

RETHINKING TEACHING MATERIAL IN URBANISM AND ARCHITECTURE: THE USE OF DIGITAL DIPTYCHS DURING LOCKDOWN

Javier Navarro-de-Pablos¹, Clara Mosquera-Pérez², M. Teresa Pérez-Cano¹

¹*Department of Urban and Regional Planning, University of Seville (SPAIN)*

²*Department of Architectural History, Theory and Composition, University of Seville (SPAIN)*

Abstract

This communication aims to show the evolution in the teaching supports and the communication with the students of the Architecture Degree of the University of Seville, applied to the teaching of Urbanism during the last year. More specifically, it will show the experience carried out in the subjects of Urbanism I (taught in the first year of the degree course) during the lockdown imposed in Spain on March 13, 2020.

Justification and objectives:

Communication methods between teachers and students are essential to improve teaching results in university education, both in the classroom and virtually. Following the general confinement decreed on 13 March 2020, these communication strategies have had to adapt to a new landscape of difficulties and obstacles, especially in disciplines where the handling of physical materials (planimetry, mapping, technical reports, etc.) remains indispensable. The SARS-CoV-2 coronavirus pandemic has been used as an opportunity to rethink the role of these physical supports, as well as strategies to ensure that they do not fall into disuse in the new virtual landscape. In this way, we intend to show the results of the implementation of digital diptych formats as a support that then, from home, students should print physically and interact with it.

Results:

Having implemented, developed and made this material more complex throughout the course of the course, the experience in the use of hybrid supports (printable digital files and virtual teaching) has shown an improvement in the times of understanding and conceptualisation of the subjects, as well as a very positive evaluation by the students, who, in addition to perceiving a close and current visual language, preserve the material as an object of design. These first indicators obtained (academic performance and satisfaction with teaching) validate the relevance of this method as a strategy for better teacher-student communication during periods of confinement.

Keywords: lockdown, urbanism, teaching supports, digital diptychs.

1 INTRODUCTION: EXCEPTIONAL CIRCUMSTANCES

The suspension of face-to-face teaching activity from 13 March 2020 in Spain made it necessary to transform some initial approaches throughout the university system. From the first moment it was possible to access the Blackboard Collaborate Ultra platform, a tool made available by the University of Seville for teaching activities, which meant that the calendar was not interrupted. In the process of adaptation and familiarisation with the platform, hardly any incidents or communication difficulties were found between teachers and students, thanks to the latest updates made by the system to adapt to the unexpected lockdown [1].

The subject in which the changes mentioned in the summary have been introduced is Urbanism I, a compulsory subject taught by the Department of Urban and Regional Planning in the first year of the Degree in Foundations of Architecture (Teaching Programme 2012). The aim of this course is to familiarize students with the concept of urbanism, the birth and evolution of the discipline and its main instrumental tools (planning), so that at the end of the term students are able to develop their own criteria and handle a methodology that allows them to address urban projects academically and professionally in the future. The total duration is 60 hours, distributed in an equal load of theoretical and practical hours, and with an attendance of 25 students who have regularly followed the course.

The evaluation of the subject, from the application of the current curriculum, tends towards the typology of continuous assessment, with a series of micro-exercises aimed at demonstrating a gradual progress of the knowledge acquired by the students, to the detriment of outdated models of final written tests. It is precisely in this sequence of practical work where the change from the classroom-based to the virtual mode was considered an opportunity; being more dynamic activities, the support in which the statements were delivered could be converted, by analogy, into an object to be preserved, with the possibility of handling it both in digital and paper format.

2 METHODOLOGY: THE USE OF THE DIPTYCH AS A CONCEPTUAL TOOL

The experiences on which these diptychs have been based are mainly two: one of them was carried out by Peter Eisenman and Miroslava Brooks at Yale University in 2015 [2], and, in the local context, the experiences carried out by teachers Ángel Martínez García-Posada, Juan José López and Ricardo Alario during 2009 and 2015 under the project "Proyectando Leyendo" [3]. Although in the first case it was a review of the conceptual basis of the diptych as a communicative tool, the experiences of the team of Spanish architects are of a practical nature, taking all the statements in their course of Architectural Projects to this type of fold-out format. From both examples, the methodology of elaboration and its conceptual foundation has been taken.

Eisenman and Brooks refer, in their theoretical body, to the diptych and triptych as Roman and Byzantine ritual artifacts, as expressive symbols for Fra Angelico or Botticelli and, finally, as strategies of juxtaposition and interrelation for Jacques Derrida. On this basis, they propose to their students to analyse geometrically and topographically works of Art History and to make pairs of images in the form of a diptych. This active participation of the students is replaced in the Spanish experience by the object to be preserved; although in the university context the material in which the exercises are exhibited is usually considered an ephemeral object, a careful design and a suggestive content makes most students preserve the diptychs. In addition, these diptychs were part of a kind of book, or fascicles of the same collection. At the end of the course, students could have a small collection of texts and images related to the content of the subject.



Figure 1. Triptych of Cortona, Fra Angelico, 1436



Figure 2. Statement of Exercise 4, "Boxes, houses or just the opposite", Alario, López, Martínez, 2010.

3 IMPLEMENTATION

The implementation of this system of statements through triptychs in digital format was thought, therefore, as a strategy so that the obligation to carry out virtual teaching did not prevent maintaining contact with the physical object. In this way, the pdf files were sent through the mentioned online platform and each student could print and fold them at home.

The character of "piece to collect" was achieved by making the back of the folders a kind of poster, which could be hung on the walls of the students' room. This forced the layout of spaces in A3 format, moving from the traditional diptych to a multiple format in which four diptychs were condensed.

There were four exercises in which this method and support was implemented, in addition to the practical exercise every four months, based on the morphogenetic analysis of large European cities under the title "5 cities". As for the so-called "microexercises", the relationship and content of these, in chronological order, was as follows:

- Microexercise 01 "Perceiving the city": In this first task, the students had to make some cartographies of the walks inside their houses, elaborating analogies with a tour around the city. Executed in the first days of confinement, the sensation of how to perceive the domestic space as a small-scale reduction of the urban space resulted in a great variety of interpretations. Being the first experience with this type of support, the students found an extra motivation when approaching the work.
- Microexercise 02 "Invisible Threads": The objective of this second activity was to learn how to use digital files and libraries, as well as to learn how to reference the sources correctly. A trio of proper names related to urbanism was assigned to each student, who had to research the apparently non-existent connection between them.
- Microexercise 03 "The Human Scale": In this case, the exercise consisted of elaborating a critical, personal and mature text commentary on the viewing of the documentary on the use of public space directed by architect Jan Gehl in 2012.
- Microexercise 04 "The Post-COVID City": This exercise was the only one that was not presented in drop-down format, as it was a virtual debate on the future of cities after the SARS-CoV-2 pandemic. For this purpose, a platform created for an educational innovation project executed by the HUM-700 Research Group was used. All the students participated in the debate, reaching the number of 96 interactions, which can be consulted at (<http://ediedpat.org/postcoronavirus/>) [4]
- Microexercise 05 "Logbook": The last of the micro-activities was presented together with the first as it was an exercise that had to be elaborated throughout the whole term. It consisted in the elaboration of a notebook that the students had to carry with them at all times, and in which they had to write down all those reflections, quotes, cut-outs or any other type of information they had found interesting, always related to architecture and urbanism. For its delivery, students

were asked to scan the pages they considered most relevant. They collected everything from graphic assemblies and collages to personal reflections, with a great variety, just like the first exercise, of styles and methods of graphic representation.

- Practical exercise "5 cities": Although at first it was not planned to adapt the format of the leaflets to the group exercise (with a weight of 60% in the final note of the students), the good reception by students of this support, led to the decision to make a diptych for each of the cities studied (Rome, Paris, London, Berlin and Barcelona).

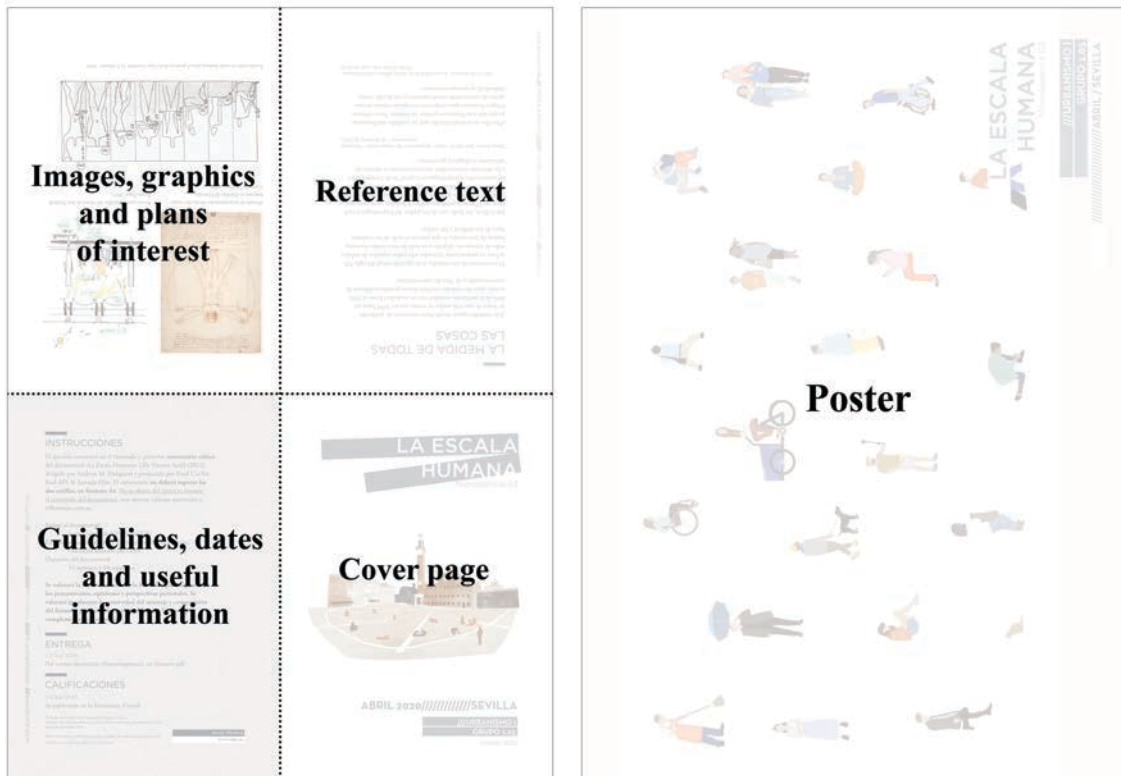


Figure 3. Contents of the pull-down dossier corresponding to Micro-Exercise 03 "The Human Scale". Degree in Foundations of Architecture, University of Seville, Group 1.05, Course 2019/2020. Elaborated by the authors.

One of the fundamental objectives of the creation of this type of teaching material was the capacity, in a single file, to condense all the information necessary to carry out the activities. Similarly, it was sought to make it an object to be preserved. This double objective led to two fundamental aspects: on one side of the A3 format, an attractive image was personalized to serve as a poster, and on the main side, to summarize and condense all the useful information.

The files were sent to the students through the BlackBoard Collaborate Ultra platform, being downloaded by 100% of the registered students, without showing logistic incidences. The only inconvenience collected by the students was, in some cases, the lack of printers. This fact, which was linked to the poor connection of some students' home internet networks, is part of the inequalities when it comes to receiving teaching, which can be induced by a system not adapted to the virtual format [5]. To reverse this situation, once the possibility of attending the University of Seville facilities in person has been resumed, students have been offered to personally pick up a copy of the microexercises in which they were interested.

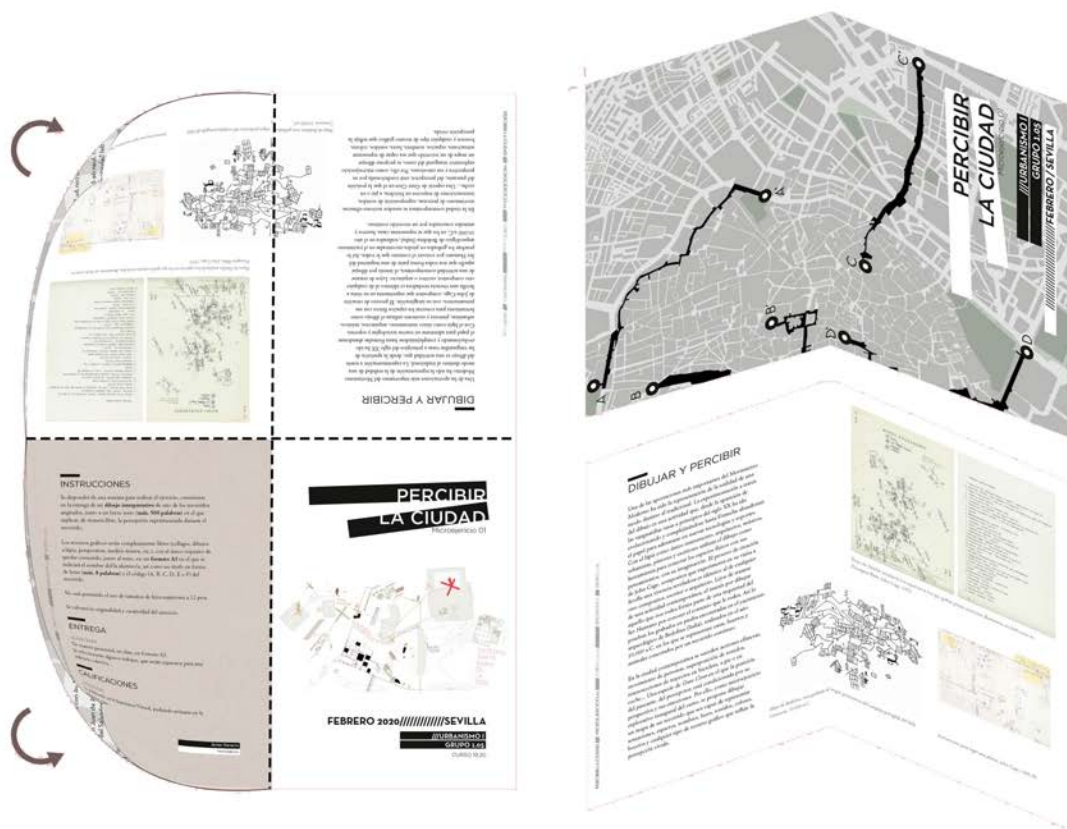
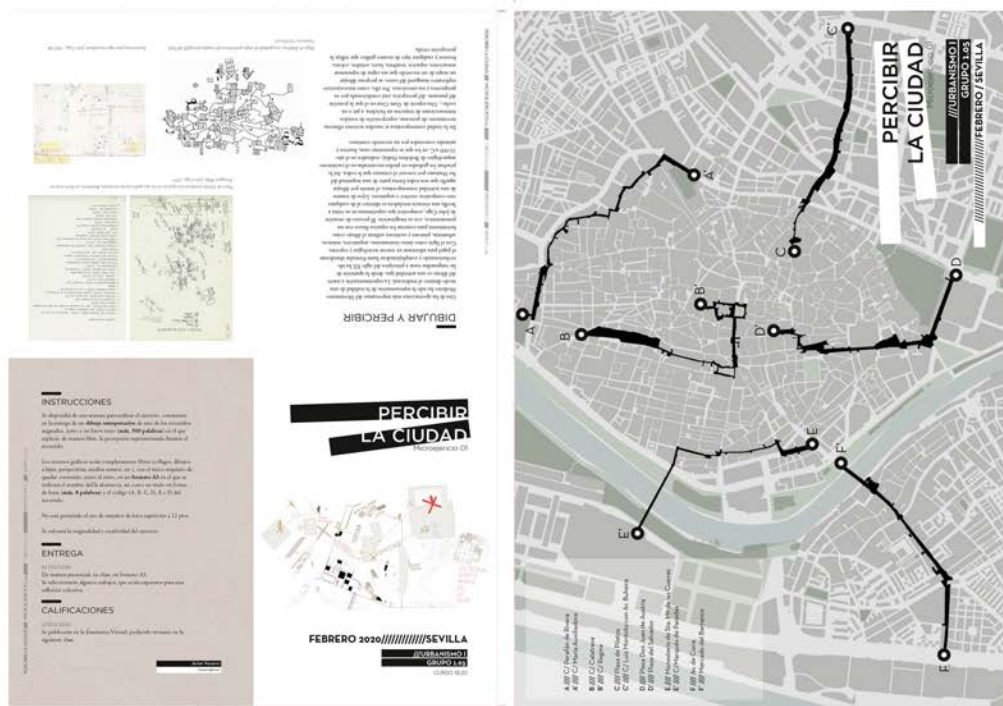


Figure 4. Process of displaying the statement corresponding to Micro-Exercise 01 "Perceiving the City". Degree in Foundations of Architecture, University of Seville, Group 1.05, Course 2019/2020. Elaborated by the authors.

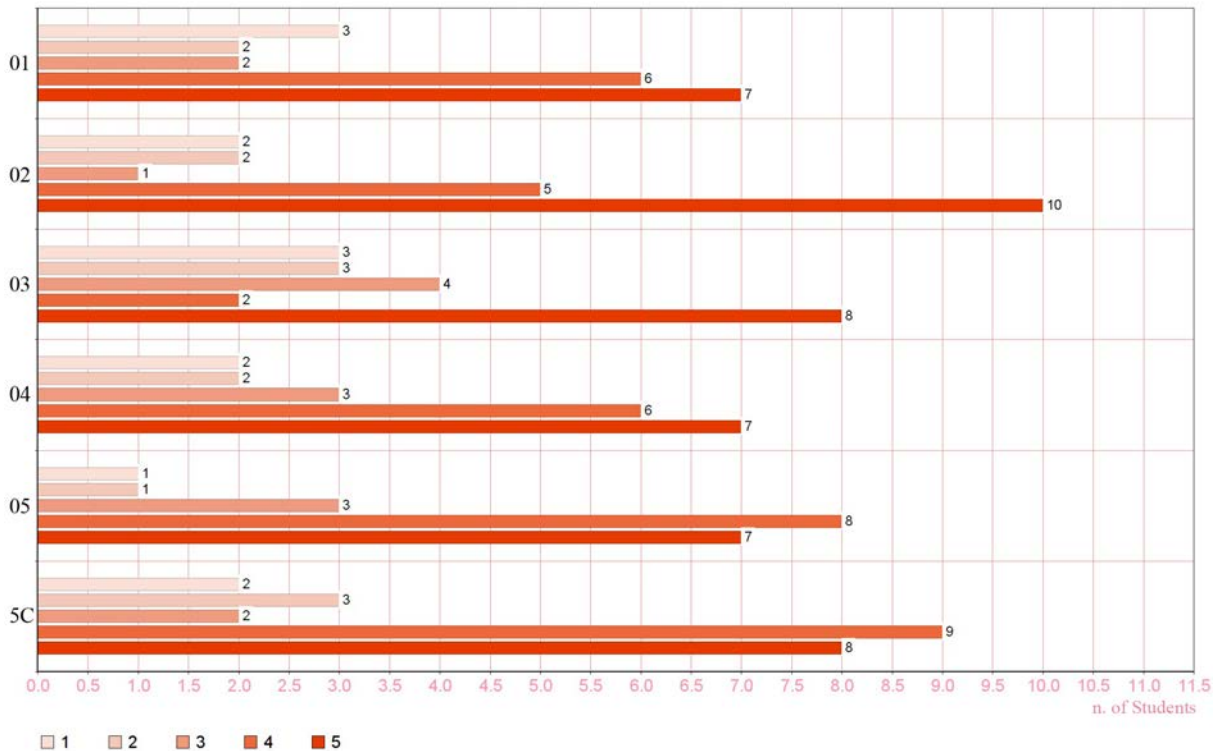


Figure 5. Covers of the practical exercises prepared for each of the five groups that made up the practical part of the course. Degree in Foundations of Architecture, University of Seville, Group 1.05, Course 2019/2020. Elaborated by the authors.

4 RESULTS

One of the key processes to check the incidence of this kind of changes in the teaching methodology is the collection of results. Despite having been an overdue decision, made in a very short time, the apparent good reception among students encouraged the continued production of brochure-posters throughout the course. Once the course was finished, always before the publication of the grades, the students were asked for an anonymous and voluntary survey on how they rated, in a range from 1 to 5, the suitability and design of each of the dossiers. At the beginning, they were asked if they had kept or reused them as posters or as mere objects of consultation, and 83% of the students answered affirmatively. Likewise, at the end of the questionnaire they were offered the possibility of leaving written observations, with no limit to the length of the questionnaire and with total freedom. This last section was especially satisfactory since, with the exception of one, the rest of the 12 comments collected were positive, thanking the effort and praising its design.

Table 1. Results of satisfaction with the displays of each microexercise (01-05) and the practical exercise (5C-"5 Cities"), with a sample of 20 students over a range of 1 (not at all satisfied) to 5 (very satisfied). Elaborated by the authors.



The results, collected and ordered in Table 1, are shown by relating the number of exercises on the Y axis, and the number of students assigned to each of the grades on the X axis. Thanks to the contrast of results, it can be observed how the degree of satisfaction of is high, with a high average per exercise (01=3.7; 02=3.9; 03=3.8; 04=4.1; 05=4.1; 5C=4.5).

Although the results seem valid thanks to the participation of 80% of the students, we do not have a previous sample of satisfaction with the teaching material; that is, it is not possible to contrast the total validity or effectiveness of this type of resource without having a sample of the evaluation of the traditional methods. This, among others, is one of the options that will be implemented in future experiences.

5 CONCLUSIONS

Analyzing the proposed approach, the implementation and the results obtained, it seems clear that the implementation of deployable and reusable diptychs is an interesting option for a virtual teaching model in the field of architecture and urbanism. Not only because of the fundamental role that the physical format must continue to play in a profession whose contact with the material is crucial, but also because of the capacity of the proposed teaching resources to easily adapt to a future return to the classroom.

As stated in the results, we believe it is necessary to contrast this first experience with the assessment of traditional methods. This will be possible thanks to the fact that the teaching of the subject will be maintained during the 2020/2021 academic year, which, to date, has been planned in a face-to-face manner, maintaining the appropriate health measures.

This strategy of teaching by microprojects or microexercises seems, in combination with this type of renewed, exclusive, and singularly made teaching material, to be an option to be consolidated within the Departments of Urban and Regional Planning and Architectural History, Theory, and Composition of the Seville School of Architecture; professors of both departments have already shown their interest and predisposition to adopt the same method in their teaching activity.

ACKNOWLEDGEMENTS

Thanks to the Ministry of Education, Culture and Sport of the Government of Spain and the University of Seville, both institutions that finance the contractual relationship of the first two authors of this communication.

REFERENCES

- [1] N. Slamnik-Kriještorac, & J.M. Marquez-Barja, "Reacting to COVID-19 campus imminent closure: Enabling remote networking laboratories via MOOCs.", 2020. Retrieved from <http://www.marquez-barja.com/images/papers/reacting20-authorversion.pdf>
- [2] P. Eisenman, "Diagrammatic Analysis: The Diptych as a Topological Diagram.", 2015. Retrieved from <https://www.architecture.yale.edu/courses/23816-diagrammatic-analysis-the-diptych-as-a-topological-diagram>
- [3] R. Alario, J. J. López, & A. Martínez, *Apuntes, lecturas y escritos de arquitectura: proyectos arquitectónicos*. Sevilla: Universidad de Sevilla, Escuela Técnica superior de Arquitectura, 2010.
- [4] J.A. Rodríguez Lora, D. Navas Carrillo, J. Navarro de Pablos, J., & M.T. Pérez Cano, "Espacio didáctico interactivo como herramienta docente para aproximarse a la revisión holística del Patrimonio Cultural: Del patrimonio histórico al contemporáneo y sus relaciones con el espacio público." *II Jornadas de Innovación Docente. El reto de la enseñanza transversal en las Escuelas de Arquitectura*, 2019.
- [5] S. Livingstone, "Digital by default: the new normal of family life under COVID-19", *Media@LSE Impact Blog*. Retrieved from: <https://blogs.lse.ac.uk/medialse/2020/05/21/digital-by-default-the-new-normal-of-family-life-under-covid-19/>, 21 May 2020.