Competencies in Design Management

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Design management has gained relevance among practitioners and researchers worldwide. However, the competencies related to design professionals in design management are seldom explored. Thus, this article examines the specialists’ view of competencies in design management, and the structuring design teams in Brazilian garment industry. The methodology was exploratory, qualitative, through in-depth interviews with five designers working in Brazilian firms in garment industry. We identify competencies related to design management by the creation and occurrence of knowledge and information, be it from individual practices and routines, or even from the integration of work teams.

**Practitioner Summary:** Through this case study, it was possible to realize the specialists’ view of competencies in design management, and how design teams are structured in Brazilian garment industry. It appears that the competencies strongly permeate the concept of design management and that, when articulated, can assist in structuring and integration of design teams and stakeholders involved in design management.

**Keywords:** Design Management, Competencies, Garment Industry, Design Professional

1. Introduction

Over the past decades, design management has been gaining strength, both in academia or in corporate world, being perceived as a strategic element for companies. Gradually, design management has been discussed and conceived as a multidisciplinary activity that brings together working partners and integrates design within an organisational environment. Organizations are using design as strategic element for gaining competitive advantage in long term. Thus, it becomes evident the need to manage design activities, making use of concepts related to competencies, learning, dynamic capabilities and other aspects. However, the role of design professional participants and their competencies in design management are little explored.

1.1 Design Management

The Design Council (2012) conceptualizes design management as the total design activity, from implementation and organization of the whole process of developing new products and services to the administration and achieving a better business performance. Bórja de Mozota (2003) argues that design management is the implementation of design as a formal program of activity within a corporation by communicating the relevance of design to long-term corporate goals and coordinating design resources at all levels of corporate activity to achieve the objectives of the corporation (BORJA DE MOZOTA, 2003). The Portuguese Design Centre (1997), however, separates the performance of design management within companies in two manners: one, in the scope of the project, where the manager has the function of managing people, services and products through all stages of the project, and another, on the company level in its entirety, where the manager will encourage, favourably, the creation of new products. With respect to the levels of the corporation, Best (2006) argues that design management must place design on a global level in the organization, taking into account the strategic, tactical and operational levels.

At corporate level, a design manager acts on the company’s strategies by fostering a design culture and aligning it with the corporate goals. According to CPD (1997), at this level a manager will be responsible, among other tasks, for connecting activities with the company’s strategies. At project level, however, the design professional is focused on managing the company’s projects operationally. At corporate level,
therefore, design professionals can act either in close collaboration with the company’s senior staff or in a design department, being it a department internal to the organization or an outsourced design service.

In 2003, the Danish Design Centre (DDC) developed the Design Ladder as a tool for measuring the level of design activity in Danish companies. Each step represents one of the four phases of a company’s design maturity. In 2004, the Swedish Industrial Design Foundation (SVID) used the Design Ladder model for a research that examined the role of design in Swedish companies. On the Design Ladder, the first step represents a total absence of design, or non-design; at this step design is non-existent in the development process of products, and tasks are generally performed by professionals other than designers. At the second step, called design as styling, design relates solely to the final aesthetic and physical forms of a product, and it is used only to give style to products. Although such a task might be performed by a designer, it is often performed by other professionals. At the third step, called design as process, design is not conceived as a result, but as a process, that is integrated on the early phases of a project and consists of an activity supported by a wide range of experts. The fourth and highest step of the ladder is called design as innovation. At this step the designer acts closely alongside the company’s top managers, and design is understood as a company’s business concept. The participation of design professionals in project development becomes more important the higher one is up the ladder. Thus, at the fourth step the design professional works in close collaboration with a company’s senior staff, an attitude that is a major part of its strategy.

Borja de Mozota (2003) argues that a few design tools should be used in corporate decision making processes, such as design input at senior staff level or within a company’s own design department, among others. She also notes that at senior staff level design activities can be the sole responsibility of a design director, a design manager, or a director who belongs to a quality control and design area or a communications and design area. It is inside a design department that the positions of project manager and designers are to be found.

### 1.2 Design Manager and Design Professional

According to Borja de Mozota (2003), some tools should be used for the insertion of design in the organizational decision-making system, as inclusion of the design at the level of senior management and structuring of the design department, among others. Also according to the author, at the level of senior management, different professionals can represent design: a design director, a design manager or a director connected to the area of design and quality control or the area of communication and design. In the design department, however, the figures of the project manager and designers are present. Several features are listed for the design manager, such as: leadership, entrepreneurship, vast technical knowledge, specific competencies, managerial abilities, pro-active profile, capacity to coordinate, in addition to being motivating and capacity to influence the team. One of the key aspects for good designers, according to Bruce et al. (1999), are the competencies, arguing that the absence of these is a major cause of failures in design projects.

The design manager must pursue actions leading to the integration of project development with the corporate goals. Regardless the company’s structure, Best (2006) states that the design manager needs to promote the best design strategy as possible when conceiving an organization as a whole. The author also argues that for this to happen stakeholders should first be convinced of the significance of a particular design strategy for the company. Several are the abilities or skills required for a design manager position. Among them we will find leadership, entrepreneurship, vast technical knowledge, managerial skills, and a proactive profile, to mention a few. A design manager should be able to coordinate, motivate and persuade a team.

### 1.3 Competence and knowledge as resources

According to Ruas et al. (2005), the concept of competence is related to several ideas and notions, such as qualifications, tasks, performance, and goals, and it bears a conceptual heterogeneity. The author argues that competence in general is grounded on a set of capabilities, strictly related to knowledge, skills and attitudes of an individual involved in the process.

Belkadi, Bonjour, and Dulmet (2007) point out that the competencies are activated based on qualitative characteristics of work situations and the construction of these can occur from the review of past projects.
The authors emphasize in their work, the connections of knowledge and competencies with the situation. These work situations can also be understood as organizational routines that, coupled with the tacit knowledge, can pose unique and specific resources of a firm. Ahuja and Katila (2004) argue that companies create unique paths of scientific and geographic research that will likely lead to the creation of heterogeneous resources. Tacit knowledge and organizational routines are highlighted as important aspects to the Theory of Resources, as they can be considered unique and specific company resources and hard to imitate by competitors. These unique features are hard to imitate and present great difficulty in transferring to another firm. Barney (1991) adopts assumptions of heterogeneity and immobility to list four attributes related to resources that firms must have in order to achieve a sustainable competitive advantage: rarity, value, difficulty of imitation and inability to replace.

Borja de Mozota (2003) highlights that "building a competitive advantage through internal resources is strategic." Thus, according to Davenport and Prusak (1998), resources can represent a competitive advantage for the organization over the competition. Bertola and Teixeira (2003), Capaldo (2007), and Davenport and Prusak (1998) argue that knowledge is embedded in "routines, processes, practices and organizational standards." Knowledge is a strategic resource for organizations and can be "embedded" in organizational routines (Chen, 2005).

Companies can also encourage routines of knowledge sharing (Capaldo, 2007). Not only share knowledge (Osterlund & Loven, 2005; Riel, Tichkiewitch, & Messnarz, 2010; Bonjour & Micaelli, 2010) but also, more specifically, the sharing of expertise, knowledge during the design process engineering, collaborative knowledge, know-how and knowledge related to the development of communication, which generate a lot of information and new knowledge (Robin, Rose, & Girard, 2007). Thus, analyzing the relationship of knowledge with practices and the specific field of design, one realizes the importance of understanding design as a multidisciplinary activity in the organizations. Belkadi, Bonjour, and Dulmet (2007), add that design can be interpreted as an activity that can generate new knowledge and integrate heterogeneous knowledge.

Jevnaker (1993) highlights tacit knowledge as advanced competence in the actions of more experienced professionals. Ability to transfer and deploy tacit knowledge, understood as a strategic resource (Subramaniam & Venkatraman, 2001), is another important point that meets the scope of competitive advantage in organizations. The authors further add difficulties to encode and transfer tacit knowledge, due to different cultures, preferences, habits and customs of certain regions. The conversion of tacit knowledge into explicit knowledge (Osterlund & Loven, 2005) or even the conversion of knowledge at the individual level to the organizational level (Osterlund & Loven, 2005) and transfer of knowledge, tacit and explicit and between organizations (Gander, Haberberg, & Rieple, 2007; Capaldo, 2007) are points that contribute to the dissemination of knowledge and strengthen the management of design in organizations. However, most of the time, the design knowledge is tacit, according to Borja de Mozota (2003). Thus, this would be difficult coding, processing or even transmission, depending on their subjective and intuitive nature. However, according to Nonaka and Takeuchi (1995), in order for companies to be able to create organizational knowledge, they should seek the conversion of tacit knowledge into explicit and tacit again.

Davenport and Prusak (1998) stress that, if there are no formal policies and procedures of knowledge, informal and self-organized networks in organizations can be major conductors and generators of knowledge and innovative thinking. Borja de Mozota (2003) adds that design can bring knowledge "to the different stages of new product development in terms of process change, creativity and dynamics of teamwork." In this way, knowledge can be understood as an experience accumulated over time, requiring it to be communicated and shared within an organization.

Therefore, this paper aims at investigate what experts think about design management and competencies, how they are structured design teams and the relationship of these with the organization.

2. Method
The method used in this study was exploratory, following a qualitative approach and conducted through a survey of literature and also through in depth interviews (MALHOTRA, 2009) with five designers working in small Brazilian firms in garment industry. The author also says, regarding qualitative research, that this is a non-structured, exploratory research methodology based on small samples, enabling a better perception and understanding of the problem involved. Yin (2001) underscores that the case study is used as a research strategy when questions of the “how” and “why” type are asked, when the researcher does not control events
and when the focus of research is on contemporary phenomena. The sample is non probabilistic, chosen by convenience. One semi-structured script was elaborated for use in the in depth interviews.

The content of the data collected was analyzed (BARDIN, 2005), aiming to achieve the objectives of this research. The data were obtained from primary sources and the research procedure used was a direct and personal approach in the interviews. In order to ensure the anonymity of the interviewees, they are identified as Designer 1 (D1), Designer 2 (D2), Designer 3 (D3), Designer 4 (D4), and Designer 5 (D5) and companies are identified as Company A, Company B, Company C, Company D, and Company E.

3. Results and discussion
The aspects analyzed were classified into three discussion groups: companies’ characteristics; design professional activity and product development process; and stakeholders involved in design management.

3.1 Companies’ characteristics
Company A is a small 36-year old family business operating in the south of Brazil. Its production is outsourced and its end product is directed at young women. Company E has been in Brazilian market for 28 years. Although small, it has its own production, outsourcing only 30% of it. Comprising a network of more than 20 own stores, company E is present in other states of Brazil through the franchising system. It defines its target public as young female executives. Company F is small, it is present in two states of Brazil, with a total of 9 own stores. It has been in the market for eight years and its target public is adult males. Company I is small, six years in the market of the state of Rio Grande do Sul, Brazil. Its production is completely outsourced and its end product is directed as the adult-female-sports public. Company J is a small family business; 29 years in the market of the state of Rio Grande do Sul, Brazil. Table 1 shows the characterization of the companies.

Table 1. Companies’ characteristics.

<table>
<thead>
<tr>
<th>Company</th>
<th>Size</th>
<th>Family Business</th>
<th>Time in operation</th>
<th>Production</th>
<th>Public</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company A</td>
<td>Small</td>
<td>Yes</td>
<td>36 years</td>
<td>Outsourced</td>
<td>Young women</td>
</tr>
<tr>
<td>Company B</td>
<td>Small</td>
<td>No</td>
<td>28 years</td>
<td>Mixed</td>
<td>Young female executives</td>
</tr>
<tr>
<td>Company C</td>
<td>Small</td>
<td>Yes</td>
<td>8 years</td>
<td>Outsourced</td>
<td>Male</td>
</tr>
<tr>
<td>Company D</td>
<td>Small</td>
<td>No</td>
<td>6 years</td>
<td>Outsourced</td>
<td>Female sports</td>
</tr>
<tr>
<td>Company E</td>
<td>Small</td>
<td>Yes</td>
<td>29 years</td>
<td>Own</td>
<td>Young female</td>
</tr>
</tbody>
</table>

3.2 Design professional activity and product development process
The specialists interviewed were unanimous in underscoring that design management already begins when the organization strategies are elaborated, and emphasized the importance of design professionals participating in this stage and also being part of the board of directors. This is because, in order for design management to occur in the companies, design must be part of the culture and the organizational strategies, and be perceived as a value (BORJA DE MOZOTA, 2003; LIBÂNIO; AMARAL, 2013), and design as an agent of knowledge and integration in the organizations (BERTOLA; TEIXEIRA, 2003; GIRARD; ROBIN, 2006).

Regardless of what was mentioned by the design professionals in the companies researched, company A began to report their product development process beginning with the development of the products proper, and said emphatically that they do not perceive design as being part of the organizational strategies. Furthermore, company A stated that there is no participation of design professionals during the process of defining organization strategies, and that they are called to opine on guidelines pre-established by the directors for the new collection. On the other hand, the interviewees of companies B and E highlighted that the design professionals work in the construction of the guideline of the new collections, together with the directors, but that the latter are responsible for the final opinion. Companies C and D emphasized that there is a design professional who is part of the board of directors and that design is considered a value in
organizational strategies. They also added that the design professionals elaborate the guidelines for the new collections and are directly or indirectly present at all stages of the product development process.

Based on the definition of the guidelines for the new collection and its products, there is a stage during which the trends are surveyed all the way to monitoring the market, including creating the collection, production of the pilot pieces, production of the collection, review and control of quality and distribution of the products and then following customer satisfaction. It should be highlighted that if all interviews are grouped together, the participation of a person responsible for design is noted, whether the designer or the stylist, or the director of the style department in the stages of the product development process reported by the interviewees. It is also underscored that each stage requires data, information and competences that need the involvement of different individuals, teams, sectors and suppliers of raw materials and/or services, composing multidisciplinary teams.

### 3.3 Design professional and competencies involved in design management

The design professional will act directly in the initial stages of the elaboration of design strategies and guidelines for a new collection, researching trends, creating the collection. Agreeing with the importance of the initial stages of a project, Kotler and Rath (1984) emphasize that a common, recurrent mistake in companies is the late entry of designers into the development process of a new product, or else the wrong choice of the type of professional to act in this stage of the Project.

The representative of creation will also follow the manufacturing of the pilot piece, the production of the collection (modeling, production, following the suppliers) and the final review and quality control of the pieces produced. D5 pointed out that this representative will also be responsible for conveying the concept of the collection to the commercial representatives, salespeople, store managers and other individuals who work at the point of sales. D4 emphasize that the representative of the creation sector should always interact with the other stakeholders responsible for each of the productive stages. Already in the final stage of market monitoring, the representative of the creation sector should return to the point of sales, and also monitor, in social networks or other research and feedback media, how the piece produced is being accepted by the consumers.

The presence of a representative of creation at each stage of the product development process, be it the stylist or a style director, is necessary to follow and monitor the piece throughout the product development process, acting directly or indirectly. Kotler and Rath (1984) corroborate this statement and emphasize that the designer should participate in all stages of product development, interacting with all areas involved in a given project. To promote a multidisciplinary activity, individuals, teams, and stakeholders in a company must constantly share information, working in an integrated way (BORJA DE MOZOTA, 2003; BEST, 2006) and encouraging an environment of collaborative and participatory work. Belkadi, Bonjour, and Dulmet (2007) emphasize the importance of a structured construction of the project team is directly relating to the management of competencies. According to the authors, these teams must have ability to coordinate competencies throughout business processes (BOUCHER, BONJOUR, AND GRABOT; 2007).

The characteristic of the complex management of this chain of suppliers of the garment industry, and also the exchange of information and knowledge with these agents is the great number of individuals involved, and consequently, requires great flexibility and adaptability to respond to the constant demands of the market. This outsourcing of production is a reflex of a market dynamics and the result of a strategy that favors greater flexibility and agility in the production processes, consolidating production networks in a same organization.

As regards individual competences of the design manager, listed by designers interviewed, knowledge was reported of the market (consumer, trends and demands), of the entire product development process and project, of the company (of the business and inherited from the family), of management, of the other participating areas (marketing, production, quality, legal and import) and technical knowledge. The skills focus on strategic thinking, relationship with the other stakeholders and team, leadership, negotiation, picking up on trends and what the market is demanding, and meeting the schedule. The attitudes deal with commitment, orientation towards results, building relationships, integrating and solving problems, according to Ruas (2005) and Borja de Mozota (2003). Bruce et al. (1999) highlight the individual competences among the essential features required for good designers, arguing that lacking them is a major cause for failure in design projects.
According to designers interviewed, it is observed that the organizational competencies are related to trend and consumption monitoring practices (Companies B, C, and E) as well as to the creation of a collection with a theme (Company D) and the perception of timing to launch the collection on the market (companies A).

4. Conclusion

Through this case study, it was possible to realize the specialists’ view of competencies in design management, and how design teams are structured in Brazilian garment industry. It appears that the competencies strongly permeate the concept of design management and that, when articulated, can assist in structuring and integration of design teams and stakeholders involved in design management.

The garment industry in the southern region of Brazil is highly representative in the economic and social context of the country, although it presents a vast field for the development of design management as well as viewing design as a strategic element for competitive advantage. Thus, in the garment companies, the creation and occurrence of knowledge and information is clearly perceived, be it from individual practices and routines, or even from the integration of work teams.

One limitation of this research is the adoption of a qualitative approach applied to a small, restricted located and non-probabilistic sample that does not permit extending the current results and conclusions to the garment industry as a whole. Consequently, it is suggested further research studies alike that may show industrial patterns in the garment industry in Brazil and abroad.

References


