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IO3
2021

Manual of best practices for a blended flexible training activity in architecture for higher education institutions

UNIVERSITÀ DI PARMA

DIA Dipartimento di Ingegneria e Architettura

ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

Silesian
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RWTH AACHEN UNIVERSITY

Normandie Université

This volume returns the results of the Intellectual Output 03 of the research project "ArchéA. Architectural European Medium-sized City Arrangement", with the aim of analyzing and restating the state of the art achieved in the field of flexible mixed training in architecture, strongly encouraged by the emergency period of the Covid-19 pandemic. The result is a collection of good practices carried out internally and externally to the ArchéA partner network, in the context of higher education institutions, made possible by new virtual tools capable of mediating teaching and mixed and flexible learning around the disciplines related to the project.

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edited by Enrico Prandi and Paolo Strina

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**Analisys of the Best Practices**
Call for papers
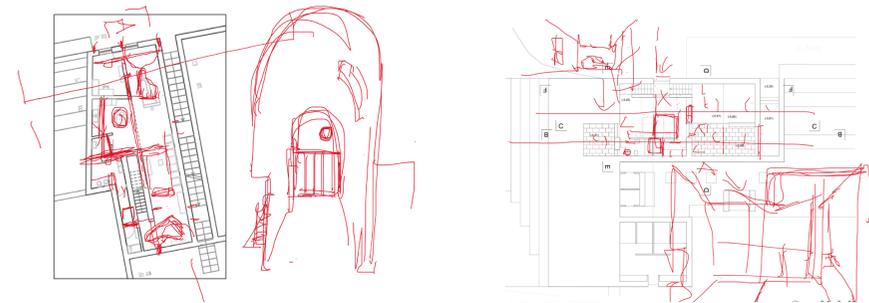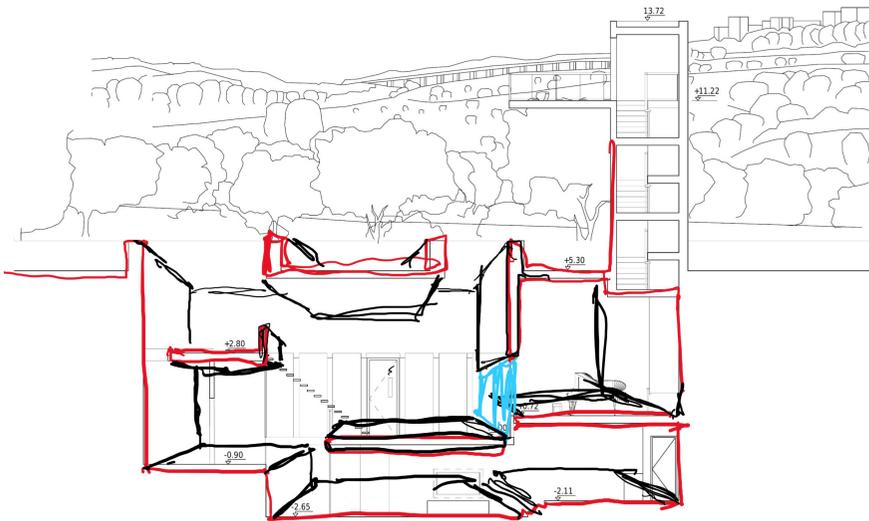
Fig.01 Laboratorio di Progettazione architettonica 1, a.y. 2019/20. Beginning of the course with site inspection in Agrigento; End of the Lab in online mode.
Fig.02-03-04 Laboratorio di Progettazione architettonica 1, a.y. 2019/20. Review on digital drawings.

Antonino Margagliotta, Paolo De Marco, Sete Álvarez Barrena
Beyond the screen

University of Palermo, Italy
University of Extremadura, Spain

Premise

Our didactic experiences in the field of architectural design, in courses that have always had a strong workshop character, have been varied in recent years and have been carried out in different variants that, when considered as a whole, allow us to reflect on the problems and the challenges faced during the pandemic[1].

Indeed, a didactic normally conducted with compulsory attendance suffered in a sudden and unexpected way from the cancellation of physical presence, the loss of contact with people and the "corporeality" of the project. Moreover, the absence of the physical space of the classroom (a scene inherent to the laboratory) soon led to the search for new tools and appropriate methods that must adapt to constantly changing situations, depending on the progress of the pandemic, transposing everything behind a screen.

Design staying at home

In response to the concreteness that comes from the relation with the place (which implies the experiential knowledge of the space of modification, the measure, its restitution), to the impossibility of moving, and to the obligation to "stay at home", the first temptation might be to renounce the project and focus on "project research"[2]. But in courses where design and research interact with the awareness that design is only learned (and taught) through design, practice remains a necessary and indispensable experience, even if it is carried out with different tools and new objectives. Another problem is the transfer of students and teachers from the classroom to home, mediated by a screen in front of which everyone is "alone". Maieutics must then be oriented towards comforting students

and feeding their enthusiasm (in addition to that of the teacher himself) and breaking the silence of the telematic classroom or invisibility, since students are not always available to show themselves on video and interact with immediacy. For this reason, we "invent" strategies that stimulate discussion, involve students through many questions that transform certainties into doubts that must be resolved by them; we experiment with "tactics" to listen to voices, capture glances, and finally give the course a new "physicality".

The difficulties are accentuated in first year courses with students who have attended in telematic mode for part of the last year of high school and for whom the lack of classroom experience prevents the possibility of socialization and the acquisition of a study methodology. It must be explained to younger students that this is a time of transition and that, especially in the public university, online instruction will never replace in presence instruction.

The search for a methodology

Beyond the critical questions, there is also an interest in experimenting with an appropriate and innovative methodology that does not abandon the prerogatives of the project (the relationship between thinking and doing, constantly with pencil in hand), at a time when one might think that the electronic medium could replace everything, confusing means and ends. The medium then becomes telematic teaching, but the aim is always to shape the designer's thinking: the project is always a "means" to learn to think.

The emergency also forces appropriate project themes because it is impossible to have direct experience of places. So, in 2019/20, the labs started in presence have "transformed" into
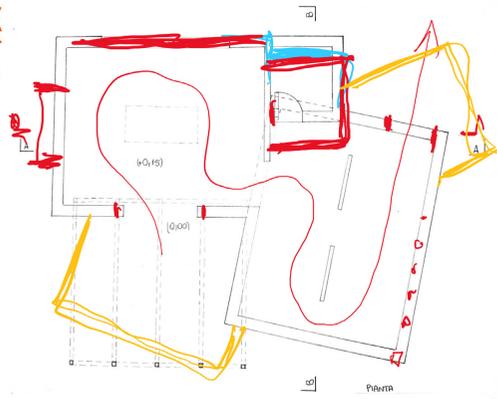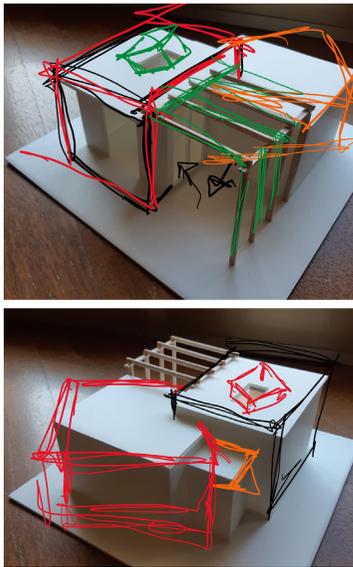
Fig.05 Laboratorio di Architectural Design, a.y. 2019/20. Review of the project on the study model and plan.
Fig.06 Laboratorio di Architectural Design, a.y. 2019/20. Study models with easily available materials.
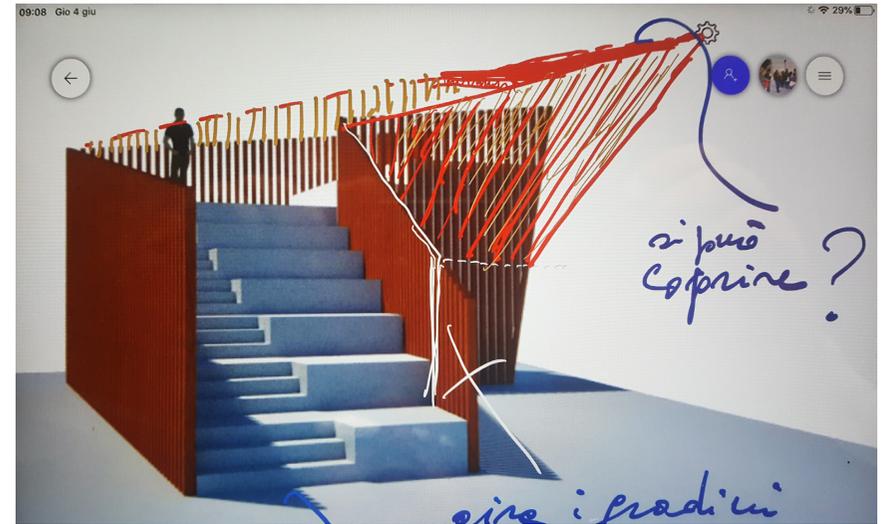
Fig.07 Laboratorio di Architectural Design, a.y. 2019/20. Reflections on the visualization of the project.

distance learning courses forcing the change (and adaptation) of the mode and the teaching materials; we introduce already in 2020/21 the theme of living in the Covid19 (or post-pandemic) period: house for weekends or for quarantine, house in a rural context with spaces for work and online study. Even the "composition exercises" – which precede and prepare the project – get a new laboratory connotation, so that if you work analog first, then requires the use of the digital for the presentation of the products; or, in the courses that return to the classroom at a certain time, there is a transition from digital communication to printed paper.

Then, during the lockdown, after an initial hesitation in which the presentation of the work is done with the students sharing their screens, there is soon a shift to a mode in which the teachers receive the documents by email to discuss them in shared screen and revise them with drawings by mouse. Subsequently, the idea of introducing drawing on tablets with touch-screen pens represents "the turning point" that allows the teacher to discuss and adopt "the reasons for the project" not only with words, but - he too - with "pencil in hand". The analysis, the interpretation, the clarification of the reasons for the solution of the design questions cannot do without the critical discussion of the drawings, carried out with the immediacy of the sketch, the graphic note that specifies concepts and proposes solutions.

With these modalities, the debate is extended to the whole course, introducing a didactic action in which the project is discussed as if on a blackboard that supports the work of the students; in this, the attenuation of personal contact corresponds to a greater participation of all students in the work of each one, transforming the "individual" review into a collective correction; with the possibility that everyone understands different logics and design solutions. Over time, the sharing mode is perfected, uploading files to the platform and creating a cloud that facilitates sharing and builds a "historical archive" for each project. The method thus allows to "accept" the condition of telematic and digital work without abandoning manual work, mediated by scans of hand drawings, revisions with tablets that simulate the worksheet and even allow other possibilities such as drawing on the model photos, etc.

The online mode also offers the possibility of an articulated didacticism with community moments involving the whole course (the theoretical and training lessons, the seminars) and, in parallel classrooms, other activities in which teachers and tutors split up to meet groups of students and then, at the end of the day, meet again in a joint session to share their work. For the final year courses, teamwork (which is always an opportunity for growth, optimizing resources, nourishing discussion and sharing) must be "reinvented" to give autonomy to groups in which everyone participates from different places.
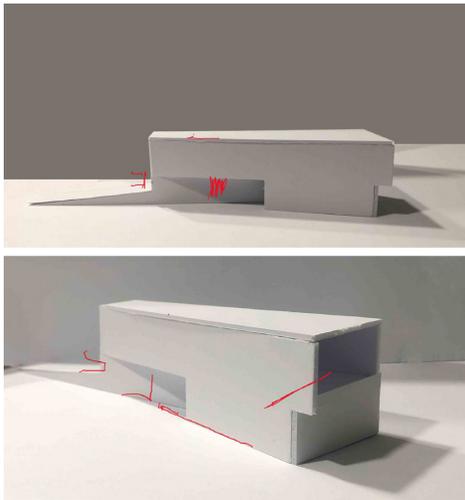
Fig.08 Laboratorio di Architectural Design, a.y. 2019/20. Review of the study model.
**Fig.09** Laboratorio di Architectural Design, a.y. 2019/20. End of the Lab entirely carried out in online mode.
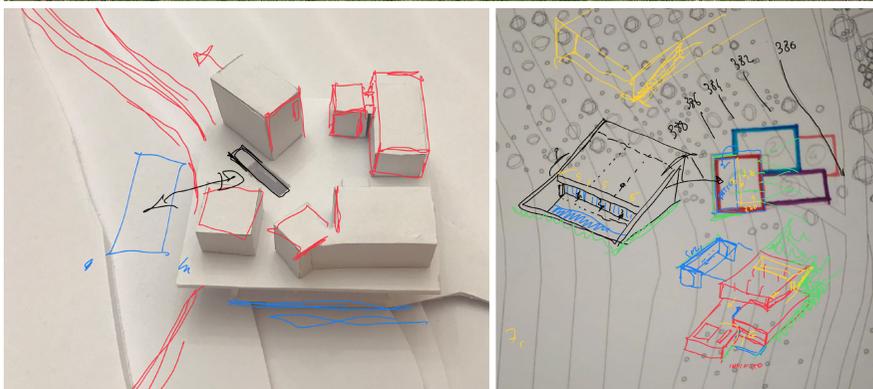
Fig.10 Progettazione Architettonica 2, a.y. 2020/21. Exploration of the project theme based on the image of the place.
Fig.11 Progettazione Architettonica 2, a.y. 2020/21. Review on study model and on hand drawn plan

Fig.12 Instrumentation for online teaching on digital documents.
Fig.11 Architettura e Composizione architettonica 3 con Laboratorio, a.y. 2020/21. Review on digital drawings
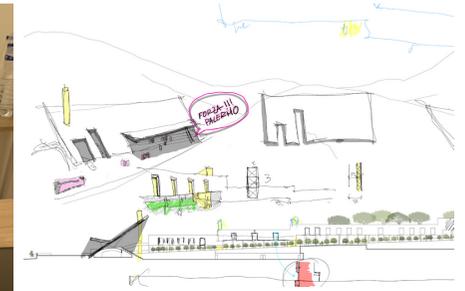
At every moment, however, the manual activity carried out at home must be stimulated (each house becomes a laboratory): through drawing "by hand" (especially in the first year courses), with the construction of models (study and presentation), using – especially during the lockdown – what students can easily find (making models with cardboard, cork, tin, iron wire, even spaghetti). And this in order to always bring the project to a "tactile experience" that can oppose the mediation of an extensive virtualization.

To carry out the lessons, long communications are avoided because they could become monologs of the teachers; students are constantly asked for comments and opinions, opening an exchange of views on recommended books and short texts ("digital postcards" uploaded weekly on the platform) to propose the theoretical reflection as a moment of debate.

Build community

For everyone (students, tutors, teachers), the end of the courses – both online and in presence – becomes a moment of great emotion: for the successful "enterprise" of carrying out the course without losing a day of teaching; for the quality of the results, due above all to the didactic experiment; for the verification of the didactic itself. In these moments emerges the sense of responsibility that has animated everyone in a difficult period in which the regular running of the courses (especially in the first lockdown) was both a consolation and an exercise in the commitment to teaching-learning "togetherness". The university, like the school, has confirmed itself as places of knowledge and cultural formation, but also of sociality in a time without socialization: trying to be a community with a different way of doing community.

Particularly moving, then, was the conclusion of the course which first returned to take place in presence (last June) with fifth-year students, for whom the end of Architectural Design Laboratory coincides with the last day of their university careers; for this reason, the students wanted to go back to the classroom and extend the lab with more full immersion days: thinking and working on the project on the printed drawing or with the construction of the model, discussion of the themes of architecture; participating in an international workshop, with the online participation of designers and professors from foreign universities (which paradoxically allows to perceive a closer world in the time of distancing), with a final surprise of an in-person guest (as a hope and desire for a return to "normality"), who generates even more interest because he returns to walk between the tables, calls

for silence, asks questions and listens to opinions. Finally, the conclusion of the workshop is a moment of celebration in a "safe" square in Palermo: an extracurricular signal (in many ways) with which the course also leaves the real classroom and returns to the spaces of sociality, to the streets, to the squares, to the city; in addition to restoring the "suspended" human relations.

Conclude to start again

Perhaps in the end it was not so difficult to deal with the new form of teaching, because the project is always an engaging experience, even with online teaching; certainly it requires a greater capacity for initiative and concentration, as well as sensitivity in dealing with "technical" issues with tools introduced to work easily from home, to involve students, to go beyond the screen. In fact, these experiences confirm that despite the technical-technological progress that also affects the world of design teaching, it is necessary to keep the cornerstones of architecture clear, as the method cannot ignore thinking and the concreteness of doing, since architecture is always experiential and not media.

Notes

[1] We refer to the courses held in the a.y. 2019-20 and 2020-21 at the University of Palermo:
- Laboratorio di Progettazione architettonica 1 (12 ects, 180 hours), CdS LM-4 Ingegneria edile - Architettura, a.y. 2019-20; prof. A. Margagliotta, tutor P. De Marco, first semester carried out in presence, second semester online, 28 students.
- Comunicare il progetto (3 ects, 75 hours), CdS LM-4 Ingegneria edile - Architettura, a.y. 2019-20; prof. P. De Marco, carried out entirely online, 12 students.
- Laboratorio di Architectural Design (10 ects, 120 hours), CdS L-4 Disegno Industriale, a.y. 2019-20; prof. A. Margagliotta, tutor P. De Marco, M. Trovato, carried out entirely online, 84 students.
- Progettazione architettonica 2 (9 ects, 99 hours), CdS L-23 Ingegneria edile, Innovazione e recupero del costruito, a.y. 2020-21; prof. P. De Marco, carried out entirely online, 15 students.
- Progettazione architettonica 1 (6 ects, 65 hours), CdS L-23 Ingegneria edile, Innovazione e recupero del costruito, a.y. 2020-21; prof. A. Margagliotta, tutor P. De Marco, carried out in mixed mode, 30 students.
- Architettura e Composizione architettonica 3 con Laboratorio (12 ects, 180 hours), CdS LM-4 Ingegneria edile - Architettura, a.y. 2020-21; prof. A. Margagliotta, tutor P. De Marco, S. Álvarez Barrena, started online, continued and closed in presence,40 students.

[2] Perhaps taking up the condition imposed by Rem Koolhaas in a design workshop at Harvard University, that is to deal only in questions related to research. Then the proposal was controversial, especially due to the opposition of the students, and the activity was not completed: «Unfortunately, they don't want to research on design; they want to design».
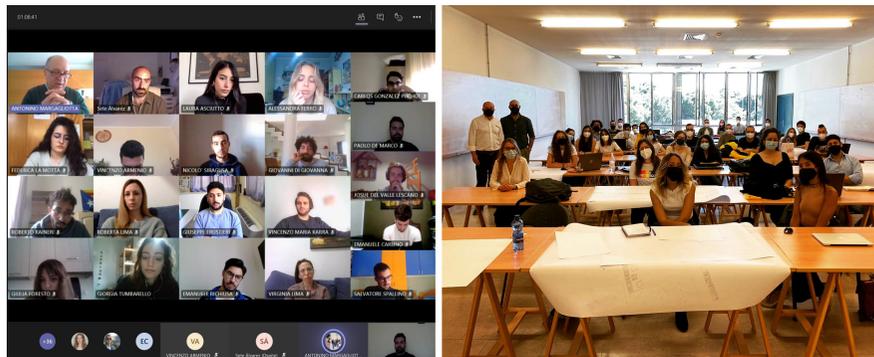
Fig.14 Architettura e Composizione architettonica 3 con Laboratorio, a.y. 2020/21.Beginning of the Course in online mode; End of the course in classroom.