




About Education in Architecture: Towards an Integrative Pedagogy in the Teaching of Communication Strategies for Architectural Design and Photography

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Abstract. This paper is based on the didactic experience and refinement of three curricular units (CUs) in FAUP, which are *Photography and Design Communication*, articulated with *Photography of Architecture, City and Territory*. In addition, we consolidate research work on the uses of diverse visual strategies and representation methods for communicating architecture, city and territory, an integrative pedagogical approach with a special focus on photography as a transversal media within these areas of study. The text describes a collaborative and dynamic environment allowing for an informed appraisal of architecture and city space, understanding the diverse forms of its appropriation and giving students the possibility to participate in the discussion of the transformation of these territories. The teaching process adopted encourages the interaction between teachers, researchers and students, leading to a dynamic of discovery built collectively. All this favours a dialogical learning process, exploring the multifaceted richness of the territories under study and the way in which public spaces are transformed and architecture is designed. It will be shown the significant connection that is established between the CUs curriculum and the research developed in the Architecture, Art and Image research group. It is believed that this articulation between CUs and research coming from R&D project teams reinforces and provides conditions to stimulate the beginning of activities related with investigation, as well as the development of students' critical reflexive competences, creativity and autonomy. Moreover, we also ensure that the articulated work of the CUs with research is open to various national and international institutions.

Keywords: Integrative · Pedagogical · Architecture · Visual representation strategies · Photography

1 The Theoretical Universe of the Curricular Units (CUs) in FAUP Speaking of the Authors, Works and Theories that Constitute the Foundation of Their Curriculum

The uses of photography as a design tool and research instrument in the fields of architecture, city and territory is based, in this paper, on the CUs didactic experience and on the investigation undertaken in AAI research group, namely Visual Space of Change, an interdisciplinary research project combining contemporary photography and visual documentation with georeferencing [1].

Visual Spaces of Change (VSC) attempts to improve the understanding and uses of photography as a research tool in the fields of art, architecture and image, by implementing contemporary photographic projects in a direct relation with their locations and general public, which can contribute to a new understanding and the activation and sharing of individual and collective memories regarding uses of existing architectures.

From this perspective, the use of photography can contribute to the creation of a knowledge-enabling environment that allows a specific study of architectural forms and spatial realities, its transformations and appropriations, rendering visible aspects of urban spaces where people socialize and interact which would be difficult to perceive without the use of images and photography.

1.1 Communication and Representation Process in Architectural Design: Photography and Drawing

Regarding the CUs of the first cycle FCAAD I, II, the students explore at the very beginning of the Communication and Representation Process in Architecture Design the potential of the visual photographic narrative in a book/booklet support. This means, creating through photography visual narratives that explore and communicate, via an architectural and fictional point of view, the real space and their experiences, telling us a story about the spaces through a journey composed of successive moments, ones that are quite close to a real experience thinking in Le Corbusier's architectural promenade [2]. The weight and intentionality contained in the act of photographing proposes that photographic images can be instruments of representation and conception in the practice and discipline of architecture.

The production of the book is a generator for several collaborative work meetings and a mental instrument and artifact capable of materializing certain knowledge, namely to support ideas of photography in architecture and art [3] (Fig. 1).

In a later phase, which is the second semester, it is possible to deepen the development of the visual narrative previously created and to enrich the Process of Communication and Representation of Architecture Project. The photography component is thus articulated with the photomontage component, with the aim of ideation and exploration of architectural ideas and construction of an atlas/image laboratory [4]. Students must be aware of the relationship between perception and vision, exploring these two universes, trying to show how they interconnect and influence our relationship and understanding of the real world [5].

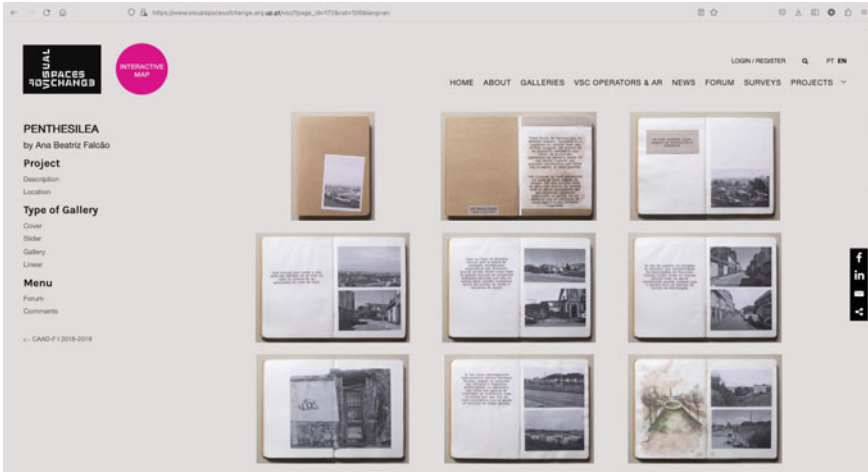


Fig. 1 Project of student Ana Beatriz Falcão in book format in the teaching gallery of visual spaces of change platform

Through these approaches, the articulation of photography with other representation methods and analogue or digital supports of image are explored (Fig. 2). The combined use of these resources addresses particularly useful aspects in the study of architectural objects and urban landscapes, providing the students with essential research tools and communication strategies as seen in the work of, e.g., Martino Stierli; Luca Galofaro; Klaus Bollinger, Florian Medicus and Kiesler Privatstiftung Wien; Eric Margolis and Luc Pauwels; Theo Van Leeuwen and Carey Jewitt and Gillian Rose [6].



Fig. 2 Production of synthesis images that combine photography with 3D modelling, using photomontage and collage techniques, allowing the exploration of various design ideas

1.2 Photography of Architecture, City and Territory

The aim of the second cycle CU is to deepen the study and practice acquired in FCAAD I, II on the use of photography and its potential to question and problematize the universe of Architecture, City and Territory.

Thus, students are led to think and use photography as a free investigation tool with the purpose of discovering new perspectives about the public space and its architecture. This potential of photography to rediscover new spatial and architectural realities and thus influence the way we perceive and understand our spaces and culture is something that is present in the work of many authors and in very different contexts. This interests us, above all, because a didactic of this kind leads students to explore and problematize the potential of photography and image as a way to represent and question the urban reality and allows them to achieve, during the CU time, a good artistic and technical domain about image and photography (Fig. 3).

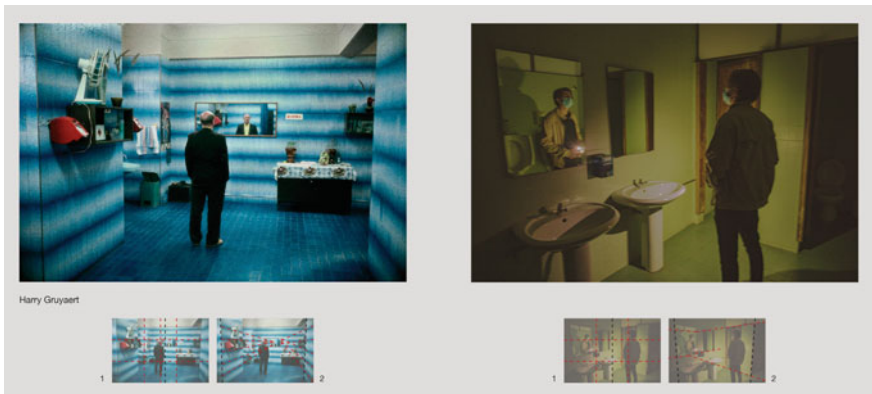


Fig. 3 Students study of composition, colour and light dimension for his photography project

Above all we advocate using photography as a critical territory [7], recognizing the importance of the work coming from several visual artists who use photography not as a mode of documenting reality but rather a mode of engaging with its multiple dimensions (Fig. 3).

Photography has the ability to move between reality and fiction, rendering visible innovative visions and introducing new links between realistic representations, fictional worlds and symbolic meanings. These features are identifiable in the work of several photographers, for example: Filip Dujardin's work addressing the potential of digital manipulation of images to represent new spatial forms and architectures and creating new imaginary spaces [8]; Bas Princen's work rendering visible transformations of urban landscapes that have not yet occurred and altering notions of time [9]; Paulo Catrica's work on landscape and architecture that constitutes a synthesis and insightful perspective of a recent past, and present realities of hybrid city spaces [10]; Paolo Rosselli's and Philip Schaerer's work creating exploratory and fictional images using specialized digital montage techniques [11]. All this reveals in many ways how an intentional use of

photography can provide us with a vocabulary specific to a place that can germinate spatial or formal ideas and that an intentional photograph can have embedded languages which can actually generate ideas for an architectural project [12].

It is believed that we offer students a pedagogical space that leads them to build their own social consciousness, always linked to space, through the knowledge of the multifaceted wealth of perspectives that exist on these themes.

2 Methodology Adopted

Besides the open classes that allowed the critical debate around diverse visual strategies and works from different authors and students, we have also promoted a series of open talks, public presentations and exhibitions of contemporary photography projects. These initiatives intended to broaden the discussion about how architecture transforms and is transformed by trends and ways of living, using as its subject of study Porto's Metropolitan Area (Fig. 4).



Fig. 4 Author explaining his photography project to students and public in metro station

The methodology developed in this pedagogical experiment builds up on previous research combining blended learning and e-learning with visual research methods and photographic techniques that enable students to manage the whole process of conception, development and implementation of photography projects in a collaborative learning environment. Furthermore, besides this former research this paper also reinforces the results of the first case study implemented within the research project Visual Spaces of Change [13], which means besides other things that we developed further the former open

public and pedagogical experiment by expanding the communication and interaction capacities between students and diverse academic and non-academic authors, all related with the universe of design communication and photography through open classes and other initiatives, opening academia to society and allowing the creation of synergies between them.

3 Conclusive and Prospective Synthesis: Teaching, Research, Internationalization and Opening of the School of Architecture and Porto University to Society

It is believed that we offer students a pedagogical space that leads them to build their own social consciousness, always linked to space, through the knowledge of the multifaceted wealth of perspectives that exist on these themes. In fact, this is the result of the integrative pedagogy of our program teaching programme where a significant connection of the CUs to the research focused on Architecture, Art and Image (AAI), which is the nuclear universe of all the research developed at AAI. Thus, this pedagogical space is where the various projects are integrated as well as several pedagogical actions related to them as open classes and workshops, as well as the active use of the online VSC collaborative and communication platform.

We believe that this close articulation between CUs, open classes and research reinforces and provides conditions to stimulate the beginning of scientific activity and the development of critical sense, creativity and autonomy of students. In fact, all these actions allow a closer approach between research and teaching and the integration of students from FAUP's curricular units and from other partner institutions linked to the universe of Architecture, Art and Image, through academic internships, reinforcing and giving conditions to stimulate the beginning of the scientific activity and the development of critical sense, creativity and autonomy of the students through their integration in R&D project teams [14]. Furthermore, these various activities are based on a strategic understanding of the image and the use of photography as a means of representing ideas, exploring digital art and various communication strategies that enable new ways of interacting with different spaces and audiences.

It is important to call attention to the pedagogical innovation work that has already started, through the VSC research project and its collaborative platform used by the CUs at FAUP and other University courses as the Master in Image Design (MDI) at FBAUP and the Photography II CU of the School of Media Arts and Design (ESMAD). This pedagogical innovation work aims to harness the potential of architecture and arts students to use and explore a collaborative work environment and specific operators for the CUs. These operators and the collaborative platform motivate students to explore the use of image and photography to observe, analyse and theorise different dimensions of space based on visual research and visual evidence and through analysis and representation exercises of architecture and urban space (Fig. 5).



Fig. 5 VSC platform collaborative environment: Diachronic Landscape (2020)

We believe that the evolution of this pedagogical innovation project may contribute to broaden the horizons for both academic teaching and learning and research. A project that can be the basis for developing a learning program specifically designed for the production, organization and communication of visual information related to the transformation and appropriation of architecture and public spaces.

Photography is therefore apprehended by the students as an essential element of study, analysis and representation of territory and its spaces and experiences. Thus, it can be seen, how the developed works explore photography as a fundamental instrument for: (1) the documental and fictional record of places, making it possible to understand and communicate the identity of places and to build a critical and analytical visual narrative of the space, fundamental for the architectural design; (2) the production of synthesis images that combine photography with 3D modelling, using photomontage techniques, allowing to explore fictional forms or foresee the impact of the interventions in places; (3) the free exploration of spaces and forms, using image editing techniques, combining methods of representation and drawing, from the sketch, through the physical model and up to the final synthesis communication project that may have as final outputs physical supports—such as posters and publications in book format both analogue and digital.

We argue that this pedagogical methodology addresses the aspects essential to the critical teaching of photography on architecture and public space by providing students with essential tools and strategies vital to the design and communication of architecture. The pedagogical approach attempts to improve the understanding and uses of photography as a research tool in the fields of architecture, which can contribute to the construction of new forums for political discussion and social intervention for the general public and academic communities when engaging with those visual narratives, as happened with the VSC Exhibitions. This paper suggests the value of implementing photographic projects in a direct relation with their locations and general public, which can contribute to the activation and sharing of individual and collective memories regarding uses of existing

architectures in the Porto Metropolitan Area. Furthermore, we recognize the importance of the work coming from several visual artists who use of photography not as a mode of documenting reality, but rather a mode of engaging with its multiple dimensions, using photography as a critical territory [7].

Finally, the VSC exhibitions both in FAUP and in the Porto Metro Stations as shown by passed research and in this paper proved to be important initiatives to open university to society and in promoting the debate of students and the public on the current dynamics of use and appropriation of certain spaces in Porto's Metropolitan Area. While it is still difficult to clearly define a pattern with full certitude regarding the opinions of the students and public about the impact of the VSC project in the debate on architecture, public space and urban transformation, since the samples of surveys are not enough representative, there is enough evidence and theoretical research to deduct pertinent issues and evolve with the present research and explore further paths for this investigation.

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book, however, the nature of the collaborations between artists and architects becomes much more active and involved, hinting towards a gradual dissolution of roles and the emergence of new common grounds.” p. 65 “In that perspective, we appreciate and really admire that a picture by Bas PrIncen is also a work on Itself,” he continues on a long-term collaborator, photographer Bas PrIncen. “It’s never a documentary of architecture. He finds a space and takes a picture of It In his way with certain framing, and that’s how he looks at the world. You could say the same about all the other works that are there. This kind of looking at the world, in a certain way, is also what architecture has in common. That certain way of looking is fundamental to us.” See in <https://tlmagazine.com/offlce-kgdvs-way-of-seeIng-thlngs>

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