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ENSEÑANZA EN TIEMPOS DE PANDEMIA, O INTENTANDO CONVIVIR CON CORONAVIRUS
TEACHING PROCESS IN TIMES OF PANDEMIC, OR TRYING TO LIVE WITH CORONAVIRUS
JORGE TUSET SOUTO

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Jorge Tuset Souto is an Architect and a doctor in Architecture. He is a professor of architectural design at the Faculty of Architecture, Design, and Urbanism of the University of the Republic - UDELAR, in Montevideo, Uruguay. He is co-responsible for the course Project Criticism, within the Project and Representation area of the Graduate Program in Architecture at the same institution. jts00598@gmail.com
<http://www.fadu.edu.uy/sepep/files/2020/05/CV-Jorge-Tuset.pdf>

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INVITED AUTHOR

Abstract

In Uruguay, as throughout the world, the practice of teaching architecture through disciplines based on design studios was seriously affected by the COVID-19 pandemic. The massive student body, which is characteristic in the framework of the School of Architecture in Uruguay, offered experiences, although embryonic, valuable to face the problem of distance learning. Reframing and evaluating the results of the first semester of 2020, the school implemented didactic-pedagogical continuity strategies. The enabling of various communication resources, intensive use of digital tools, and exploration of student roles were crucial elements to carry out remotely the design studio activities. Also, new evaluative approaches have been considered in the teaching modality adopted to cope with the pandemic. Amidst the changes imposed by the crisis in recent months, the teaching system has come into constant questioning, and the proposal of hybrid pedagogical strategies for future school semesters is at the center of the discussions.

Keywords: Remote design studios, Pedagogical strategies, Audiovisual

1 Introduction

First of all, some considerations about university education, within the framework of the School of Architecture of the University of the Republic, in Montevideo, Uruguay, seem necessary to me. There are only two university-level schools in the country that address architecture and related disciplines (urban planning, equipment design, and so on). One of them is privately-owned and serves a fairly limited number of students. The school develops an approach to the discipline from a strictly professional point of view, seeking to quickly insert its graduates into the labor field. The other school is state-funded, thus free of charge, and searches to

cover a larger number of students. It seeks to disseminate the numerous tasks and roles that an architect can assume in the complexity of the contemporary world. Of course, such an approach, which has been implemented for a long time, makes teaching a huge number of students a problem of very difficult resolution. There have been cases of subjects, such as History of Contemporary Architecture, in which some classes had more than three hundred students, and there were no classrooms to accommodate so many people (see figure 1). On several occasions, the classes were broadcast live because the students had to be distributed in different classrooms. Situations such as the one here described gave us a minimum of experience and some basic, elementary know-how to face the problem of remote learning.



Fig. 1: A regular class in a pre-pandemic situation (massiveness). Source: The author, February 2020.

With greater or lesser success, the school has been able to handle the problem of massiveness in classes on theoretical subjects. Even though, in these cases, the problem becomes critical when carrying out evaluative tests, both partial – throughout the course – and final. In the case of subjects based on practical work, the situation is critical. This is especially noticeable in Architectural Design courses and has put the studio-based teaching system (known basically as "the studios" in the university jargon) in crisis. An almost personal teacher-student relationship is at the base of the Design Studio teaching type, which the pandemic has put in crisis. There is not yet an effective response to this situation, only some outlines. We could refer to the book edited by Nasrin Seraji, Sony Devabhaktuni, and Xiaoxuan Lu, entitled "From Crisis to Crisis: Debates on Why Architecture Criticism Matters Today" (2019) to elaborate on these aspects.

2 Didactic-pedagogical strategies of continuity in the remote context

In its origins, the exercise was planned to be carried out in one semester in normal times. The emergence of the pandemic forced the teaching team to rethink both the exercise profile and the strategies to carry it out. The exercise proposed the development of a building that would house a series of mixed activities in shared workspaces usually called Co-working, with the incorporation, in some cases, of a small sector of temporary housing and minimal and informal accommodation – a kind of Co-living. The program profile was adjusted according to the different locations, which were selected in four parts of the city: the Rambla of Montevideo, the coast of Cerro on the Bay of the city, in two points, and a plot close to the city's central area, next to two university centers of great importance.

The new context due to the pandemic and the impossibility of teaching courses in person led to a review of the exercise, prioritizing some variables, discarding others, and incorporating some new ones. The new context also forced teachers to rethink correction and communication strategies, both with the students and among the members of the teaching team. Interaction channels such as WhatsApp, Instagram, and platforms such as Zoom and Conceptboard were enabled. In particular, the latter was useful to make corrections possible and visible in different stages of development of the exercise. As a first approximation to specify the scope of a new pedagogical strategy, a survey was carried out among the students to collect as much information as possible about the availability of computer resources and communication channels that they would be able to use during the development of the exercise (figure 2).

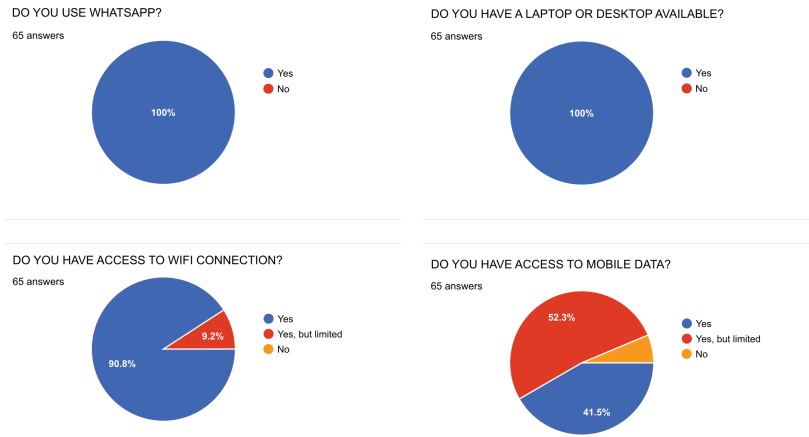


Fig. 2: Some results of the survey conducted among students. Source: The author, 2020

Subsequently, and taking the aforementioned survey as a reference, the group of students was subdivided into three subgroups (Table 1) of approximately 12 students each, seeking an adequate balance between their members to the effects of ensuring correct computer coverage. Later, they also had to be grouped in pairs and present joint work. Each subgroup was tutored by a team of three teachers, who rotated their leading role, thus seeking to cover a wide range of visions about the topics raised in the virtual classes. Design strategies, evaluation of the technological responses suggested by the project, computer resources of communication and design (Sketchup, AutoCAD, BIM, etc.), and other relevant aspects thematized subsequent sessions.

NAME - LAST NAME	EMAIL 1	PHONE NUMBER	WIFI	D.M.
Luciana Picerno	XXXXXXXX@gmail.com	094XXXXXX		
Cecilia Piriz	XXXXXXXX@gmail.com	098XXXXXX		
Hernán López	XXXXXXXXXXXX@gmail.com	098XXXXXX		
Juan Diego Almandós	XXXXXXXXXXXX@gmail.com	098XXXXXX		
Sebastián Vaz	XXXXXXXX@gmail.com	098XXXXXX		
Martína Valverde	XXXXXXXXXXXX@gmail.com	094XXXXXX		
Diego Correa	XXXXXXXXXXXX@gmail.com	092XXXXXX		
Delfina Rodríguez	XXXXXXXX@gmail.com	098XXXXXX		
Melina Cabiró	XXXXX@gmail.com	094XXXXXX		
Deborah de León	XXXXXXXXXXXX@gmail.com	094XXXXXX		
Augustín Quintero	XXXXXXXXXXXXXXXui@gmail.com	099XXXXXX		
Lucía Saltombide	XXXXXXXXXXXX@gmail.com	092XXXXXX		

NAME - LAST NAME	EMAIL 1	PHONE NUMBER	WIFI	D.M.
Paula Arias	XXXXXXXX@gmail.com	099XXXXXX		
Florencia Ortiz	XXXXXXXXXXXX@gmail.com	098XXXXXX		
Rodrigo Egaña	XXXXXXXXXXXX@gmail.com	099XXXXXX		
Diego Carratto	XXXXXXX@gmail.com	098XXXXXX		
Gervasio Guillot	XXXXXXXXXXXX@gmail.com	091XXXXXX		
Katuska Bedolla	XXXXX@gmail.com	091XXXXXX		
Virginia Vergara	XXXXXXXX@gmail.com	095XXXXXX		
Marcelo Caraballo	XXXXXXXXXXXX@gmail.com	099XXXXXX		
Micaela Pérez	XXXXXXXX@gmail.com	095XXXXXX		
Fernanda Rotundo	XXXXXX@gmail.com	092XXXXXX		
Camila Rodríguez	XXXXXXXXXXXX@gmail.com	098XXXXXX		
Katherin Rodríguez	XXXXXXXX@gmail.com	098XXXXXX		

NAME - LAST NAME	EMAIL 1	PHONE NUMBER	WIFI	D.M.
María Pia Rodríguez	XXXXXXXX@gmail.com	091XXXXXX		
Angela León-Barreto	XXXXXXXXXXXX@gmail.com	098XXXXXX		
Fiorella Sosa	XXXXXXXX@gmail.com	099XXXXXX		
Mateo Camejo	XXXXXXX@gmail.com	091XXXXXX		
Gabriel Torales	XXXXXXXXXXXX@gmail.com	XXXXXX		
Francisco Rodríguez	XXX@gmail.com	097XXXXXX		
Joaquín Cuervo	XXXXXXXX@gmail.com	099XXXXXX		
Estefany Cañete	XXXXXXX@gmail.com	094XXXXXX		
Daiana Vieira	XXXXXXXXXXXX@gmail.com	099XXXXXX		
Gimena Pérez	XXXXXXX@gmail.com	092XXXXXX		
Melisa Barcos	XXXXXXXXXXXXmail.com	091XXXXXX		
María Victoria Baridon	XXXXXXXX@gmail.com	098XXXXXX		

Table 1: Students divided into three subgroups and partial-individual survey of technological resources available to each of them (partial file). Source: The author, 2020

At first, contacts were made via e-mail and WhatsApp. WhatsApp remained in force as a means of communication at the level of the limited group of the teaching team, intending to exchange opinions among

all its members. Classes and correction sessions were held via Zoom and Conceptboard, which were quite dynamic, friendly, and acceptable systems for interacting with students.

I prefer not to go into particular considerations of the proposed exercise, and of all the demands that it had implicit (program, implementation, technological resources, etc.). However, it is worth mentioning some of them: direct knowledge of the proposed implantation site was supplied by an approach to it using tools such as Google Earth, Google Maps, Street View, and cartography obtained from the database owned by the Montevideo Municipal Government and the Faculty. (figures 3 and 4). These resources, which are also usually used in face-to-face exercises, obviously do not totally replace the knowledge obtained in direct approaches to the site, but in this case, they were a valuable instrument to provide information related to the implantation site. Teachers' observations about each proposal were previously analyzed and graphed in a conventional way. These graphics were uploaded to a shared Conceptboard so that, during the virtual class, the teaching team could make comments and observations. (figures 5 and 6).



Fig. 3: Aerial images of two of the locations used in the exercise. Source: Google Earth, 2020.



Fig. 4: Google Street-View images of two of the locations used in the exercise. Source: Google Earth, 2020.

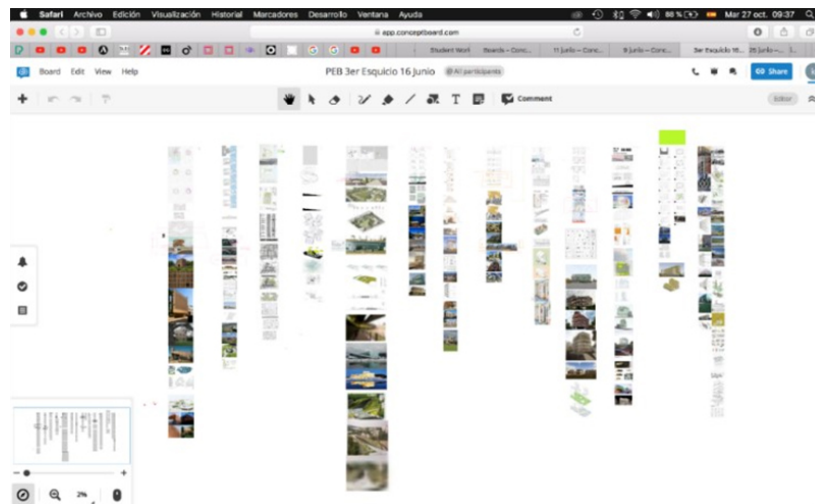


Fig. 5: First sketches expressing a student's design intentions. Source: The author, 2020.

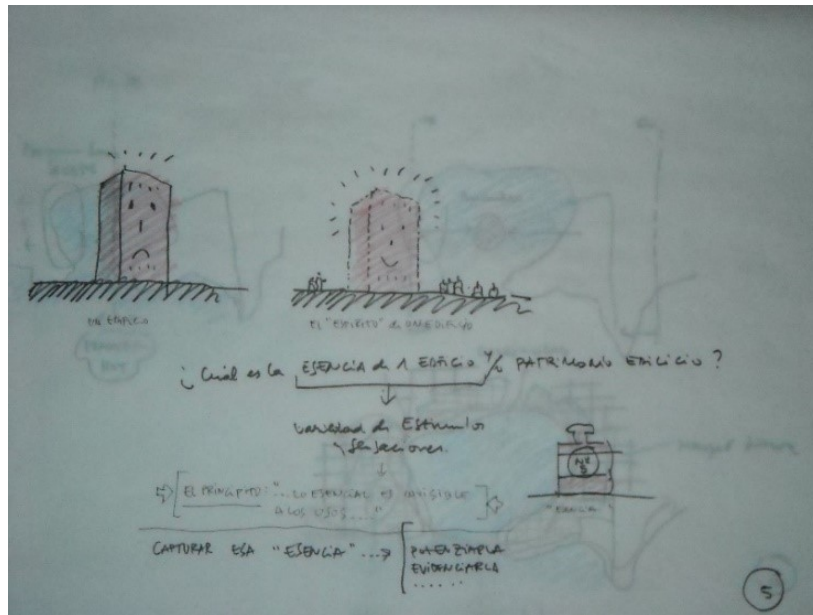


Fig. 6: Teachers' comments using conventional resources. Source: The author, 2020.

At the same time, we sought to develop some strategies that would recompose cohesion and exchange among the students themselves, an aspect that is often basic and of crucial importance for the development of exercises in the studio modality. To this end, the figure of the client-principal was established as an intermediary between the aspirations of the designer and the demands arising from the proposed program. With an approximate frequency of three weeks, the students had to submit their proposals to the consideration of their peers, who assumed the aforementioned role and who, many times, requested changes somewhat outside the logic through which the project was passing (preference by the use of certain materials or technological solutions, preferences regarding a certain kind of image, and so on.) (figure 7). In these instances, teachers acted as moderators of the discussions that arose between both actors, channeling and re-focusing them, if necessary. (figure 8).

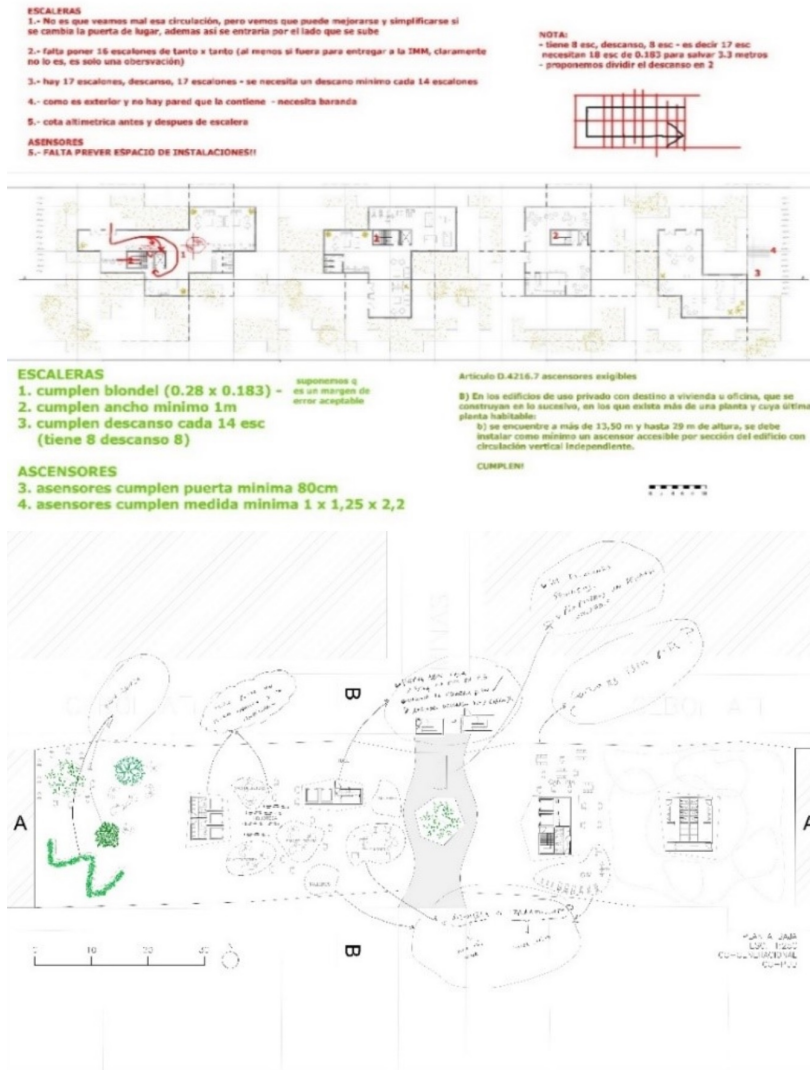


Fig. 7: Two examples of observations made by students in the role of clients/customers on their peers' design proposals.
Source: Rodriguez-Osorio and Frascini-Saldombide, 2020

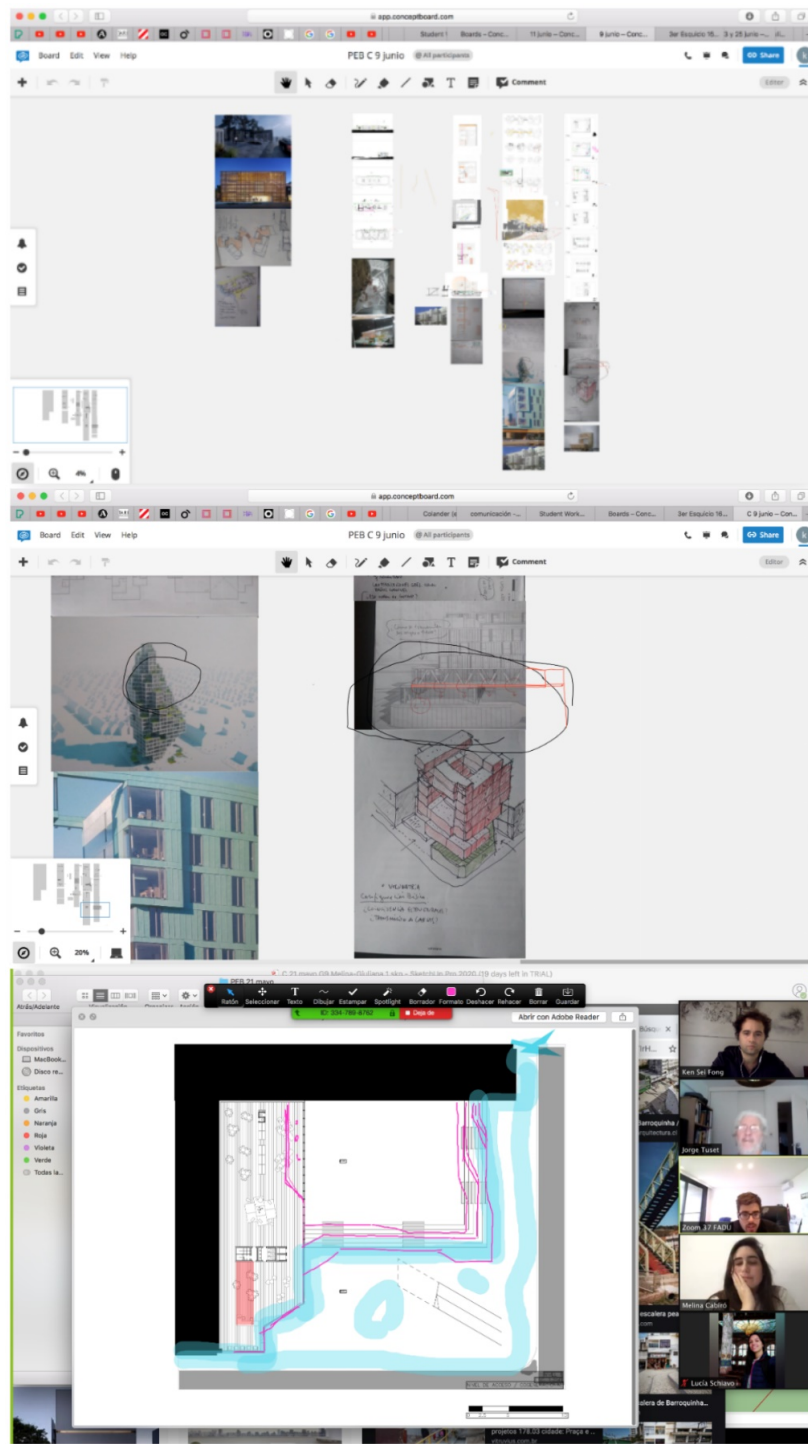


Fig. 8: A presentation session, with comments and corrections via Conceptboard. Source: The author, 2020

3 Further evaluation approaches

When the development of the exercise was rescheduled, the problems of how the final presentation should be carried out, and how it would be done by the students immediately arose. The final results are usually presented and exhibited by displaying physical models and graphic documentation attached to rigid panels. This presentation can be complemented with the addition of a blog containing basic information on the design process. The blog sometimes includes sketches developed by the student, images of architectural references, corrections made by teachers, and so on. It is a kind of compilation of the process carried out during the exercise.

As a substitute for these face-to-face communication pathways, virtual models were developed using a basic 3D modeling application such as Sketchup, which, in addition, allows the base model to be gradually modified throughout the work process (figure 9). The novelty was that, as a basic and fundamental presentation piece, the students had to make a short video, no more than three minutes long, in which they presented the proposal and the blog or folder of the design process in digital format. The latter constituted complementary information for a better understanding of the proposals. The folder included the most conventional graphic pieces, such as general views, plants, sections, facades, and/or some relevant design detail.

Although there were some partial and specific experiences carried out in previous years, the presentation of the video had a marked experimental nature and had never been considered as the main piece of the final presentation of the project. Thus, well-known international illustrative examples were used to show the potential of the medium, such as the now-famous documentary about the House of Bordeaux, designed by Koolhaas (with Guadalupe as the lead actress), the dissertations of Bjarke Ingels for several of his proposals (easily located on Netflix, Youtube, and other platforms), or some documentaries on Le Corbusier, showing the Swiss master developing and presenting his proposals for the Plan of Paris. The humorous-critical approach was not neglected, as in the episode of *The Simpsons* in which Gehry appears preparing his proposal for the Springfield Cultural Center, based on the request of Marsh Simpson, via a letter sent by postal correspondence (figure 10), or the appearance of Koolhaas himself in a children's recreational space, in the middle of a cruise.

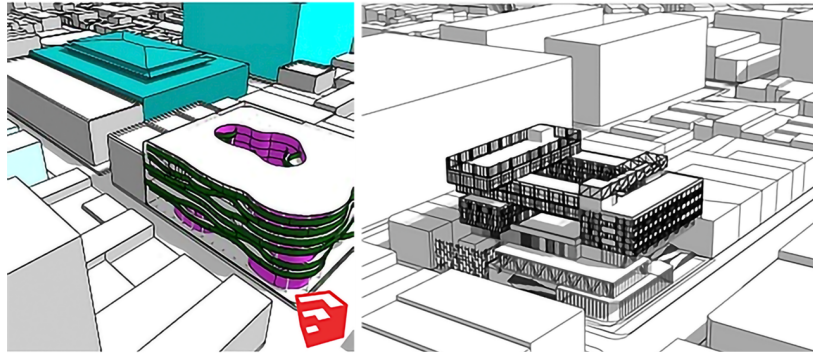


Fig. 9: 3D digital models (SketchUp). Source: Irazusta- Valverde and Rodriguez-Osorio, 2020



Fig. 10: Some reference videos: Koolhaas, Ingels, Le Corbusier, and *The Simpsons*. Source: The author, 2020.

For the development of this short video-presentation, the teachers insisted that it be more than a description or documentation of the proposal, but that it tries to develop an argument, a story about it, exploring both its genesis and its subsequent evolution. This last objective was partially achieved only by some students. Of course, for those who do not have some basic knowledge of this medium, the references and examples used were excessively influential when developing their own interpretations. Only a small group of students chose to dabble in less conventional formats of architecture video, oscillating between video clips and the plain and simple animation (figures 11 and 12).

First, the teaching team that supervised the subgroup evaluated the final proposals. Later, the entire course's teaching group re-evaluated them. Subsequently, as is customary and characteristic in the Studio system, the results were presented to its whole teaching staff. This practice is usually exhausting since it implies a review of all the courses to which the Studio belongs. However, by allowing several teachers to unify criteria and guide common levels of evaluation, and weighting of the work carried out has become the only more or less effective tool to counteract the massiveness that our school is going through.



Fig. 11: More or less conventional video, in the video clip modality. Source: Juan Diego Almandós, 2020.

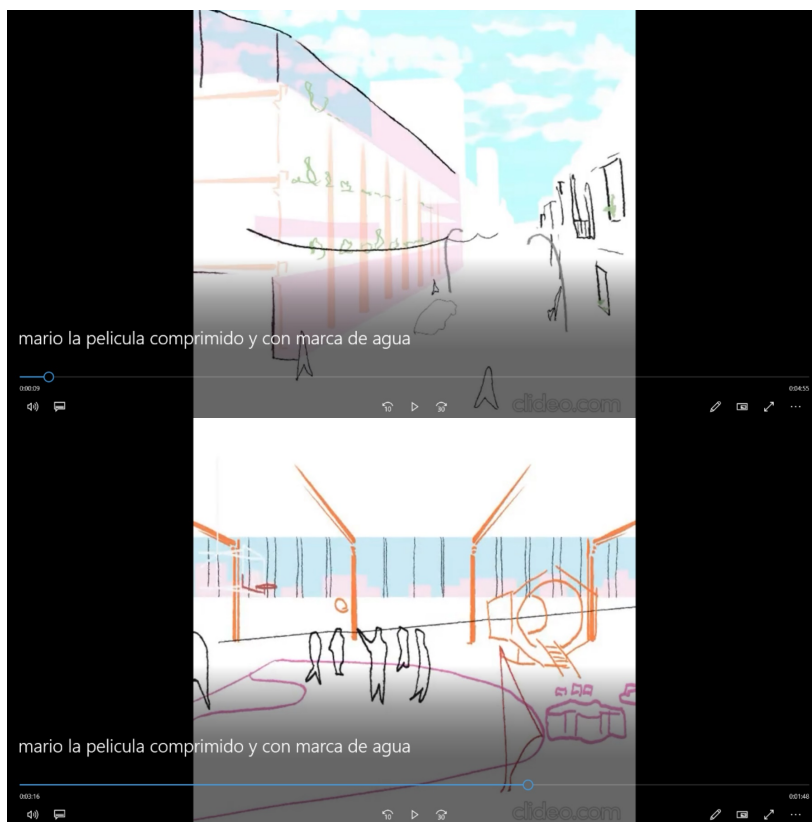


Fig. 12: Unconventional video within the animation modality. Source: Deborah de León, 2020

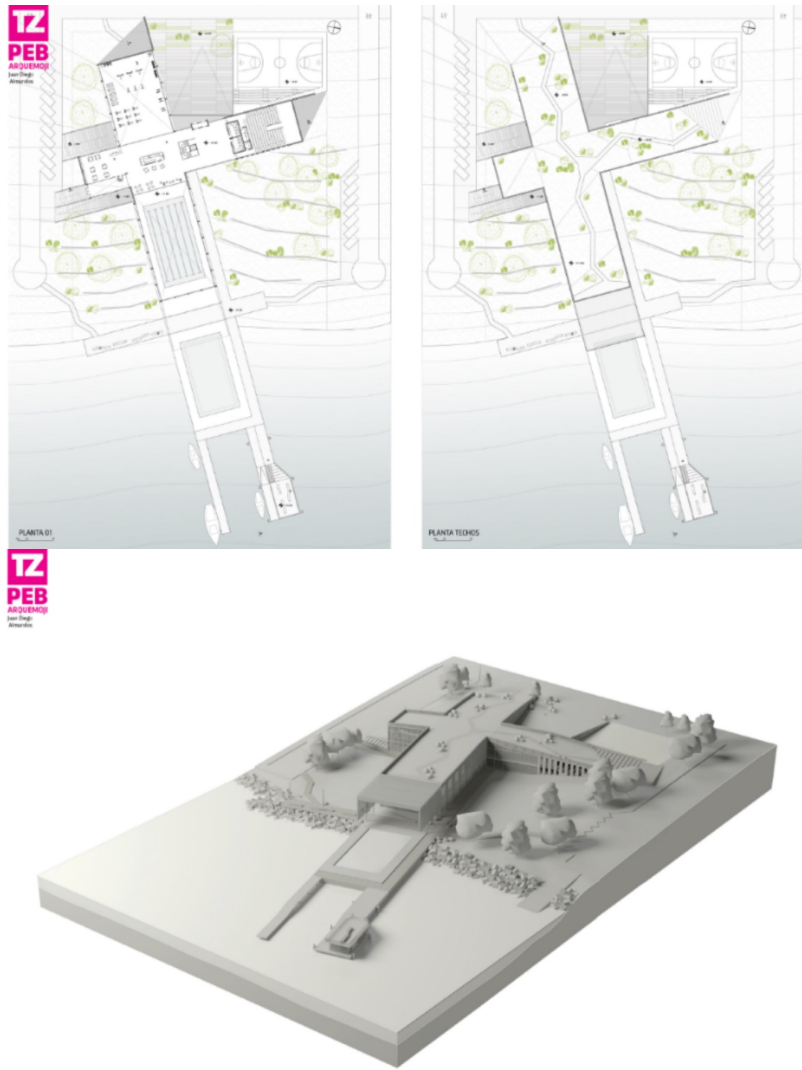


Fig. 13: Final proposal presentation (orthodox modality). Source: Juan Diego Almandós, 2020.

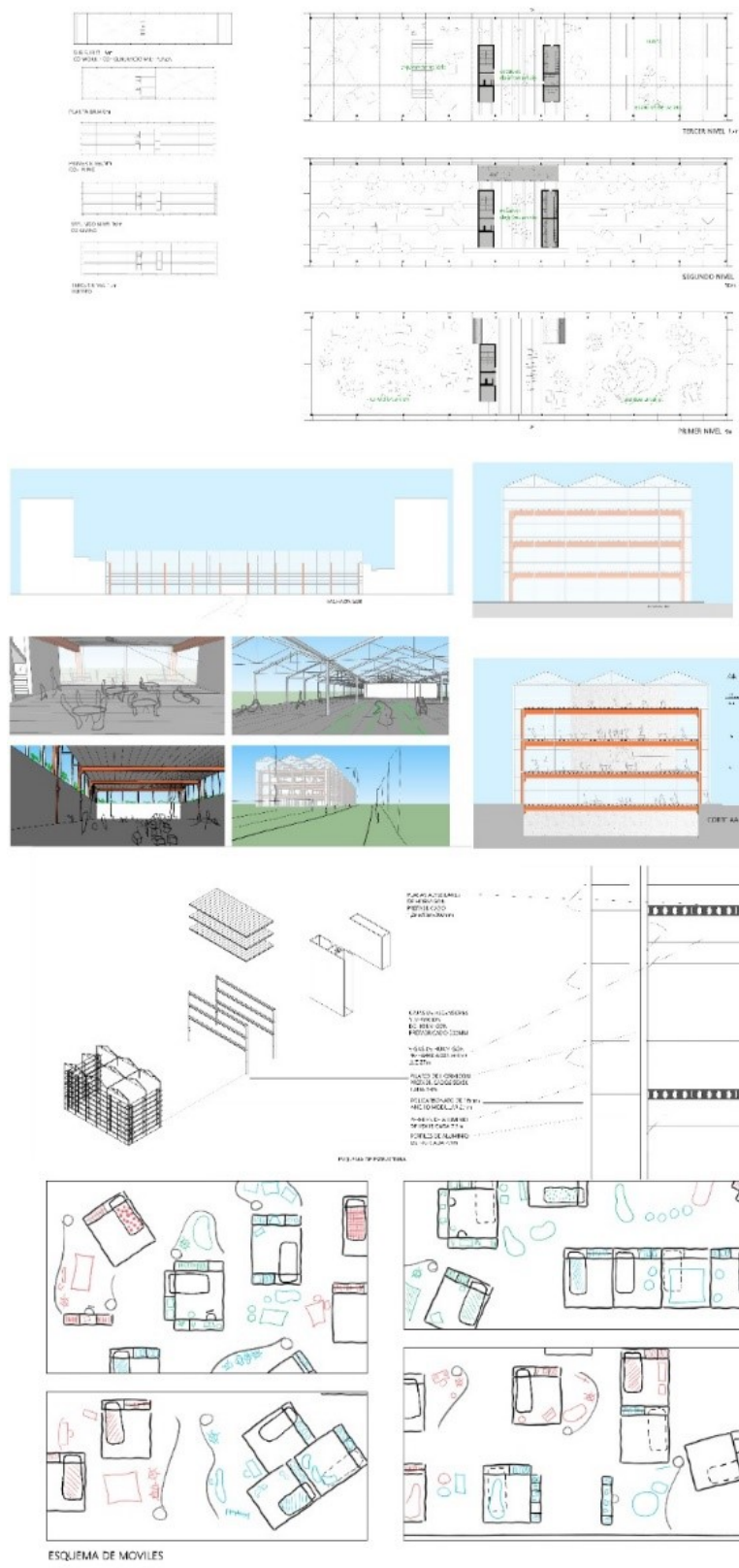


Fig. 14: Final proposal presentation (non-conventional modality). Source: Deborah de León, 2020.

4 Some partial and final considerations

In addition to proposing to the teaching team a review of its pedagogical strategies and teaching practices, the new situation has also allowed them to advance and experiment with novel practices, albeit in a very embryonic way, establishing new and different communication pathways between students and teachers, and between teachers. Moreover, it experimented with unusual communication resources in studio teaching: video production, different communication, and response times, among others. They allowed for more elaborate and in-depth responses to the demands and questions posed by the students. It is well known that in the conventional development of studio practices, the immediacy and urgency of responses to students' demands often lead to design solutions not as precise as they should be. They even may lead to misunderstandings in interpretation and understanding of the teachers' comments and observations.

The whole experience resulted in a questioning of the studio-based education system. As already mentioned, its bases are face-to-face, participatory classes with a high degree of student-teacher interaction, which has not been possible during the pandemic. In the future, different and mixed strategies should therefore be considered, allowing and encouraging student autonomy so that they can carry out an exercise without constant tutoring from the teacher, in working sessions (for example via Zoom) in which all those involved in the process will actively participate.

Likewise, one could try to exchange the students' proposals among themselves, in order to achieve a more active bond between them and reducing the teaching team's direct participation. Sometimes students learn more from the exchange of opinions among fellows than from teachers comments. Prior to the development of the project courses, the new situation may require, in turn, from the teaching teams, the establishment of a protocol (a term used today until abuse) to guide the work of the students, so that they can organize themselves with a greater degree of autonomy.

On the one hand, this would imply, on the part of the teachers, to work beyond the strict limits of the established class schedule. They should probably agree to respond to the demands of students in more flexible hours, establishing time-settings to receive students' inquiries and questions, and time-settings to answer such questions. On the other hand, students would be required to show a greater degree of responsibility and commitment when communicating with teachers. In communication via Zoom, the experience carried out revealed the difficulty to check the students' presence or absence.

In the future, schools should implement pedagogical strategies able to admit a greater degree of flexibility when being put into practice. Such strategies could also combine face-to-face modes and virtual modes and provide a thorough review of the studio-based teaching system, its pedagogical methodology, and the type of exercise it proposes.

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