

Playing with packaging. A collaborative design experience between university and company

Brincando com embalagens. Um projeto de design colaborativo entre universidade e empresa

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Abstract

The education of design and of the professions that fall under the "culture of project" are being studied by several researchers. In the 1980s, Donald Schön (1983, 1987) investigated with great interest the teaching in architectural design studios. Schön managed to advance in the teaching/learning by proposing the theory of "reflection-in-action." However, universities in general are often displaced from the social reality in which they operate due to their strong academic tradition. This article starts from a view of the process of innovation driven by design to achieve a reflection of how the relationship between universities and organizations can play an important role in this context. To do so it is presented a collaborative work between the Unisinos School of Design and Litocromart, a graphics services company, specialized in developing and printing packages. At the end we present some conclusions about this experience, which might assist others in making future collaborative projects of this type.

Key words: innovation, collaborative design, university, company.

Resumo

O ensino do design e das profissões que se enquadram na "cultura do projeto" vem sendo objeto de estudo por diversos pesquisadores. Nos anos 1980, Donald Schön (1983, 1987) investigou com grande interesse o ensino nos ateliês de projeto de arquitetura. Schön conseguiu avançar nos processos de ensino/aprendizagem propondo a teoria da "reflexão-na-ação". No entanto, universidades em geral muitas vezes se encontram deslocadas da realidade social onde estão inseridas em função da forte tradição acadêmica. O presente artigo parte de uma visão do processo inovação dirigida pelo design para chegar a uma reflexão de como o relacionamento entre universidades e organizações pode desempenhar um importante papel nesse contexto. Para tanto se apresenta um trabalho colaborativo entre a Escola de Design Unisinos e a empresa de serviços gráficos Litocromart, especializada no desenvolvimento e impressão de embalagens. Ao final são apresentadas algumas conclusões sobre essa experiência que poderão auxiliar na realização de futuros projetos colaborativos deste tipo.

Palavras-chave: inovação, design colaborativo, universidade, empresa.

Introduction

Design today is considered an essential element for companies that aim to achieve innovation. However, for an effective integration of design inside the companies it is necessary for the administration of these organizations to understand the culture of design that underpins the innovative potential of design and to learn how to explore its potential. Organizations whose business is design, usually larger ones, are from time to time involved in developing a dialogue between the business culture and project culture, aiming at a deep integration of design in the organizational net (Franzato, 2010). It is still problematic, however, the viability of this dialogue in small and medium businesses without direct interest in design. Limiting our analysis to these organizations, the objective of this paper is to discuss whether the University can facilitate dialogue between the company's culture and the culture of design. In this sense, the article seeks to explore the potential of particular learning activities.

For this purpose, we analyze one case of a partnership held during the years of 2009 until 2011, between the Unisinos School of Design and the graphics service company Litocromart, with the involvement of different educational activities of various academic levels.

The article starts from a literature review on the relationship between design and innovation, introduces the concept of innovation driven by design and the process cycle at its base. The following is the study of the partnership considered its division into four process cycles. Finally, it is presented the discussions on the results, highlighting the value of collaborations between universities and companies.

The design driven innovation process

In manufacturing companies, and increasingly often also in the tertiary sector companies, design has become a major resource for business innovation. Roberto Verganti (2009, p. 152) indicates the possibility of an "innovation driven by design", based on the designer's ability to become agent of exchange between organizations and society.

Design represents a new path to innovation, and in this context it is essential that companies learn to manage it (Borja de Mozota, 2003). Design should move from the operating levels - related to the development of new products - to strategic levels, related to corporate governance. This view of design, according to Zurlo, can be called "strategic design" (Zurlo, 2004, 2010). In other words, design used to be interpreted only as a task in the development of new products, today it is believed that it can spread its design thinking in a capillary form in the organization and, especially, in its administration, proposing the project as a new paradigm of innovation (Brown, 2009).

This process of innovation driven by design, as described by Marzano (2007), seeks to reconsider the overall performance of companies in the market and society. Generally, the intent of this process is the definition of new scenarios of competitive performance for organizations. These processes are aimed at meeting an unprecedented point of view, alternative or future, about the contexts of

business, but also the generation of visions that can show the possibilities that could open up if a certain point of view was applied. The ultimate goal of this process is to identify a feasible path of innovation, allowing the organization a coherent development.

The process of innovation driven by design (Figure 1) begins with the identification of a problem by the organization - the briefing. Then four steps are carried out: research, analysis, synthesis and implementation, which are best described as follows:

- *Research (acquisition of knowledge on the project subject)*: In this step it is performed preliminary research aimed at collecting data essential to accomplish the project, for example, the ones called Contextual Research and Blue Sky Research. Such studies focus on the company (identity, portfolio of products and services, productive skills, intellectual capital, etc.), in the context of performance (market, audience, etc.), besides the development of a unique and comprehensive reference set about design (emerging trends, creative stimuli, exemplary projects, etc.).

- *Analysis (scenario building)*: In this step, the collected data is established with the aim of delineating new paths for innovation and building new scenarios of business activity, alternative to the current. Such scenarios are discussed among the various project participants to jointly decide which path should be taken.

- *Synthesis (design concepts)*: In this stage, the ideas and knowledge gathered are matured in various design concepts, for example, embryos of new products and services that the designer intends to propose to the company. As in scenario building, the concepts are also discussed to choose which of them to perform.

- *Realization (project development)*: In this phase, the chosen concept is detailed, in order to proceed with the planning, production and marketing of the new products and services.

As suggested by the spiral in the scheme of Figure 1, after the first process, the others follow cyclically: when developing a project, the designer solves a particular project problem and identify additional issues that the company may face in the future. Thus, the designer encourages the company to pursue research and design, making it crucial to search for continuous innovation. In this process, the completion of the first three steps is due to the designer or design team, corresponding to what Zurlo (2010) calls to *see*, *predict* and *make see*. The fourth step is critical to the success of the project and corresponds to *make*, which unlike the three previous steps, its realization is the responsibility of the organization.

Next, it is presented how the concept of design-driven innovation has been pursued and encouraged at the Unisinos School of Design, in southern Brazil, through actions that aim to integrate the academic world to the business context. It is also presented a case of this specific integration.

The case Bino: playing with the package

The Unisinos School of Design seeks to develop partnerships with businesses and other organizations, explor-

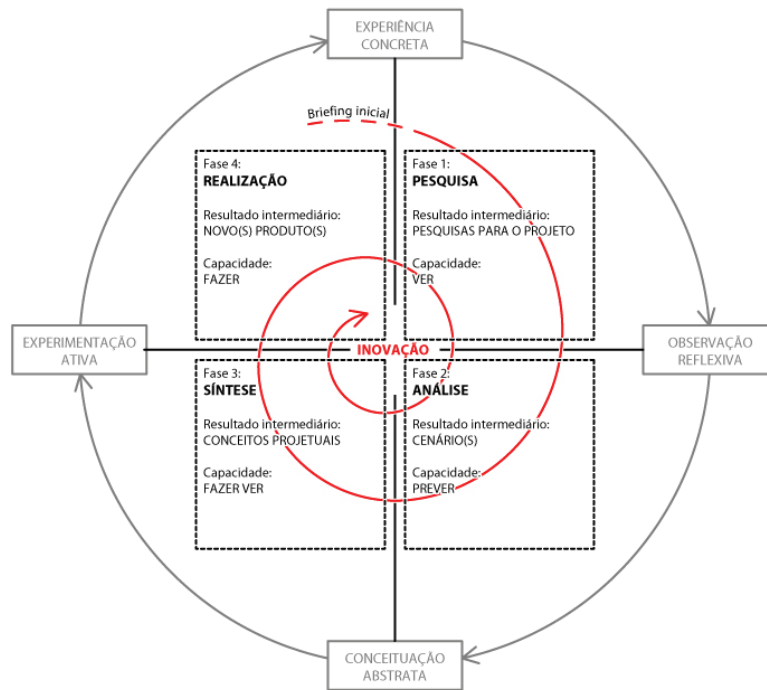


Figure 1. The spiral of innovation driven by design.
Source: Franzato (2011).

ing the potential of educational activities that incubates. Thus, students are afforded the opportunity to work on real cases, while organizations fertilization is provided with ideas and projects developed by an outside look at their routine.

These experiences are developed using the methodological approach of the metaproject (Celaschi and Deserti, 2007; De Moraes, 2010), aimed at exploring regular trajectories of innovation to business partners. Moreover, case studies represent important concepts proposed. Among the many cases already developed, this article discusses the partnership with Litocromart graphics, as this has unfolded in several projects cycles over three years. This collaboration allows us to evaluate the progress of the dialogue between company culture and design culture through academic activities and the degree of innovation thus afforded. Each project cycle was evaluated as a whole, its four steps - presented in the previous section -, and finally, their intermediate and final results.

Following it is presented the two organizations involved in the case, the Unisinos School of Design and Litocromart graphics, as well as three project cycles already developed, plus a fourth cycle in the planning stage.

Unisinos School of Design

The Unisinos School of Design - EDU - was designed in the context of cooperation between the Politecnico di Milano and Unisinos, based on the view that design is a "process of innovation that creates value for society" (Liberali, 2008, p. 19). Its proposal was based on principles of internationalization, innovation and integration between universities, business and society, and its activi-

ties are carried out in undergraduate and postgraduate levels, plus research and consulting services. In addition, the EDU "promotes economic and strategic innovation of the several local productive sectors and cultural reality of Rio Grande do Sul" (Liberali, 2008, p. 19), Brazilian state of the school.

To Borba *et al.* (2008) in Unisinos School of Design the research and teaching propose a permanent dialogue with society and industry, ensuring a new form of sustainable development. The school should provide the students with learning tools and methodologies that help them to address to the needs of the market. For the authors, few courses are aware that isolation (social and production system) is dangerous and not sustainable (Borba *et al.*, 2008). Finally, these authors define four fundamentals that govern the relationship between universities and companies:

- To enable dialogue between universities and innovative organizations;
- To establish real experiences to students;
- To bring future talent to organizations;
- To establish a permanent bond that promotes the culture of project.

Litocromart Graphics

Litocromart graphics is located in the Industrial District of Cachoeirinha in Rio Grande do Sul, and works since 1955. Currently works with the production of packaging and many of its customers are from the pharmaceutical and food industries, which demonstrates competence and development of quality products that meet the strict standards of these sectors. This is a large company, with

high annual production output. Their main raw materials are duplex, triplex and micro-waved cards. In its technological capabilities, Litocromart has availability of several processes such as offset printing, printing of metal strips and special stamps (such as those required for packaging of medicines), die-cutting, special knives, folding, gluing, lamination, located varnish, among other special finishes. The machinery of the company is constantly expanding mainly in the area of printing.

The company sought the EDU in 2009 in order to develop a totally new business, which would move the company from a business to business to a business to consumer format. As a secondary objective, the company was interested in developing a brand called "Bino", for the marketing of paper toys that could be manufactured within the company's factory, exploring new possibilities for its communication and marketing. Considering the limited resources that the company could provide, it was chosen to develop the project exploring the teaching activities. Were involved the courses of Bachelor of Design and Master in Graphic Design. The project unfolded through four project cycles (graduate, internship, undergraduate, extra-curricular workshop), where was used the methodology proposed by Celaschi and Deserti (2007).

First Project Cycle (Bachelor of Design)

In the Unisinos course of Bachelor of Design, the curriculum is organized into Learning Programs (PA), in order to enable a transdisciplinary vision for the development of projects. The central structural element of each Learning Program is the Design Studio. As indicated Scaletsky and Luzzardi,

"In each PA, the level of complexity of the projects in the studios increases, through the design of products and services, to reach a project for the promotion of a territory. This arrangement allows the university to bring companies into the classroom, allowing students to work with real project bonds and deal with the constraints of the market" (Scaletsky and Luzzardi, 2011).

The partnership between Litocromart and the Unisinos School of Design at this level took place in the second half of 2009, in the discipline of "Design Studio 2". The aim was to explore the theme of paper toys, to create a portfolio and develop a brand for this new business. In order to develop teamwork, students were divided into six groups, each composed of three students. The groups developed independently the stages of the design process, exploring the meanings of the word "play." Also, they have focused on different target groups and in different contexts of buying and using, building very different scenarios and, above all, original ones.

So as results came luminaire design concepts, stationery objects, toys for children with visual impairment, office objects, souvenirs and games, which shows the range of possible answers in the universe of the research topic (Figure 2). This set of unique designs offered Litocromart a broad range of possibilities for development, and several ways to innovate in your new business.

In this experiment, it was carried out a first project cycle until the synthesis phase, because the main objective

was to provide the company a number of proposals for development, but not for its effective development. In this sense, metaprojects researches, scenarios and concepts developed by the students represent a foundation for the company to be based on actual data, make informed decisions, find trading partners, and finally enable the new business.

Second Project Cycle (internship)

With the aim of enhancing the partnership between the EDU and Litocromart, it was decided to create an object that would express the results of the partnership so far. This object was initially presented in the form of a book, but it should be produced within the company's factory (which does not have binding process), and that somehow showed their available technology and manufacturing processes. To realize this activity it was used one more feature of the academic curriculum of the Undergraduate Design course: the internship.

Thus, a student in her third and final year, similar to PA2 students, toured the various stages of the design process illustrated earlier until the development of a toy-book, which summarized the results of the previous step (Figure 3). This idea of developing a toy-book came about spontaneously, given the nature of the subject treated in the discipline "Design Studio 2".

In a way, the design of this product represents a second project cycle that keeps a connection to the next, which should lead to the realization of Bino and its brand portfolio of children's products. This contribution collects and organizes the results of the collaboration, providing a valuable tool for discussion, in addition to the work of the students' visibility. Furthermore, through this product, the company can offer to its partners and customers a presentation of the developing projects and its commitment to innovation.

Third Project Cycle (Master in Graphic Design workshop)

This third project cycle sought to develop a graphic identity for the brand "Bino". To that end, it was conducted a three-day workshop with the class of Master in Graphic Design from EDU, where new ideas were generated in a search of a way for Bino, but also for its applications. The results can be seen in Figure 4.

This cycle, like the previous two, only advances to the synthesis phase, without being actually made and implemented. The results will be analyzed by the company to choose a path to be further developed and its effective realization.

Fourth Project Cycle (extracurricular workshop)

At the time of submission of this paper, this activity had not yet been executed, but it consists on a workshop that will gather together undergraduate and master's students towards the development of paper toys for effective implementation in the production line of Litocromart. Thus, the expected result of this is the fourth project cycle, which is the advance to the realization phase.



Figure 2. Design concepts by the students of Bachelor in Design.
Source: Photos taken by students.



Figure 3. Toy-book developed in the second project cycle.

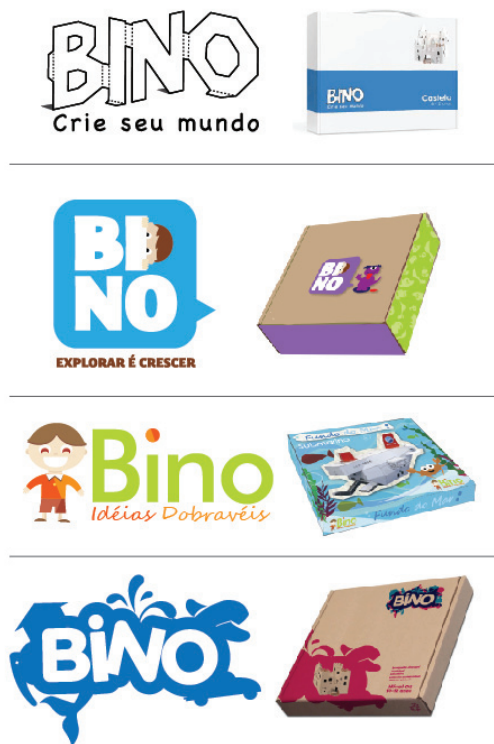


Figure 4. Results of the third project cycle.
Source: logos and applications developed by students.

This workshop will take place once a week over the first three months of the school year of 2012, and will have as main characteristic the development of new skills for the participants. This training will be held through the exchange by the moderators of the workshop with the students, but also among the students of various levels of the School who will be working together to develop products that will be marketed by Litocromart from the Bino trademark.

Final remarks

The subdivision into four project cycles allows a full investigation of the experience according to the methodology of action-research (Kolb, 1984; Franzato, 2011). The results of each cycle offered the experiential basis for thinking of what gave rise to the next cycle. Thus, it was

possible to construct a model that triangulates research, education and marketing.

For a company to collaborate with a class of first-year students it means to receive fresh ideas and often unpredictable ones. It is the company that must know how to interpret them, helped by teachers who act as translators between the company and the students. It is also essential to understand the potential of ideas in order to be able to transform the ideas of the creative designers into future innovation.

On the other hand, to work with a real company that operates continuously in the market, it means for students to enrich their own academic background with a direct connection to the professional world. The use of these experiences becomes very important to build their portfolios, well-developed, highly original projects and consistent with the proposal (Franzato and Freire, 2008).

We could see that the insertion of the company in the educational context can be very productive for both sides. It is clear that collaborations between universities and business carried out through educational activities differ from consultancy project aimed at professionals, like academic-oriented applied research. Through design activities, which must first attend the training purpose, these collaborations aimed at stimulating interesting, comprehensive and far-reaching topics, seeking to go beyond the ephemeral and the logic of profit. We are aware that proposing a briefing that is not fixed to the design of a product, but to a new business, prove interesting opportunities for the company that would probably not be achieved otherwise.

The integration of different levels of the School shows how rich can the relationship of a company be with an educational institution, creating and disseminating knowledge in both a vertical and horizontal ways.

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