INTRODUCING SYSTEMIC SOLUTIONS FOR SUSTAINABILITY AT THE DESIGN COURSES IN UAM CUAJIMALPA. STUDY CASE: BOOK CLUB IN MEXICO CITY

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ABSTRACT

The case study presented in this paper, envisions a student project, which was undertaken at the "Design" bachelor program (also known as "Integral Design") at UAM University. The main focus of the project involved the way in which design can help promote reading, through the particular case of the Bookclub Network in Mexico City, a heterogeneous group of spaces led by community work that has proven its relevance for 20 years, despite losing all support from the government. The methodological approach of the project supposed a paradigmatic shift regarding conventional practices, in order to avoid an "Integral Design" through the addition of particular design practices, so that a better articulation could be reached by means of an interdisciplinary systemic design that could also unravel a complex problem under the vision of sustainability.

Key Words: Design courses, Systemic Design, Sustainability

1. INTRODUCTION

In Mexico, it is common to analyze and solve a Design Problem from a particular Design Discipline or area (graphic, industrial, multimedia or architectural). The Design Bachelor program at UAM allows exploring Design without a particular focus, where complex problems are being undertaken during the final courses of the program. Previously, the solutions to those complex problems were developed through the incorporation of pieces of each particular design discipline to achieve an "integral" design. However, through an approach that methodically incorporates a systemic design, not only an articulation among all interventions at a system level is possible, but it also allows a more solid approach towards Sustainability.

The assimilation of a sustainability focus in this project, involved a deep understanding regarding the importance of economic autonomy from the government at local community-led cells, whose goal is the promotion of reading as a pillar of education in Mexico City. This way, a multidisciplinary approach was adopted at the research phase, including design, semiotics and cultural studies. Additionally, an interdisciplinary approach was needed in order to articulate different areas of design to offer a systemic solution to social, economic and environmental problems.

2. READING CULTURE IN MEXICO AND SUSTAINABILITY AS DESIGN PROJECT FOCUS

Although we do not have homogeneous figures, in general the reading indicators in Mexico are low in comparison with countries with similar development: according to the Reading Module (Molec) of the National Institute of Statistics, Geography and Informatics (INEGI) for 2018, each Mexican reads an average of 3.8 books per year, spends a little more than half an hour a day reading, but only 2 out of 10 readers fully understand what they read, while 6 out of 10 understand the majority and the rest comprise half or less. Those who read, prefer literature (40.8%), followed by academic readings (33.6%) and the rest prefer self-improvement books, religion, manuals or guides (25.6%). According to Molec research, although Mexicans receive some encouragement to increase their reading levels, half of the inhabitants said they do not have enough time to devote to reading. At least 1 in 4 said they do not read due to lack of interest and because they do not like reading, and 1 in 10 said they do not read because they prefer to do other activities.

In contrast to the average of 3.8 books read per year by each Mexican, the same indicator in Spain is 10, in Portugal 8.5, in Chile 5.4, in Argentina 4.6, in Colombia 4.1, and in Brazil 4. Although the government makes permanent efforts to increase reading among Mexicans, the situation has not improved significantly in the last 20 years.

Among these efforts, the initiative of the government of Mexico City stands out, which in 1997 launched the program of book clubs "Libroclubes", to bring the population closer to books and reading. The Book Clubs are citizen spaces for reading, autonomous, with a neighborhood vocation. They facilitate unrestricted access to books, based in trust, without bureaucracy. They are also spaces for communitarian activities. Anyone can open a new Bookclub in any space: Homes, factories, unions, hospitals, institutions, squares, gardens and even in prisons.

In 1997, the government of Mexico City supported each Bookclub with an initial collection of books, training and institutional support. However, when the government changed four years later, the support ceased and the Book Clubs, which had not achieved real autonomy, quickly disappeared, to the point that by 2003, only 500 remained. At the start of our project in 2017, the local government claimed that 300 Bookclubs still worked, but our estimate is that they do not reach 100. However, many of these survivors have worked more than 19 years, thanks to the commitment of their managers, the support of the people who frequent them and the relevance of their service.

The academic Terminal Project Bookclubs, started from the assumption that a design intervention would help strengthen Bookclubs through multiplication and that if the Bookclub Network was consolidated as an independent initiative, any change in government support would not affect them.

3. METHODOLOGY

During the academic course denominated "Terminal Project", at the Design bachelor program at UAM University, students develop a design project during one year at the end of their curricular studies. Book Clubs project was incorporated as the principal Topic, but a particular methodology was integrated, in order to favor a systematic approach through all research, problematization, discovery, proposal and communication phases of the project.

In order to provide a strong basis from which to start a Systemic comprehension of the complex context of Bookclubs thematic towards sustainability, S.PSS (Sustainable Product - Service Systems) methodological basis was incorporated from the beginning of the academic course, through the application of a series of tools for the observation and identification of key contextual actors, nexus, interconnected problems, among others. Also this approach provided a path to build a configuration of solutions, actors, interactions and scenarios, in order to ease an interdisciplinary and systemic design process. Some particular tools that allowed the configuration of the systemic solution involved the development of system maps, map of actors and interactions, Sustainability Design-Orienting toolkit (SDO), and SPSS Concept Description.

The S.PSS methodology was supplemented by methodologies from Semiotics, Rhetoric and Cognitive Sciences studies in order to detect user´s motivators and significant metaphors, with which a persuasive discourse could be constructed. In addition, a didactic instrumentation was also employed, in order to manage a systemic project divided by teams, where documentation, discussion, and analysis could support the collaborative work, in contradiction

of an individualistic and competitive inertia.

The project was divided into three main stages: research, design and adjustments, but not in a linear manner, since the results of the first design phase gave rise to new research and adjustments in an iterative process. The first research phase, focused in three mail issues:

1. Documentary research on the context, focused on the state of reading in México and in the city from the quantitative and qualitative perspectives.

2. Activities on reading awareness to sensitize students, by collective readings, visits to the International Book Fair of Minería and to a theater play about the importance of reading. All activities were discussed in the group, to develop a critic point of view.

3. Field research in the Bookclubs program and visit to specific Bookclubs, where the students made interviews with those responsible, users and officials.

In this third phase, through the application of a questionnaire and in-depth interview techniques, an ethnography was developed in which motivations and identifiers were identified, as well as the identification of the metaphor that best describes the Bookclubs among the users. The first investigation outcome, showed that indeed Bookclubs are spaces of true interaction, which generate community welfare, through reading and books BUT only about a hundred remain in the city, there is no so-called Bookclub Network, as the relationship between them is minimal and this leads to a great vulnerability to government fluctuations.

4. RESULTS AND ANALYSIS

The evaluation of the design was made based on three perspectives:

a) As objects of design, functionality, materials, costs and aesthetics.

b) Based on the interactions that promote, as well as its sustainable dimension, the main social, economic and environmental factors and impacts.

c) As part of the general system, in the contribution it makes to the solution of the complex phenomenon.

Results

The project provided a system that articulates products and encourages services. It also attend important needs of the Bookclubs as spaces and also of the Network, as an organization. If implemented, the Network would be strengthened as a citizen instance, autonomous from the government, increasing its possibilities for sustainability.

Besides, the process with the students allowed comprehensive approach to reading as a phenomenon with cultural and social impact, gave transcendence to the design intervention, and it allowed for collaborative, non-competitive learning experiences for students and stimulated in their relationship and interaction skills that are difficult in competitive dynamics.

The overall results of the project achieved by the students, involved the development of specific design proposals of products and services, all of them interlaced between them in order to generate a general system that could lead to the solution of the identified needs of the Book Club program. In this way, not only the approach of the project required an important and complex process to interconnect the design proposals among the teams of students to create a system, but also the teaching-learning process signified an important challenge and paradigmatic change within the usual teaching practices at the University, enabling the development of an integral, interdisciplinary and systemic Design project.
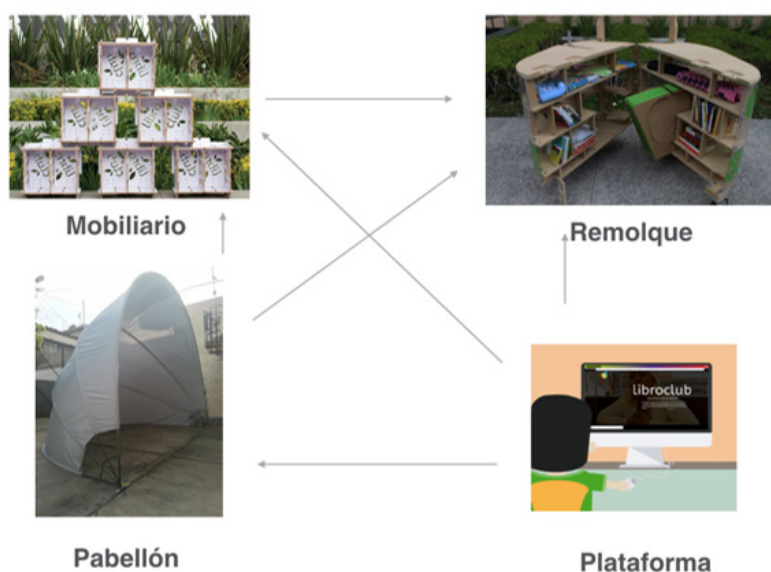

[Figure 1] Design Proposals by students, interconnected to offer a Systemic Solution, in which Distributed Production of furniture, installations and digital services were configured for Book Club coordinators

4.1. Impacts on Sustainability

A wide arrange of tools were used to analyze, anticipate and reduce environmental impacts of the different design proposals of each team of students, which involved a careful selection of materials, design of modular pieces, waste reduction of manufacturing processes, among others.

However, it is possible to identify that most of the design proposals offered a higher focus on the social and economic pillars of sustainability, enabling the adoption of a system that not only encourages reading as a cultural process, but also provides the opportunity to have autonomous-management system with economic and organizational.
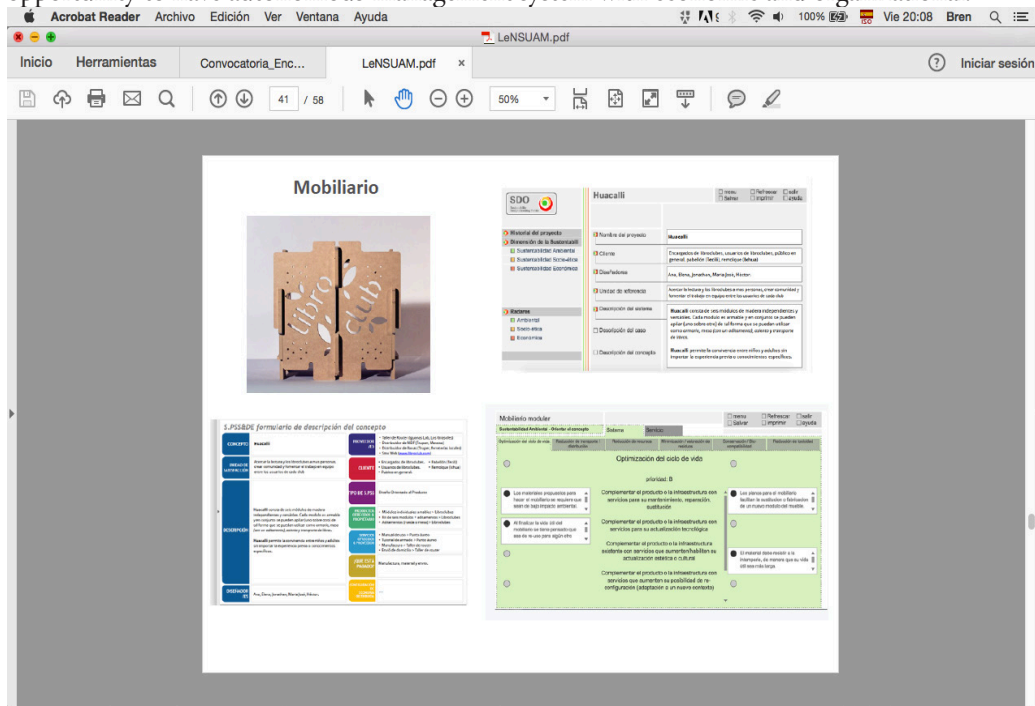
[Figure 2] Array of Tools applied to one of the interconnected design proposals of Bookclub project, in which PSS and DE configurations, as well as Sustainability factors and scenarios were identified and tackled.

5. CONCLUSIONS

The systemic approach promoted in this project yielded integrated solutions, rather than the production of objects; opened the door to a teaching experience different from the usual, as an alternative for the institution, students and teachers, as well as raised a way to link the process with users, through collaborative sessions and feedback.

It also revealed important educational and institutional challenges: a) The need to analyze the profiles of the students that make up the teams to ensure that it is within their reach to carry out their project, b) implement the dynamics that foster productive collaboration and not competition among students, c) take care of the follow-up of the process, through an efficient documentation that allows the permanent and collective analysis, d) sustain the close, empathetic and committed relationship with the community that is served. All of the above requires a special teaching preparation that the institution must provide.

When the Ministry of Culture of the CDMX requested to present this project at the International Book Fair of the Zócalo, it was necessary to manufacture new prototypes. However, the real implementation requires the support and accompaniment of the university in the management of the project, the signing of agreements, the protection of the students' copyright and the support so that the prototypes presented in evaluation can be adjusted to the reproducibility needs.

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