FAM

ArchéA
Architectural
European Medium-sized City
Arrangement

Co-funded by the
Erasmus+ Programme
of the European Union

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 University of Technology
RWTH AACHEN UNIVERSITY
Normandie Université

FAM ArchéA
Architectural
European Medium-sized City
Arrangement

FAMagazine. Research and projects on architecture and the city

ArchéA. Architectural European Medium sized City Arrangement

Editor: Festival Architettura Edizioni, Parma, Italy

ISSN: 2039-0491
DOI: 10.12838/fam/issn2039-0491/n0-2021

Editorial secretariat
c/o Università di Parma
Campus Scienze e Tecnologie
Via G. P. Usberti, 181/a
43124 - Parma (Italia)

Email: redazione@famagazine.it
Email: ArchéA@unibo.it
www.famagazine.it
site.unibo.it/ArchéA/en

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.

ArchéA. Architectural European Medium-sized City Arrangement

Project Reference: 2018-1-IT02-KA203-048305
Programme: Erasmus+
Key Action: Cooperation for innovation and the exchange of good practices
Action Type: Strategic Partnerships for higher education

https://ec.europa.eu

This manual comes out as a special issue of the “FAMagazine. Researches and projects on architecture and the city”, associated partner of the ArchéA research project.

FAM ArchéA
Architectural
European Medium-sized City
Arrangement

Co-funded by the
Erasmus+ Programme
of the European Union

IO3
2021

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

edited by Enrico Prandi and Paolo Strina

UNIVERSITÀ DI PARMA
DIA Dipartimento di Ingegneria e Architettura
ALMA MATER STUDIORUM UNIVERSITÀ DI BOLOGNA
Silesian University of Technology
RWTH AACHEN UNIVERSITY
Normandie Université

Analisys of the Best Practices

Call for papers

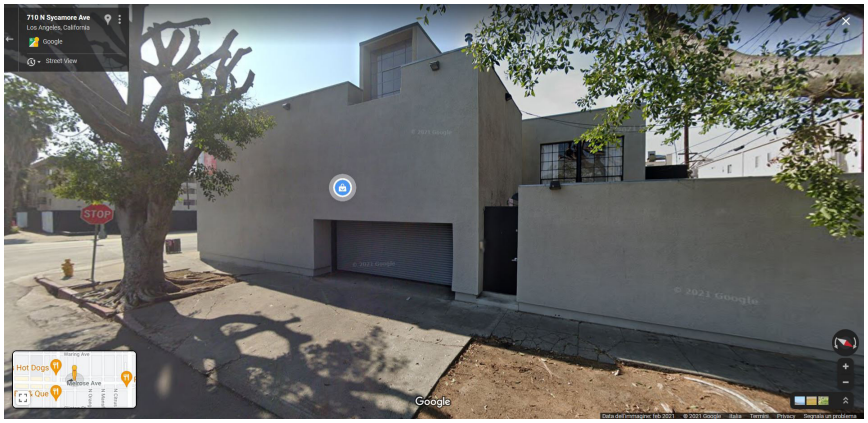

Fig.01 The Danziger House, 7001 Melrose Av., Los Angeles, from Google Streetview

DOI: 10.12838/fam/issn2039-0491/n0-2021/819

Laura Carnevali, Fabio Colonnese

Teaching drawing in a shared community

Sapienza University of Rome, Italy

At the Faculty of Civil Engineering, Sapienza University, Rome, the first year Architecture Drawing course comprises a total of 162 hours (12 Formative Credits or CFU) divided into 51 hours of lectures, 51 hours of exercises and 60 hours of laboratory. Generally a six-months long course, this year it has been reduced into a three-months long course, from October to January, requiring a compression of the program. The problems due to the program compression and to the change of teacher were stressed by the measures for containing the Covid-19 diffusion. The former teacher was reputed "fragile" and precluded from teaching in presence and a new teacher was given the course. Moreover, Sapienza University adopted a mixed format, with a few students present in the classroom and most of them at home. Besides the many technical and instrumental difficulties due to the late equipment of the classrooms with updated hardware and software, the late registration of about a quarter of the students after the admission tests caused some of them to join the class more than a month after the first lesson. Anyway, a friendly collaboration between the "old" and the "new" teacher contributed to overcome most of the organizational questions.

Besides the lessons in Descriptive Geometry and Architectural Drawing, the course was centered on the Laboratory. The students were asked to apply the architecture drawing notions to the representation of the Danziger House (Fig. 01), designed and built by the Canadian-American architect Frank O. Gehry in Los Angeles between 1963 and 1965. At the age of ninety, Frank O. Gehry is considered one of the undisputed masters of contemporary architecture, able to interpret the contribution of the masters of European rationalism through the expressions of contemporary artists ranging from Pop Art to Land Art and an unprecedented sensitivity to the urban landscape and industrial materials. To transfer his sculptural approach to architecture, he developed an original procedure, later defined as *reverse modeling,* which combines tools borrowed from aircraft engineering with laser scanning and digital modelling to transfer the surfaces of his small models in paper, fabric, and mesh first into vectorial models to be reworked and optimized. The students were asked to choose one of Gehry's works and to prepare a short report to be presented to their colleagues either in presence or by Google Meet, the official platform chosen by Sapienza.

The Danziger House, 7001 Melrose Avenue, was chosen for its stereometry and "apparent" simplicity as well as its position in the huge urban chessboard of Los Angeles. The semi-detached house is at the end lot of a row of buildings and is exposed on three sides. It is made up of two shifted, accosted boxes, which respectively house the residential areas and the production space requested by the client, an artist photographer. Above them, two cubic skylights bring natural light into the atelier and the main bedroom. While the studio has an independent entrance, the residential block appears to be completely closed to the outside. Besides the large garage door, a small, wooden gate is the only visible entrance. Quite informally, it leads to a secret garden protected from the main street, Melrose Avenue, by a tall wall that turns sharply before touching the second box. Here, a large glass-door leads into the residential volume, featuring a double-height living room a kitchen below a sort of internal balcony. Behind the kitchen, there is a staircase leading up to the bedrooms and closing the private garage. A door leads from the kitchen to the full-height artist's study. It contains the lower box

dedicated to the darkroom and large windows open to the north and east. The graphic and iconographic documentation on the house, which was limited by the libraries lock-down, was enriched by the exploration of the site through Google-maps and Google-street view. As over the years the following owners have modified both the external form of the house and the organization of interiors, the students were asked to restore its original state in their traditional drawings, digital drawings and renderings from the digital models (Fig. 02-03).

When teaching and exercises are held in presence, the freshmen, after an initial orientation period, usually begin to relate to each other. They tend to organize themselves in small groups, to develop a mutual support, to share data and tricks, to emulate the good-practices, and to grow their own self-confidence. The maturation of the so-called 'soft skills' is accompanied by a series of behaviors that quickly transform a series of individuals into a class endowed with a sort of collective intelligence. Teaching in the socially distanced classroom, with half or more students attending from home, also has the contraindication of discouraging these behaviors and keeping the relationship between teacher and student on an individual level. To overcome this limitation, in addition to the institutional platforms, such as Sapienza E-learning, some expedients were

Fig.02 Renato Danilo Carcione, Rendering from the digital model (Autocad)

Fig.03 Leonardo Perna, Rendering from the digital model (Autocad)

adopted. The collegial correction, albeit anonymous, of the exercises is one of these expedients to let knowledge circulate. Another one is the public presentation of Gehry's works. In drawing a sheet of free-hand sketches, students were suggested to think of particular subjects (a pizza-boy, a night thief, a little bird, and so on) and routes in the house, introducing a sort of "role-play game" narration able to engage their imagination and enthusiasm.

In some cases, small study groups spontaneously formed and worked home albeit keeping the social distance, but students were also encouraged to share their homework time through apps, such as Discord, that allow them to chat, share images and videos, and listen to music together while drawing.

In this sense, the course was promoted as a non-competitive work environment but rather open to error, experimentation, and sharing, as university should always be.

In the case of drawing and designing disciplines, social distancing discourages a direct emulation of the teacher, who is not allowed to be sitting down near the students and drawing together with them, on their own sheets. To struggle this situation, the use of the traditional PowerPoint slide presentations was decreased while free-hand drawing was enhanced, from the geometry constructions to the ways of exploring the plans and sections of Gehry's Danziger House. In particular, the teachers used a graphic tablet with Adobe Photoshop or Apple Concept and a large digital blackboard in the classroom, which is equipped with software for digital painting (Fig. 04). Similarly, the exercises were corrected with digital software over the screenshots. To facilitate this process, students were asked to draw with softer pencils to rend their drawing more visible and were provided with basic notions of Photoshop in order to optimize the digital photographs of their graphical works.

The students apparently reacted with an increasing and active presence to the course. While at the beginning only six or seven of them came to faculty, at the end of November, 28 of them, almost half of registered students, were present in the classroom. Despite the scheduled turns, some students asked to be invited almost always while a few of them, generally living outside Rome, preferred to stay home for the whole course.

Fig.04 Sketching an interior perspective view on the digital tablet (Digital painting)

The students were accompanied to the exam both with collegial reviews on Google Meet and Zoom, always at a distance, and by Q&A emails. In the impossibility of carrying out written exams in a conventional way, the notions of geometry were verified through a series of small exercises to be performed and showed through the smartphone camera, while the Laboratory drawings were presented through digital photographs. Most of these considerations concern also with the students of the course of Digital Drawing at the Faculty of Architecture, which one of the two teachers had in parallel with this. In particular, these students were given the opportunity to share their drawing on the platform MIRO, which presents a number of tools for shared work. Each student was allowed to colonize one of the squares of a large grid, which can be zoomed and browsed, and to put a selection of his or her drawings – from the exercises done at the course to personal sketches, collages of paintings – up to create a sort of anarchic exhibition. Although only half of the students accepted the invitation to the platform, this self-managed virtual space gave them the opportunity to know each other and to learn from each other. Their contagious and intimate participation to the MIRO platform is testified by the spontaneous collage they created as a surprising Christmas card for the teacher, in which each of them drafted a portrait of another student with a personal technique and one of them, chosen as a coordinator, assembled all the portraits into a photograph of Piazza del Popolo (Fig. 05).

The results of the critical review of the program and the experimentation of different methods and topics due to the pandemic of the Architectural Drawing course can be read in the students' exams. In February 2021, 54 exams of 67 registered students were carried out, about 80% of the total. While the number of exams can be considered a quantitative good result, the general quality of the students' work shows an evident decline. The first question concerns with the contents. A number of exams demonstrate of the students' difficulties in controlling three-dimensional configurations in their mind and abstract visions. This is due to the short time the students have to assimilate complex concepts which cannot be compressed. The second question concerns with their ability in drawing, both free-hand drawing and CAD drawing, which can be enhanced only sitting close to them and correcting directly their drawings. Moreover, some of the students have missed the last revisions and the opportunity to refine and perfect their works.

When questioned about their experience, the students stressed that, despite the difficulties in getting to university, the classroom offers opportunities for concentration and application that are by far higher than those they can have at home. Nevertheless, attendance in the classroom was conditioned by external factors such as movement policy changes, a raising number of infections and even the absence of other teachers in the afternoon, which forced students to get back home in a few minutes and to attend the on-line lesson.

Another aspect is specifically a technical one. Implementing the hardware and software instrumentation as the course was proceeding forced the teachers and students to constant upgrading. The technical difficulties related to the efficiency of hardware and software were overcome only by the constant commitment and creativity of the teachers and the patience and participation of the students. This dynamic led to consider that the conditions imposed by the pandemic seem to have promoted an exceptional and favorable situation. In many cases, the general "hostile" situation promoted an exceptional atmosphere of participation, interaction and solidarity between teachers and students, "all in the same boat", which is worth to reflect and experiment upon in the next future.

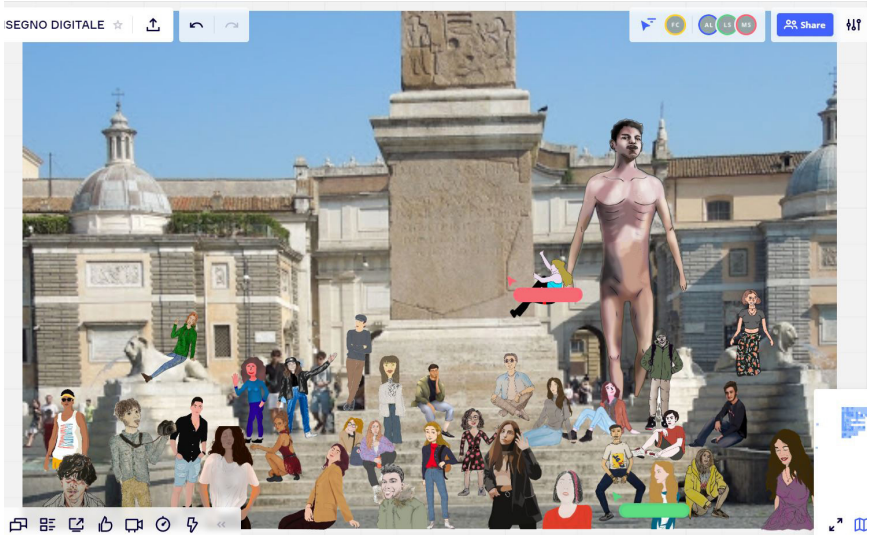

Fig.05 The Christmas Collage Card made by the students (MIRO)