importantly, management education encourages students to focus on one best solution to a problem, whereas design theory seeks to encourage the development of the larger number of potential solutions to a problem.

Simon (1996) goes on to describe seven activities in the design process: Define Research, Ideate, Prototype, Choose, Implement, and Learn. Although has been debate since around which activities are critical to this process, practitioners generally agree that Design Thinking requires defining the right problem to solve, creating and evaluating the different options, nurturing an environment conducive to experimentation, and building testing the proposed solutions in the real world environment.

These same practitioners insist that these activities aim to develop specific skills sets in students and managers alike: the abilities to deal with ambiguity, to be curious, to develop holistic views of the problem, to develop empathy, to work collaboratively, and to maintain critical distance. As Waloszek (2012) concludes, Design Thinking can be understood as a “*methodology that combines empathy for the context of a problem, creativity in the generation of insights and solutions, and rationality and feedback to analyze and fit solutions to the context.*”

Design Thinking has been introduced over the last two decades as a subject of study in a number of business education programs. The value proposition of design thinking however isn't in analyzing its impact on business but applying the concepts of this methodology in developing management education as a whole. Specific points in which Design Thinking can improve how students learn about business include:

The student is inherently part of the problem that must be addressed. “Teaching the student” is less important in business education than helping future managers effectively address customer challenges. Each student brings unique motivations, experiences and skill sets to class. Most can't relate with the business context under study - their empathy and implication are pre-requisites in solving the problems at hand. Finally, success depends upon practice: students must practice what teachers preach.

Business problems solving requires a much deeper understanding of the user and of the user experience than we do in business schools. One of the core ideas in this vision is that the people using the products and services are different from those who manufacture and implement them. User experience is about creating memorable and experiences that have meaning for the consumer. Design Thinking implies using quantitative and qualitative approaches to develop a better understanding of the data.

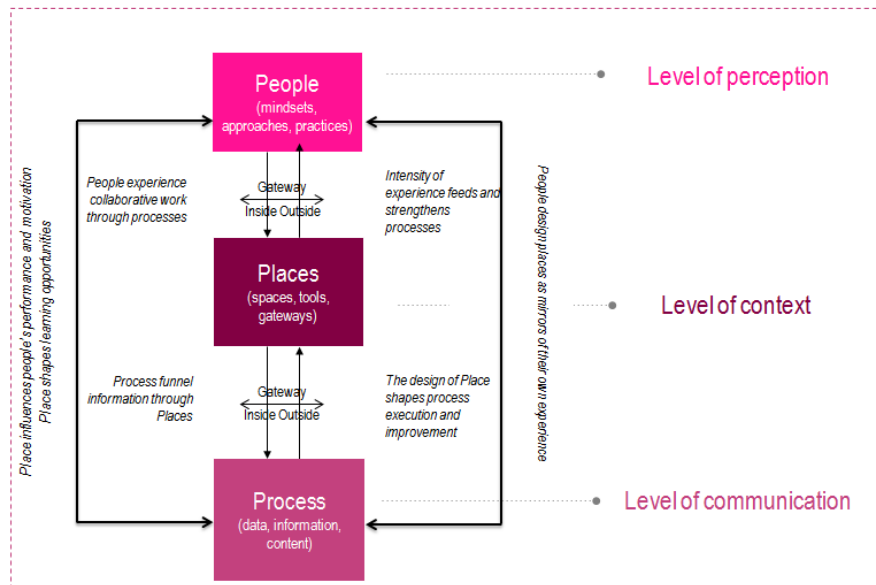
Business challenges are a result of a system of structures, patterns and events, rather than just the events alone. Any system is a web of interrelationships between people, information and physical technologies. There is a need to understand the essential relationships operating at various levels of the system, as well different strengths and probabilities for change.

Design Thinking takes into account how context shapes both the problem and the potential for viable solutions. In Design Thinking a problem is not only defined by its operating context but also by the constraints imposed on the problem solver. The greater the constraints: the better the chances of producing truly innovative solutions. This approach postulates that constraints are a source of new ideas, and should be fully recognized as levers rather than inhibitors to creativity. The more constraints a problem solver is forced to confront the better the opportunity to break out of the box of previous experience to find innovative solutions to the problem.

The logic inherent in Design Thinking can help students visualize solutions to complex problems that elude best practices. This "abductive" logic can be understood as "the process of forming an explanatory hypothesis." Charles Sanders Peirce studies of the origins of new ideas led him to believe that innovation is tied neither to inductive nor deductive reasoning, but to "logical leaps of the mind" when our observations don't quite existing frames and models. This form of modal reasoning called "abductive logic" explores what could potentially be true (Martin, 2009).

Design Thinking insists on the necessity of formulating a large set potentially useful ideas, services and products, gradually improving their fit with the problems under study, prototyping, giving the product to the consumer and then improving it some more. The advantages of a prototype a product, or simulating a service, include producing a better result at a more reasonable cost and contributing to strengthening empathy and engagement with the organization.

Table 1. The 3Ps of Design in Practice



Based on our own pedagogical experience in Europe and abroad, we believe that the effectiveness of Design Thinking can be enhanced by focusing on *Design in Practice*. This concept implies that the application of design approaches can be enhanced by drawing the necessarily parallels between design thinking and pedagogy. Critical considerations include:

2.1 Constructing a Holistic Approach that Positions Each Student in Context

Design in Practice, rather than ignoring the limits of the classroom and the students' experience, recognizes that business challenges and solutions are context dependent. With this in mind, instructors, like practitioners, need to elucidate the context: the places, processes and people in which class participants evolve. The participants themselves will benefit from exploring the relationship between the content being provided in each program and the context(s) in which it is distributed, analyzed, and discussed. As in real life experience, these considerations include geography, time, physical resources and budget.

2.2 Co-Designing a Learning Place that Fosters Student (and Instructor) Engagement

The value proposition of Design Thinking is less in its approach to teaching management than in its application to the design of participatory learning "places" in which students, faculty and administration (or managers, facilitators and sponsors) take responsibility for transforming content into action. A learning place is constructed, both physically and digitally, around a vision of what the place represents, the events that are staged there, the participants, the learning outcomes and gateways between this place and the work place. Design in Practice suggests that classrooms, much like participants, are part of both part of the challenge and the solution of management education.

2.3 Deploying Physical Technologies that Are Adapted to the Challenges to Be Addressed

Much the same can be said for the physical technologies found in the modern classroom. How does the physical layout of the auditorium, workshop or seminar room facilitate or hinder the students' understanding of the context of the subject under study? What high and low tech tools are provided to encourage the student's implication and appropriation of the subject at hand? How does the course support documents mirror or differ from the information available in the real world? How do the school and the instructor build bridges between the classroom and the workplace to encourage the participants to apply the lessons learned?

2.4 Recognizing the Ubiquitous Nature of Information

Class content is formal and informal, structured and unstructured. Reading lists in class are similar to project briefs at work: both are necessary but often incomplete in understanding what needs to be known to tackle the business problems at hand. Design in Practice suggests that students should be stimulated to explore what unstructured information is available, on the Web, and from interviewing the business community. Instructors should be encouraged to explore how the students are accessing, filtering, aggregating, applying, and sharing information sources. Sharing information needs to go beyond working in small groups - exploring the use and meaning of information with end-users, students in other disciplines, and managers in the business community can be a critical source of cognitive dissonance.

2.5 Developing Each Student's State of Mind

Finally, Design in Practice suggests that the ultimate goal of management education is not "spreading the good word" but helping the students transform data and information into managerial action. Our vision of Design in Practice implies that the learning outcomes depend upon helping each student manager understand how they use information to develop their managerial capabilities. How are the students framing the problems to be solved? How are they encouraged to analyze the visible constraints to fuel new ideas and potentially new products, services or systems? How does the specific pedagogy, and the program as a whole, represent a call to action?

3. CASE STUDIES

3.1 MBA France-India - Management Innovation

We have been applying the principles of Design in Practice to in the MBA France-India program in encouraging students to improve significantly the impact of the learning "place". One of the major aims of this MBA, which draws students principally from southwest France and the Karnataka region, is to provide accessible managerial skills to work cross-culturally. The objectives of the management innovation module were to introduce the students to the various forms of innovation, to elucidate varying practices in fields

ranging from social commerce, omnichannel distribution to digital transformation, and to encourage the students to apply the lessons taught in small group projects.

A number of constraints shaped the project. To begin with, the diverse backgrounds of the students: engineering, technology, as well as the social sciences and the humanities, pleaded in favor of an integrated multi-disciplinary approach to innovation. Second, the program's spatial distribution - one-third of the MBA is run in Pau, one-third in the Bangalore region, and one-third in internships in international companies - hinders the students' identification with a host school. Over the years, the need to build a stronger group identity and the deeper implication of the participants in the program have been constantly underlined the program's staff. Finally, the majority of the students are constantly seeking to get out of class to practice management.

We incorporated the concepts of Design in Practice into a semester project called *Design your School*. In this crowd sourcing project, students were encouraged to use apply the concepts of management innovation in redesigning learning places outside the traditional classroom, notably in the both the Commons and the Resource Library. The students were challenged to shape their "learning place" using physical resources, information technology and change management. The students were invited to anchor their vision in the current students' interests and motivations, and then to redesign a space around a specific vision, use scenarios, events, and desired outcomes.

The preliminary outcomes of the project include several dozen student proposals from class participants, as well as a number of professors and students from others schools, on visions ranging from Feng Shui working environments to finance and distribution test labs to an innovation factories. Student participation proved markedly better than in many modules of the program; many students continued to pitch and improve their projects throughout the year. The module materials, as well as the students' projects have been incorporated into an interactive e-book that the students can comment and structure for their personal needs.

3.2 FBS - A Multi-Disciplinary Foundation for Management Study

We have developed the principles of Design in Process in proposing a new approach to learning about management at France Business School (FBS). The merger of four business schools in 2012 gave birth to both FBS and a vision of management education based on a cross-functional management program. Behind this vision, the school has sought to appeal to a wide range of students by promoting innovation and entrepreneurship. The key to the program is a first semester agenda based on sharing and knowledge transfer among the different disciplines.

There have been several challenges in creating the conditions for Design in Practice. To begin with, the pedagogy needed to be restructured to solicit novel ideas, embrace challenges, and produce meaningful solutions for business. Course work had to be integrated in pedagogical processes that promoted collaborative work and prototyping. The traditional classrooms have given way to "hotspots" integrating co-working spaces and digital learning technologies (MOOCs, an LMS and broadband internet access). The instructors have been encouraged to become "knowledge brokers" opening gateways to real-life experiences.

Today, first year students are challenged to find fresh out-of-the-box solutions to today's major business problems. The "wicked" problems they face are designed to strengthen their mental agility and develop their cognitive abilities for abductive reasoning. In class and out, students can write on the walls, build their own collaborative workspaces, and practice thinking-by-doing techniques (visual thinking, mocking-up, sketching, etc.). The student experience is based on an environment where problem solving, prototyping, and testing products, services and ideas have become the staple of the pedagogical process.

Student evaluations indicate that Design in Practice develops twofold awareness: self-awareness on their capabilities to act as designers in producing ideas and solutions, and awareness on the power of collaborative work. The new program has accompanied a number of students in the creation of start-ups to put their ideas into practice both inside than outside the business school. Current students and the new alumni appear to create a cohesive community based on discovery and collaboration in line with the school's strategic vision.

3.3 Microsoft - The OAM on Boarding Guide

In designing Microsoft's OAM On boarding Guide, we are working with the corporation to help its employees structure and react to real-time flows of data, information and content. Microsoft, as one of the world's leading software companies, employees over three hundred employees to handle the logistics of service and delivery in four regional operations centers on four continents. The corporation's strategic shift from selling software licenses to promoting software and devices focuses particular light on operations management as the employees must quickly absorb new knowledge and deploy new skills.

This shift in strategy has brought about a number of challenges in training new hires for the future challenges of software plus devices. The "one best way" to manage the new division does not exist as the corporation is exploring new markets. The operations managers are constantly on the go with little time to spend on classical classroom instruction. Communication between the different regional operations centers and between the OAMs themselves has been notoriously poor over the years. Finally, given the history of the company's success with desktop applications, the division has little experience with either mobile applications or mobile training.

The Interactive On boarding Guide was conceived as an exercise in Design in Practice to address each of these issues. The texts themselves are delivered in the form of an interactive, social book that is updated each time the operations manager consults his Windows 8 tablet or mobile phone. Each page, each idea and each theme can be like, annotated and shared by each manager, who can also consult the comments of his or her colleagues in real time. The content is available off line, permitting each manager to consult the book anytime and anywhere. Natural language search allows the reader to quickly locate key ideas from anywhere in the text.

The On boarding Guide is currently being rolled out worldwide. The Guide represents one of the corporation's first attempts to design and implement an application designed for a mobile work force. The ability to take notes and share ideas inside the book offers employees a real-time tool to improve horizontal communication between Oams and between the Operations Centers. The ability to update the texts in quasi-real time offers the division the possibility to update its vision as the market challenges of software and devices evolve. Although it is too early to have any quantitative analysis of use of the application, preliminary feedback from the beta test team has been markedly positive.

4. CONCLUSION

In conclusion, we have put forward a proposal to take a fundamentally different approach to business school education. Our argument has been built upon a foundation of common critiques of the MBA: the bias of case study methodology, the mismatch between management theory and the practice, the lack of attention given to how most markets and industries are evolving. Our proposal is built upon the precepts of Design Thinking - understanding that the students are both part of the challenge and an integral part of the solution, focusing on abductive methods for solving market challenges, and dealing with both ambiguity and complexity.

Our vision goes beyond design thinking in suggesting that the value proposition for business schools is not in teaching the methodology, but in applying the approach to remodel management education. The scope of this effort cannot be limited to improving cognitive approaches, but instead extended to designing learning places, flows of information, and mindsets that support how students learn about management. Places, Processes, and People are interdependent considerations in pedagogy that inherently influence the quality of education. We conclude our argument with three examples of how we are putting *Design in Practice*.

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