Oct 21st, 9:00 AM

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Design and business double education: cross-country comparison

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Abstract: *Design thinking is the buzz in the management community these days. Managers are encouraged to get out of the box, apply user-oriented research and think more systemically and less analytically, the way designers are trained to do. Previous research on business education best-sellers in France and Brazil shows evidence that design is not considered or is restricted to a very limited content, pointing out that managers are not prepared to understand design. That reality is also perceived on the day by day relationships of both designers and managers and brings forth the issue of double education. Is it the solution? Does teaching design to managers bring value to the relationship? This paper proposes a discussion on double education as a way to bridge this gap. For that, researchers in Brazil and France conducted an exploratory study that investigated how design and management could be developed as double education to better develop design management.*

Keywords*: Design Management, Double Education, Cross-Country research.*

Introduction

Design thinking is the buzz in management community these days. Managers are encouraged to get out of the box, apply user-oriented research and think more systemically and less analytically, as designers are trained to do. Lockwood (2009)

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points out that many reasons led companies to think that designers have a way of thinking that can contribute to new product development strategies.

According to Borja de Mozota (2003), design can be integrated into a company in many ways considering the intention and approach of the company to the design use.

Design adopts different courses of entry in order to be integrated into an organization. The variety of design applications, however, must not hide the fact that there are some common structures among these different management perspectives. The three most common structures for design entry are: corporate communications and branding policy; product and innovation policy; and retail space and retail branding positioning (Borja de Mozota, 2003, pg.13).

In this context, designers and managers should work together and share decisions in those fields of work. As Kotler and Rath (1984) consider, design, not to be neglected in a company process, requires mutual understanding, especially among professionals involved in product development. 'If a company recognizes the need for more and better design work, then a two-way process of education must occur. Marketers must acquire a better understanding of the design process and designers must acquire a better understanding of the marketing process.' (Kotler and Rath, 1984, pg.19)

In this sense, marketing can be the link between designers and managers. Designers have interest in different areas that are apparently related to marketing. For a good design, these areas must be considered in the whole process of project. Design goes beyond aesthetics, and treating design superficially, with no contact to strategic team, is the mistake of many companies. On that, Kotler and Keller (2005) affirm that in increasingly accelerated markets, design is the factor that will bring competitive advantage. As long as it is integrated to the strategic process in the company.

We can easily see how marketing is important to business and management. Kotler and Armstrong (2007) affirm that the good marketing is essential for the whole company success. For Dickson (2001) the challenges faced by managers involve new product development and adapting to these changes is the secret for companies to achieve marketing success. If marketing is the link between designers and managers, product development is one of the points that connect marketing to design.

Nonetheless, previous researches on business education best-sellers books show evidence that design is not considered or is restricted to a very limited content, pointing out that managers are not prepared to understand design. That reality is also perceived on the day by day relationship of both designers and managers and brings forth the question of double education. This paper discusses the question of teaching business students design as a way to bridge this gap and improve the relationship between design and management.

Objective and Method

Considering a previous research on what is delivered regarding marketing to design students, this research seeks for the other way around. Aiming to discuss the double education on design and management, this paper proposes a discussion on what is presented to business school students in terms of design.

For that, researchers in Brazil and France are working on an exploratory study that investigates design in business/management education. To do so, a three-step exploratory research is being developed: a literature review, an undergraduate programs investigation and interviews with professional.

For the literature review, preliminary on this work, business/management and innovation books, especially the ones with marketing focus, were reviewed to list which ones address design, as chapter, quote or example. At the same time, programs from the main business and management undergraduate courses were reviewed with the same purpose. Following those two phases, in-deep interviews with professors will be applied to continue the exploration of the double education role in design and management education.

By the time this paper was written the two first phases were complete in Brazil and the interviews were about to start. They were finalized in the beginning of December. Data comparison on books and undergraduate programs are shown next, as well as the discussion regarding some questions on double education.

Previous Research

In order to explore the approaches used to teach marketing in design schools, an exploratory study was developed in Brazil, with three major focuses: the understanding of this theme by both new and veteran students, the approaches developed by many other design colleges, and the theoretical definitions of marketing and design (Wolff and Capra, 2008). Regarding students' perception about marketing, the results show that the words and phrases mentioned were basically the same, but the depth and the understanding of concepts became different over time, what may indicate a certain evolution of students' understanding of the subject.

As for the approaches developed by design colleges in Brazil, results show that almost 73% of Higher Education Institutions in Brazil understand the importance of marketing as an academic subject that should be considered when teaching design. Nevertheless, the programs indicate a superficial knowledge of marketing, often focused on areas that meet some specific interests, rather than knowledge on the subject as a whole. Also, several authors have been superficial in relation to theory, composing bibliographic references that are not compatible with the knowledge expected of a Design student.

The last part of the study focuses on a theoretical approach of the theme. Of all topics discussed in the study it is important to note that, although they are linked in several ways, it is possible to highlight two major areas of study and integration between marketing and design. The first one is 'consumer behavior' and the relationship consumers develop with products. This area has something to do with the creative characteristic of design and the unconscious factors affecting consumers. The second major area would be related to the development of new products. In this sense, marketing interacts with design technical issues, such as the use of materials engineering, prototyping and production processes.

This study provides some thoughts on how marketing is offered to design students, but what about the other way around? What do business/management students know about design? What does the business school offers their students regarding design?

Also prior to this research two processes took place in France: 'speed dating' and 'personas'. Both were developed as seminars and meetings and had the objective of talking to designers and managers to understand how they felt about each other and how they dealt with this relationship. 'Speed dating' put designers and managers together in a dynamic similar to speed dating meetings. Pairs of professionals had to talk to each other in a simulation of the manager as the designer's client. This dynamic

showed the researchers the skills designers had to use or develop to face the different types of enterprises.

From this exercise, examples of relationships between the company/designer functions could be perceived by the researchers and skills/stereotypes of professionals could be understood, as presented in figure 1. It was perceived that the design is perfect for the artist marketing manager or buyer of intellectual services, as they can understand its role easily. The same can be said for the eco-designer for the brand manager or managers of sustainable development.

The exercise shows that design-trends professionals relate better with the communications director, since this professional can better understand design skills and values. The 'experimenter' design consultant can be trained in an innovation setting, and the humanistic design-director relates better with professionals who work with sustainable development. Finally, the speed dating meeting showed that the design-transformer could work well with the customer relationship manager. The interaction designer fits well with the supply chain director, thus showing better entries in companies for each designer's competencies or profile.

Figure 1. Different Designers for different Clients.

The 'personas' exercise took place in a workshop about user-oriented design and worked with the stereotype of managers. The researchers could understand that the functions in an organization can be defined as manager head, research and development and marketing managers, and this is how the groups involved with the exercise were defined. All the participants spoke first about those functions and departments. After being prepared by the seminar leader and motivated to talk about

each function and design, they were able to successfully find three personas for each function. Analyzing the dynamic developed, the researchers could understand that there are different personas for design and managers, and, for example, a web marketing manager can easily sell designer artist inside the company, but it will be hard to sell him a designer problem solver and able to do market research. In addition to that, it will be difficult to sell brand design and sensory or emotional sensitivity to the responsible for research and development. As for the leader lost in high places, far away from design, strategy could be a good way to introduce design in the company, and the competence of project coordinator can easily access design in business plan. Even though design is also far away from strategy books as the research presented in this paper shows.

Results

The results presented in this paper show the desk research and books comparison and the Brazilian business schools programs investigation. The next research steps involve business schools programs investigation in France and in-deep interviews with academics and business that will be held in Brazil and France.

Results on Desk Research

For this research phase, books on management and business, especially the ones focused on marketing, innovation and product development and, strategy were reviewed to verify how and when design is mentioned. The researchers chose 23 books, Brazilian, French and internationally known, considered the main references to business students in undergraduate courses. In each book researchers verified the table of contents and the index looking for design (table 1). When found, design or correlated areas such as branding and product development, the books were signalized, and the content is discussed as follows.

Table 1 - part I - Design on Business Books.

	Book	Authors	Design in the table of contents/Index
MARKETING AND BRAND	Business Model Generation	Osterwalder *et al*	Yes
	Marketing Management	Kotler and keller	Yes
	Marketing: best practices	Czinkota *et al*	No
	Marketing Management	Dickson	Yes
	Marketing	Churchill	Yes
	Branding Management	Lewi and Lacoeuilhe	No
	Mercator	Lendrevie, Lévy and Lindon	Yes
	Marketing fondements et pratiques	Dubois and Jolibert	No
	Développement de	Gotteland and	Yes

	nouveaux produits	Haon	
	Marketing de l'Innovation	Manceau and Le Nagard	Yes
	Les marques capital de l'entreprise	Kapferer	Yes
INNOVATION AND PRODUCT DEVELOPMENT	Managing Innovation.	Tidd et. al.	Yes
	Gestão do Desenvolvimento de Produto[1]	Rozenfeld et.al.	No
	Management de l'innovation	Le Loarne	Yes
	La boite à outils de l'innovation	Giboin	No
	Encyclopédie de l'innovation	Mustar and Penan	No
	Oxford handbook of Innovation	Fagerberg et. al.	No
STRATEGY	Competitive Strategy	Porter	No
	Competitive Advantage	Porter	No
	Management & RSE	Pluchart and Uzan	No
	Strategie industrielle	Tarondeau	No

It is possible to verify that, out of 23 books reviewed, 11 identify design in their table of contents or index. Although design appears in many books, the approach can be different. Osterwalder *et al*. (2011), describe in a chapter entitled *Design*, techniques and tools from the designer's world that, as the authors point out, can help to develop better business plans, creating customer value and offering new approaches to business.

Porter (1986) does not mention design, but as he explains differentiation strategy and the urge to create something new that can be considered unique by costumers, he indirectly considers design. The author explains that differentiation does not allow industries to ignore costs, but those are not strategic targets in this strategy. In Porters (1989), the very well known 'value chain model' design is not shown. The author suggests marketing and sales as activities that deal with customers and satisfy their needs. This model also appears in Kotler's book, Marketing Management, as a part of the customer's satisfaction, value and customer retention chapter.

But Kotler and Keller (2006) also present design as an important part of product development and branding. In the Brazilian edition, there is a special section of the book with local case studies, showing how important design is to a company success.

In the same way, Churchill (2000) explains that good design can add value to a new product. He considers that well designed products can please customers without being more expensive, especially when industries use multidisciplinary teams to develop products. If marketing, engineering, and production can work together and develop a

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[1] New Product Development Management

new product it can be beautiful, have a nice performance, and be easy to produce and use.

Tidd (2008) focuses on design as he considers product development as a process with many functions, from marketing to design and production, including quality. For this author, design activities are, many times, treated apart from production and sales, and this can lead to problems in product development as a full process. Set design apart from market can result in inappropriate models, where consumers' needs are not satisfied, or worse, badly dimensioned, creating technical sophistication or standards higher than expected by the markets and, as a consequence, products that cost too much or are not welcome by consumers.

Czinkota (2001) also focuses on product development without considering design. He argues that success in product development is a matter of discovering the consumer's needs and problems that are not satisfied and develop a product with competitive advantage. A product with competitive advantage solves problems better than its competitors and, this is possible due to technical, manufacture, management or marketing solutions. And even though Czinkota proposes cooperation among those areas in product development, he does not consider design as part of it.

In the same way, Rozenfeld (2006), the main Brazilian Product Development book, describes the whole process of product development without considering the designers' role. The book highlights a stage gate product development process that proposes the designers' capabilities without considering designer as a profession.

Dickson (1997) presents design as a part of the product development process. The author points out the role of the senior manager as to 'guide, support, and champion the team's efforts, but not to direct the specific design solutions' (p.382). Also, design is presented as the tool to simplicity and reduced costs. 'In short, design simplicity produces what competitive rationality and TQM strive to achieve: higher quality, lower cost design, and manufacturing processes that are completed fast' (p.383).

Results from the Brazilian Business Schools Programs

In order to explore how design works in Business Schools in Brazil, 10 Brazilians Universities had their curriculum reviewed. Seeking reliability, all universities chosen are associated to ANGRAD – National Association of Business Schools – and are included in the raking of best schools in the country, according to the Brazilian Ministry of Education.

For this phase, the colleges investigated are Universidade Federal do Rio Grande do Sul (UFRGS), Universidade de São Paulo (USP), Fundação Getúlio Vargas (FGV), Universidade Presbiteriana Mackenzie, Escola Superior de Propaganda e Marketing (ESPM), Universidade Federal do Rio de Janeiro (UFRJ), Universidade Federal do Paraná (UFPR), Universidade de Brasília (UNB), Universidade federal de Minas Gerais (UFMG) e Universidade do Vale do Rio dos Sinos (Unisinos). First, the website of all selected Schools was accessed to find their programs. In cases that the same course is offered in different shifts (morning and night) or has specific qualification areas, all programs were considered. After that, the disciplines of each program were analyzed, seeking design relation/entry points (table 2).

Table 2. Design and related courses in Business Undergraduate Programs

	Marketing	Design	Innovation and Technology	Product Process Development
UFRGS	x		x	x

USP	x			x
FGV	x			
Mackenzie	x		x	
ESPM	x	x	x	x
UFRJ	x			
UFPR	x			
UNB	x		x	
UFMG	x			x
Unisinos	x		x	x

It was found that all colleges analyzed have at least two marketing disciplines, and maximum eight. This shows how marketing can act in business administration and how their study requires a look in different points of view.

Another important finding was the recurrence of technology and innovation disciplines: five of all colleges analyzed offered courses on 'Entrepreneurship and Innovation', 'Technological Innovation Management' and 'Innovation Management". The 10.973 Brazilian law states that innovation is 'the introduction of something new or the improvement in production or social environment that results in new products, process or services' (Brasil, 2004, pg. 1). For the Oslo Manual, innovation can be [...] 'the implementation/adoption of new or significantly improved production or delivery methods. It may involve changes in equipment, human resources, working methods or a combination of these.' (2005, p. 9)

Thus, considering design as the key to innovation or its own representation, when a new product is developed, from the conception to the conclusion (Tidd *et al.*, 2008), the innovations disciplines offered in business schools are a great opportunity to introduce design aspects for managers and bring both design and business closer.

It was also found that four schools offered courses related do product process development like 'New Products Development', 'Planning and Controlling Production' and 'Product Design and Production Process'.

Finally, of all analyzed colleges, only one of them offered a discipline directly related to design. ESPM School has 'Branding' in their program. Lindstrom (2007) explains that branding consists of creating emotional bonds between brand and consumer. This fact may be attributed to ESPM's tradition on marketing and advertising areas, and the relation between marketing, business and design when it comes to brand management.

Conclusion

Although still in its initial stages it is possible to see some conclusion for this study. The little or nonexistence of design in bibliography, as well as in the Brazilian schools analyzed in this study indicates a gap in the curriculums when it comes to design management. The previous study in design schools shows superficiality regarding marketing topics, which may be the link between design and management. This study, at least in Brazil, shows the same regarding how managers learn about design. On that, a question arises: If designers are not prepared in managing and managers do not learn about design, who should be responsible for design management?

Considering the analysis for the business schools in Brazil, the courses involving technology and innovation seem to be the potential insert point for design in business and management. According to Gomes (2009), design is a growing activity for innovation process. Through it, ideas arise and materialize, not only regarding the

creativity level, but also in determining technical and producing capabilities, opening new market opportunities. Therefore innovation is one of the factors that managers should focus their efforts, but for this, they need basic knowledge on design.

Another potential entry point for design in business happens through product development, which is shown in five of the ten analysed institutions and in the books. Product development process has strategic importance in organizations seeking to identify market and clients' needs, investigate technologic possibilities and develops products in appropriated time (faster than competitors), with the appropriate cost (Rozenfeld *et al.*, 2006). Design can be inserted in different points of the process – starting in briefing, product conception, material and technology analysis until production and management leading to better practices and best results. Thus, design has a direct relation with product development, as well as innovation and strategy, and should be present in academic topics inside management and business schools as presented in figure 2.
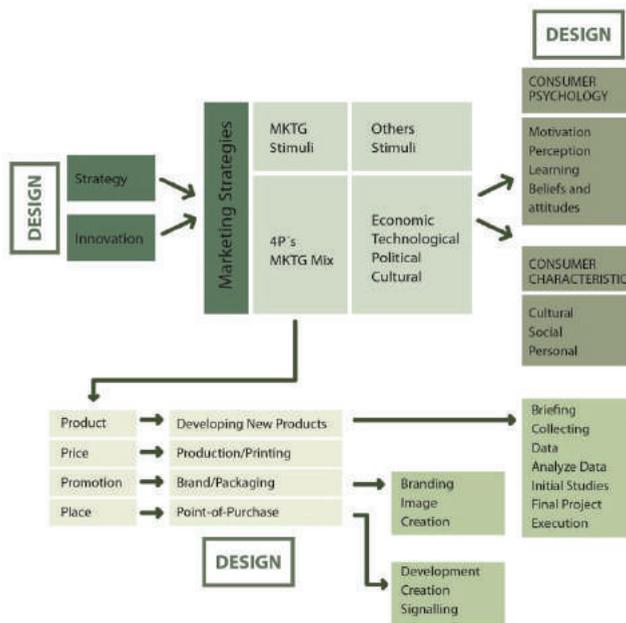

Figure 2. Design and Marketing Management Relationship – points of entry

But why this is not the way it happens? What this research could find, even if we still have a long way to go to finish our research process, is that the design community, when they want to bridge with business, tries to do it through innovation and new product development and not with marketing and strategy. The truth is that the business of design is, most of the time, in marketing, which can be seen through the book comparison, previous research and the schools research. Marketing is paramount in business, but design is not a part of all marketing books and, even if mentioned in the index, it is not a separate chapter in the curriculum. And, even if designers think they are strategic, design is never in a strategy book.

Finally, cross-country studies have the advantage of comparing realities and promote debates. As our research is to be continued, we also seek to improve discussions and relate different areas, thus deepening the comprehension of double-loop education to improve the relationship between designers and managers. This study proposal is also to find ways for managers to reach designers and vice-versa. The next steps will focus on cross-country comparison, and the in-deep interviews with professional will allow a look from the market viewpoint.

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