Pedagogical Actions Towards Cultural Heritage and Archival Preservation
–Bridging Design Education Between Past and Future

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Abstract
The nature and the materiality of cultural heritage and archives are being brought to design research, questioning the ways in which they are communicated, curated, and used. Design, as an activity with the ability to creatively engage with other fields in its education process and as an active agent in communication and society, endorses a role of responsible citizenship, contributing with its actions to improve its contexts and its communities of intervention. The following paper develops the research of design education between past and future, starting from a global outlook that deals with methods, strategies and creativity, and copes with new and more complex challenges and work forms, and describes pedagogical actions in higher education in Design, in Portugal, through the exploration of "Arquivo Leonor," in Barcelos, Portugal, a archival heritage with over five centuries. This project aims to intertwine three key concepts such as design, heritage, and open culture its cultural action to the community. Its intervention motto is the interpretation and decipherment of this heritage, for which a mediation strategy is articulated with various tactical interventions, including archive research, documentation and ethnography, and its dissemination and strategy definition. As a pedagogical field that extends beyond visual mediation, it acknowledges and promotes alternative expressions of knowledge, addressing possible design roles in terms of overall cultural change. It focuses on a teaching-learning-research bias, focused on heritage preservation identities, traditions, and systems of knowledge, establishing a mediation pedagogy that opened territories for further expansion of theory and practice.

Keywords: Design Education, Higher Education, Cultural Heritage, Archives

1. Introduction

In the current landscape of creative education and research, heritage preservation has emerged as a prominent and vital subject (Flinn, 2007; Winter, 2013; McCandlish and McPherson, 2020; Listvandity, 2021). Its rich knowledge and corpus offer significant potential for influencing design action and pedagogy, ultimately contributing to its conservation. Recently we can observe a growing interest with how design can foster cultural development, establishing meaningful connections between culture, economy, and society (Hou, 2022; Ejsing-Duun & Skovbjerg, 2017). Additionally, efforts have been made to bridge the gap between design theory and practice (Droumeva, 2016).

Amidst the rapid technological advancements and evolving educational contexts, design has assumed an active role in safeguarding localized practices, products, and industries (Thomas et al., 2011). By utilizing contemporary media as a tool for identity and value enhancement, design plays a crucial part in the preservation of these cultural assets (Pöllänen, 2007). There are changes occurring in the global economy driven by globalization, technological innovation and communication paradigm shifts. The new set up drive the adoption of development strategies by institutions and organizations for their general improvement. Globalization of society promotes changes in citizens' social behaviours. Design, designers and design educators, as active agents in communication and society, must assume a responsible citizenship role, contributing with their actions to the improvement of their contexts and communities of intervention (Acklin et al., 2013), and in this context, design may have an important role to play (Meth, 2023; Dilekçi and Karatay, 2023).

The integration of design research projects with heritage preservation can enhance instructional methodologies and strategies, requiring educators to build upon their role in a teaching-learning dialogue (Huppatz, 2015; Turunen, 2020). The integration of design and heritage preservation offers numerous avenues for meaningful exploration, developing an intimate understanding of the intricate relationship between design and cultural heritage, enhancing their ability to create meaningful, context-sensitive solutions.

This also contributes to adding new contexts to the dynamics of the design classes, enriching the activities, and inviting students to explore, take risks and actively engage in the search for primary information, which refers to the themes at work. Preserving cultural heritage and archival patrimony is an interesting gateway to understanding the evolution of a local culture and region, and their values. By merging design research with heritage preservation, students are invited to explore the historical significance of design, recognize its impact on culture, and appreciate the relevance of traditional practices in contemporary contexts.

2. A pedagogical Action Exploring "Arquivo Leonor"

The pedagogical actions presented consist of a global interpretation of project development in graphic design, in a practice-based research process towards cultural and heritage preservation. Cultural heritage has universal value for all of us, as individuals, communities, and societies, and it is an opportunity to communicate culture. "Through cherishing our cultural heritage, we can discover our diversity and start an inter-cultural conversation about what we have in common. So what better way to enrich our lives than by interacting with something so central to who we are?" (Europa.eu, n.d.).

Integrated in the process of higher education in graphic design, namely in the degree (BA) in Graphic Design of the School of Design of the Polytechnic Institute of Cávado and Ave, within the structuring curricula of Design Project, the pedagogical process of this action identifies as main objectives: (i) to explore the grammar of communication design; (ii) to identify attitudes and methods used in the project environment; (iii) match the aesthetic objectives of design to the effective possibilities – methodological, technical and productive – of graphic production, using in particular the appropriate technological tools; (iv) to develop reasoning and creative stimulation in project, substantiated in the history of visual communication and in the praxis of contemporary graphic design; and finally (v) to develop the capacity for critical thinking regarding the different perspectives of Design, its role in society and tangencies.

Santa Casa da Misericórdia de Barcelos, in Portuguese the Mery Institution of Barcelos, has a vast archival collection of great importance, not only for the institution, but also for the History of Barcelos and National History. *Arquivo Leonor*, in Portuguese Leonor Archive · as it is known, in an allusion to Queen Leonor, sister of King Manuel I – consists of religious, welfare and social information. Of the most significant documents, we highlight the Provision of King Manuel I of the year 1520.

With the main objectives of preserving, processing and disseminating its informational heritage, the Leonor Archive aims to be an archive of all and for all. The Archive holds documents that take us from the 15th century to the 20th century, going through information as diverse as: Inventories, Register of brothers, Commitments, *Tombos*, Judgments, Provisions, factitious codices, among others. This is the "raw material" from where the projects steams.

The work assignment consists of the design and development of graphic communication of a cultural heritage with a view to its promotion and dissemination, emphasizing its local and regional importance, proposing the development of integrated communication in multiple media. As a case study, design students have to choose a specific topic, within a proposed global set.

The methodology used is devised from Bruce Archer's influential "3 stage design process" (Archer, 1965). The incorporation of this design process and its related methodology as a scientific activity sparked an in-depth exploration into the specific nature of design "doing." Each stage of the process was attributed unique meanings, stemming from the objectives set forth in the initial exploratory phase. Central to Archer's approach is his steadfast defense of design's specificity, not merely as a professionalized endeavor, but as a dimension of human action in its entirety. His invaluable contribution lies in establishing design as a domain of "communicable knowledge" (Archer, 1965), one that can be subject to investigation, analysis, and ultimately concluded through rigorous knowledge-seeking. Archer's insights proved foundational in guiding designers, at the time and next, to confront design as a disciplined field, replete with its own methodological rigor and systematized research practices. This pivotal shift placed design at the heart of a discourse that engaged both the precision and structure of science and academia, as well as the liberating realms of freedom and intuition intrinsic to art and creativity.

The three-stage design process outlined by Archer provides a comprehensive roadmap for designers to navigate the complexities of their projects effectively. The initial phase is marked by exploration and discovery, a period where designers immerse themselves in the

subject matter, seek inspiration, and identify project objectives. This stage sets the tone for the entire creative journey, laying the foundation upon which subsequent stages will build. The second phase involves the development of design concepts and solutions. Here, designers translate their insights and inspirations into tangible forms and ideas, carefully refining and iterating until the most promising paths emerge. This stage demands a delicate balance between analytical thinking and creative flair, as designers strive to bridge the gap between imagination and practicality. Finally, in the third stage, the designs take shape, guided by the refined concepts and solutions from the previous phase. This is the implementation stage, where designers bring their visions to life through prototyping, testing, and refining. It is an iterative process where feedback and adjustments play a crucial role in achieving the desired outcome.

Archer's insistence on design as "communicable knowledge" brings into focus the significance of sharing insights, methodologies, and findings with the broader design community. To embrace design as a discipline equipped with methodological rigor and systematized research elevates its status within academic and scientific circles. It positions design alongside traditional scholarly disciplines, encouraging interdisciplinary dialogues, levering possible innovative collaborations between diverse research areas.

Archer promoted the use of systems-level analysis, in a design process based on evidence and evaluation through experimentation. The starting point, also promoted in this proposal presented and related to the theme of heritage preservation, will always be the expression of a need, and therein lies the rationale and importance of determining the reasons for creating a design process, as well as managing the expectations of its scope and its relationship to the artifact developed. In this development, Archer systematizes his proposal in the so-called 3 Phase Model, where the design process would be this creative mix, the limitations of the objectives and the systematic analyses, always having the creative act as a structure:

1. *Analytical Phase*, from which information is compiled, organized, and evaluated, conditioning factors are defined, and the hierarchy is structured, detecting the problem, programming and obtaining information.
2. *Creative Phase*, in which analysis, synthesis and creative development are applied.
3. *Executive Phase*, in which a critical appreciation of the previous phases is developed, ideas are adjusted, and the design process and the interactive process with other players are developed, in the definition of the proposal and solution. Communication also becomes part of the objectives inherent to the development of the result.

By applying this methodology to the pedagogical action, and by its success, a learning ladder is established between understanding, meaning and action, which is added here to the students' training process, by active processes and pedagogical construction, that are not previously observable or susceptible to experimentation. Archer's emphasis on design as an inherent aspect of human action underscores its significance in shaping the world around us. By recognizing design as both an art form and a science, designers can harness the power of creativity while leveraging systematic approaches to generate meaningful and impactful solutions.

3. Design Outputs and Discussion

The significance of Archer's methodology in the realm of higher education in design cannot be understated. By defining design as an interplay between intuition and cognition, this

approach resonates deeply with the multifaceted nature of design, recognizing that creativity and analytical thinking are not mutually exclusive but rather complementary elements in the design journey. This balanced integration capacitates design studente who are not only capable of ideation and artistic expression but also possess the rigor and discipline to translate those ideas into practical and impactful solutions.

Overall, Archer's methodology offers immense value in the context of higher education in design, nurturing a new generation of designers who can navigate the complexities of the modern world with confidence and creativity. "His method was based on critical path analysis, a model of operations research, and gave design research examples" (Bayazit, 2004). Thus, rebutting the methodology described about the teaching/learning activity, student's assignment is organized as follows. In the first phase (*Analytical Phase*) the cultural heritage case study to communicate is identified. It foresees the development of research on site or in related and tangential projects and their critical reflection to the concept to work on. In the second phase (*Creative Phase*) is developed the study and implementation of the graphic component of the project. It foresees the methodological phasing in moments of analysis, synthesis and practical development of the communication supports, and here the visual graphics are developed. In the present paper we'll highlight some of these outputs accordingly. In the third phase (*Executive Phase*) the project is concluded, in terms of communication and dissemination, including its final presentation.
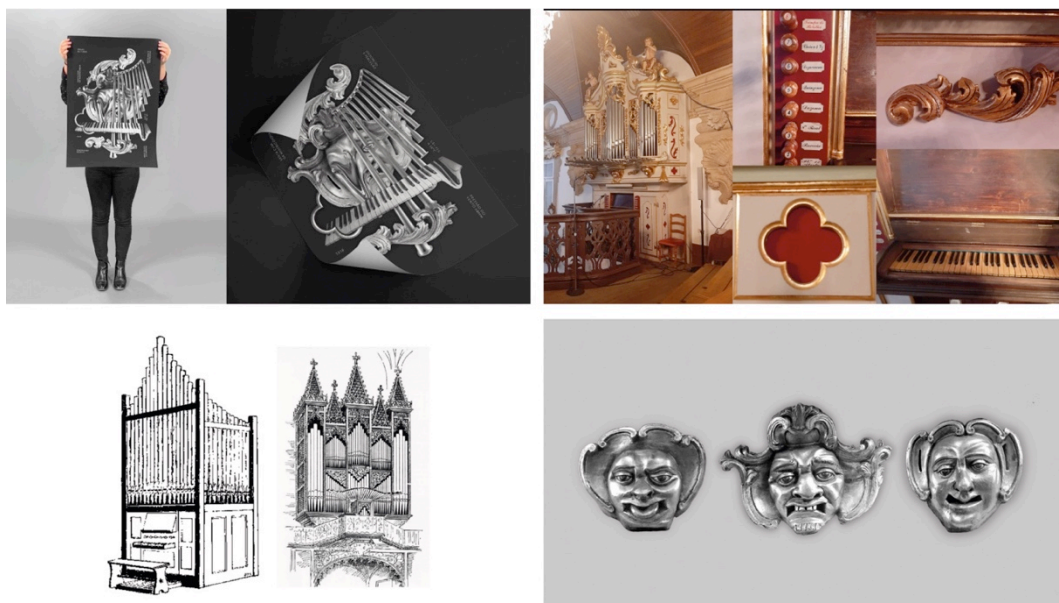

Figure 1: Poster project (top left) and visual research on the case study "18th century pipe organ from the Church of Misericórdia in Barcelos."
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The project's characteristics lead to a rich diversity of examples in terms of graphic language, evolving through meticulous research and individual exploration. The foundation is laid with poster design in a 50x70cm format, which serves as the starting point. However, the students' research and topic choices extend beyond, encompassing three additional communication supports that align with their respective subjects. The success of these assignments not only enhances the learning process but also serves as a testament to the effectiveness of the project methodology employed.
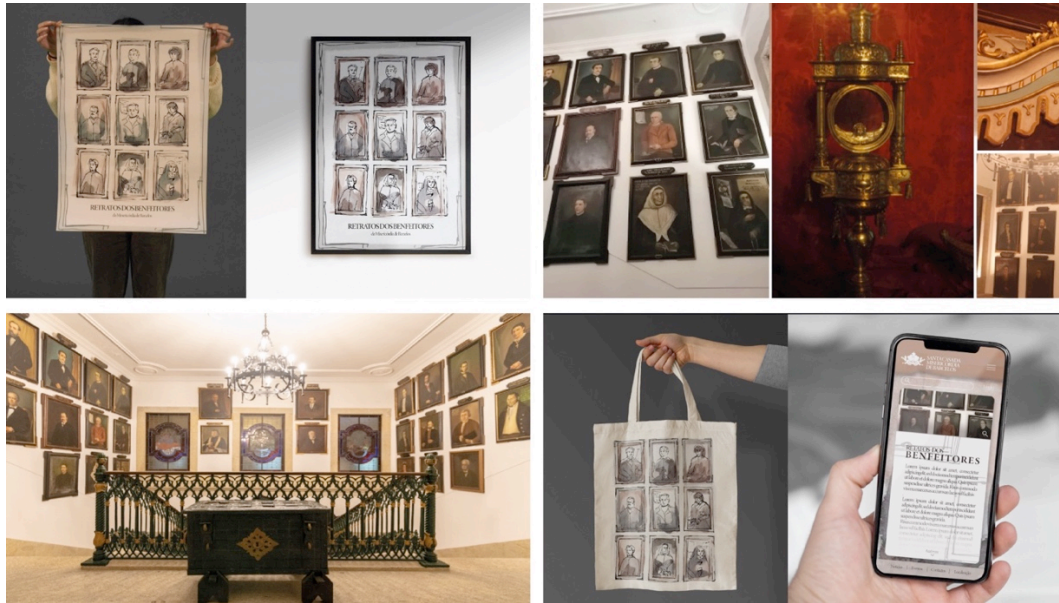
Figure 2: Poster project (top left), other visual outputs (bottom right) and on-site research on the case study "Gallery of Benefactors" at *Arquivo Leonor* Museum.
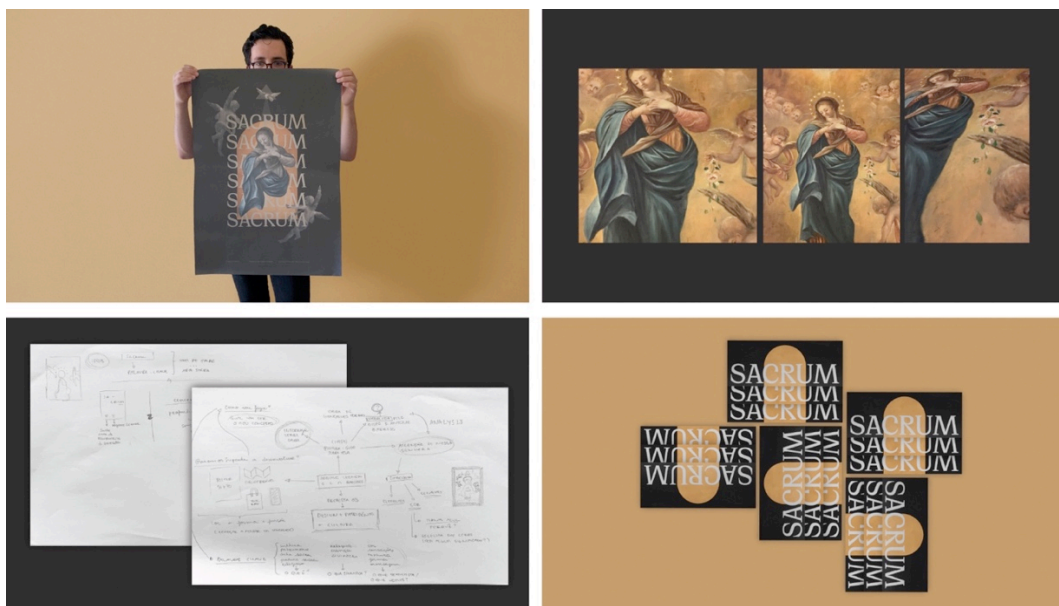© Ana Beatriz Salgado / IPCA.

Figure 3: Poster project (top left) and visual research on the case study "Painting of 'Ascenção de Nossa Senhora' (*Ascension of Mother Mary*), 1954"
at *Arquivo Leonor* Museum.
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4. Conclusion

Classroom activities and practical fieldwork and on-site research empowered students to solidify their understanding and skills in research and experimentation within graphic and visual communication. Engaging and motivating assignments facilitated this knowledge consolidation process. It was also integrated, as proposed in the program, the identification of the historical and semantic capital of graphic design as fundamental ingredients for the creation of a reasoned visual discourse and autonomy in the development of projects. The overall results are very satisfactory, meeting the expectations created, with many cases of

outstanding quality of responses. The development of a project structured and organized into different phases and supported by this methodological model of Archer is highly enhancing the capabilities of students and motivating for their training.

Although there is a great heterogeneity in the graphic language of the answers, it can be observed in most of the works developed a concern for exploration and creative experimentation, seeking to demonstrate specific skills related to the different areas that are part of the curricular structure of the degree. By exploring and discussing the foundations of the design language, the proposed training presents the creative possibilities of graphic design, exploring the limits of the discipline in parallel with reflection on its methodological activity. Teachers, as mediators between students and research projects, and also in the fundamental role of a researcher, are in a prominent position to reflect on learning, collect and interpret data and propose decisions regarding teaching and the construction of an applicable pedagogical model. It is important that classrooms are also living laboratories for research, capable of transforming and being transformed. The educational resources that are built have a lot to do with writing and reflecting on the pedagogical activities themselves, in the form of scholarly contributions to the higher education community involved in design.

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