



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



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Normandie Université

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

Management

Enrico Prandi, (Director) University of Parma

Lamberto Amistadi, (Deputy Director) University of Bologna

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.

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edited by Enrico Prandi and Paolo Strina

Analisis of the Best Practices

Call for papers

Özlem Erdoğan Erkarıslan, Yenal Akgün*
Design and implementation of online learning process for complex architectural projects: a graduation project example during Covid-19 period

*Istanbul Aydın University, Turkey
 Yaşar University, Turkey*

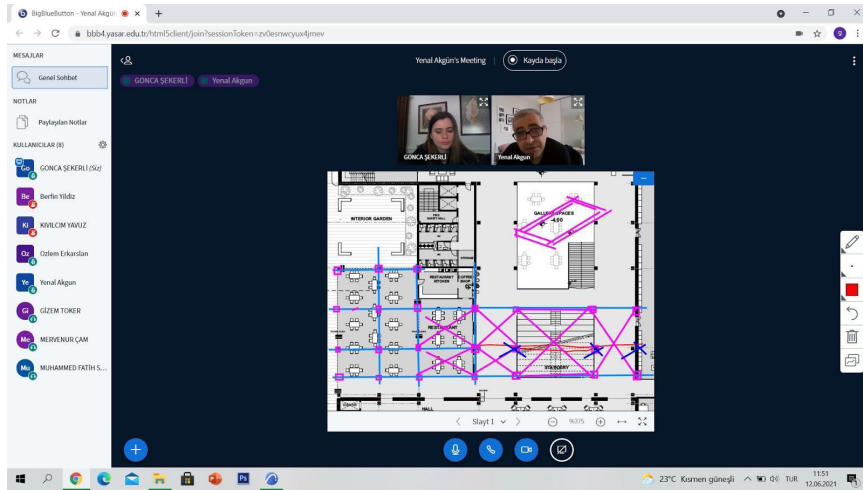
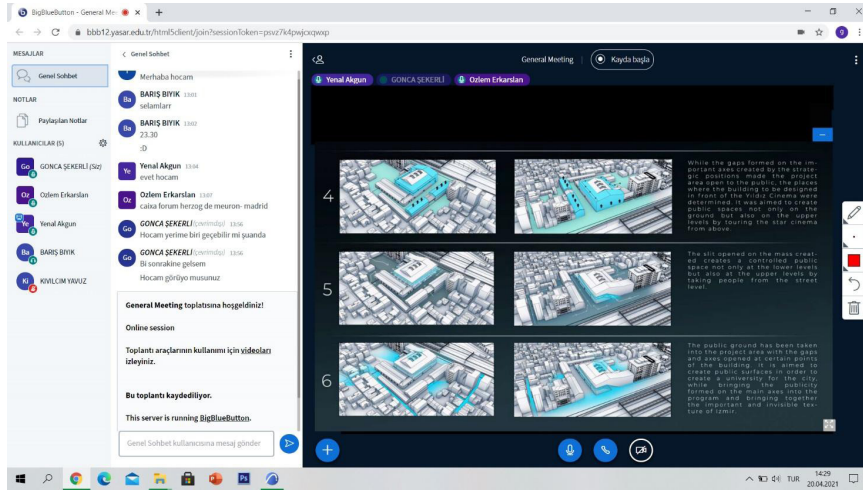


Fig.01 Site Survey Presentations and Given Site View Template
Fig.02 Sakai LMS Interface for Online Review Sessions

Introduction

Architectural design studio is the most important course of architectural education and it is considered the central axis where the theoretical and technical knowledge obtained from other courses are brought together. This design studio is a form of disciplinary training in a social learning environment, where the instructors and students interact. In this environment, students learn from the instructor, as well as from each other; and nourish their creativity through experience and learning by doing (Ceylan et al., 2021).

As an alternative to the conventional face-to-face design studio environment, new instruments and concepts, such as blended learning, virtual studios or online studios have emerged in recent years, parallel to the advancements in computer and communication technologies (Silva & Lima, 2008; Bacelar-Nicolau et al., 2009). Although the research studies and attempts on distance or blended learning systems were incipient in architectural education, after the declaration of COVID-19 as a global pandemic on March 11, 2020 by the World Health Organization, the remote learning aspect became the most important element of the architectural design studio.

Many researchers have evaluated the success of the distance learning methods and tools during COVID-19 period by making questionnaires with the instructors and students (Alnusairat et. al, 2021; Varma & Jafri, 2021; Asadpour, 2021). Recently, some studies have also evaluated the methodologies, capabilities, and shortcomings of the online tools (Milovanović et al., 2020; Ceylan et al, 2021) and searched for different options.

Although the existing literature hints at various methods of measuring the efficiency of online

learning tools on theoretical courses or short design problems, we still do not have a full-fledged, differentiated examination of the use of “learning management systems” for conducting complex and long-term architectural problems like a graduation project. This gap in the literature constitutes the main motivation of this paper.

A graduation project is the most important step in architectural education because it tests out the maturity of a student of architecture as a potential architect, and includes multilayered difficulties and expectations on the building and site. In the case of Turkey, graduation projects are considered particularly decisive due to the terms and conditions of professional service of architecture is regulated by the Chamber of Architects in Turkey, which allows four-year bachelor degree holders to work as registered architects without any other obligatory competency exam or internship requirements. For this reason, when online education became a requirement during the 2020-21 academic year, time-management and the restructuring of the studio became an asset to ensure a workflow would continue to run like clockwork as in the face-face education.

This paper aims to express the progress of an online graduation studio experience via the Sakai Learning management system (LMS). Moreover, it elaborates the defining attributes of the tools and online learning methods that were used during the semester; and reveals their potentials and shortcomings.

Definition of the Studio

Based on the catalogue description, the graduation studio at Yaşar University is defined as a 10 ECTS course and organized in (4+4) eight contact

hours, with a main learning mechanism of solving an architectural problem that is functionally, conceptually, contextually or structurally complex, in a remarkable urban context. In the 2020-21 academic semester, 28 students were enrolled in the course to be supervised by two professors. The studio problem was given as an adaptive reuse project transforming two existing and unused buildings into an architecture school, which brought some challenges as well as practicalities. Adaptive reuse projects always mean extra workload such as documenting and adjusting the accuracy of the measured drawings, which cannot be done without on-site surveying. Additionally, this kind of studio problems need a detailed and sensitive approach to the structural, tectonic integrity and carefully considered materiality.

On the other hand, the well-defined boundaries of the plot and existing structures provided a guideline for the students while experimenting with spatial and structural alterations.

Definition of the Learning Medium

Sakai is a free, community source, educational software platform designed to support teaching, research and collaboration (Sakai LMS, n.d.). This platform is an inclusive learning management system allowing different types of online meetings, exams/ assignment submissions, forums, chats, mail groups allowing online interactions, grading, announcements etc., without need for extra supplementary tools and software packages.

Since the Sakai platform is the official learning platform at Yaşar University, and had been in use for uploading the course materials, assignments, grades, resources and announcements long before the Covid 19 zero point (11 March 2020), the university management decided all courses to be offered under the same platform.

Definition of the Tools

Site Surveying Supplementary Materials: at the beginning of the project, the students were provided with the measured drawings of the existing buildings, which were formerly documented by Izmir Municipality since it is also in the agenda of the local government to transform these two buildings into a cultural center. A small group of students paid a visit to the site and shared the camera of their phones via connecting to Sakai System when at the same time the entire group was online in the breakout rooms and ready for graphical documentation of the site visit via working on a shared holder. Therefore, the Sakai system enabled students to still have the spirit of teamwork and doing actual site surveying. The warm-up and analysis phase was also supported by many other online activities such as communicating with Lead Architect of the department of Heritage of Izmir Municipality as well as online viewing and conducting discussions with the director of the documentary film about the existing buildings on the site. A template was given to the students for the site analysis In Figure 1; this perspective template can be seen on a student's online presentation.

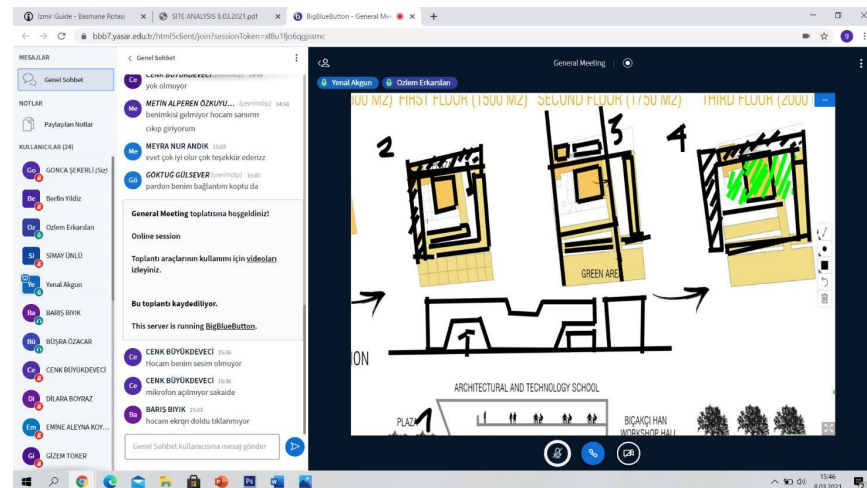


Fig.03 Sakai LMS Interface for Online Review Sessions

Tools for Critics: the studio was organized predominantly along with one-to-one critics within the studio hours during which the entire group could discuss together, except the students who specifically asked for private critique sessions. Sakai LMS allows users to sketch over the existing drawings and this increases the communication between the instructors and the students (Fig. 02-03). The students were rotated between two professors, which was regulated and announced by the studio team in Sakai System at the beginning of each week. On the other hand, some joint sessions brought forth an exchange of ideas in a larger group and strengthened the good spirit of the studio when everybody was in need of care, sympathy and affection. Use of Sakai Forum and WhatsApp group was efficiently used for casual communication, which allowed for flexible working hours and strengthened interpersonal relations despite the difficulties of the online process.

Templates of Visual Communication: a conventional architectural representation is based on presentation boards/ sheets that include diagrams, all drawing sets and visualizations and one or more physical models depicting the mass. However, on-line screening of such presentations can be deceptive and may cause misreading of the drawings in the absence of drawing scale and physical models. In order to solve this problem, the studio team asked students not to prepare presentation boards in A or B paper sizes, and used a template slide format with 16:9 ratio, which is

an international standard for most laptop and monitor screens. Location, orientation and size of each drawing were defined in this template. This template increases the accuracy of the communication. Furthermore, all students were encouraged to use similar perspective views as can be seen in Table 1 below. The templates were very efficient for interim desk reviews when the student was in need of introducing the project but cannot find an appropriate diagram language and/ or verbalize their concept smoothly.

Tools for Assessment and Self Evaluation: the studio team recorded the sessions as much as possible to provide an easy access and recovery of the reviews when the student or the studio team felt any doubts about the agreement. Chat box was used in the juries simultaneously as the guest jurors were speaking to insert a brief about the comments. In this way, the student was able to read the comment before replying (Fig. 04). The students were also encouraged to use self-evaluation check-lists, which were included in every submission package which were simple questionnaires covering basic and minimum requirements expected from them which they can assess their self-evaluation over 5-scale Likert scale.

Conclusion

The tools of Sakai LMS allow students and professors to sketch over the projects during the online contacts. Forums and chat tools allow file sharing, comments and interaction, which makes the use of all communication tools to be transformed

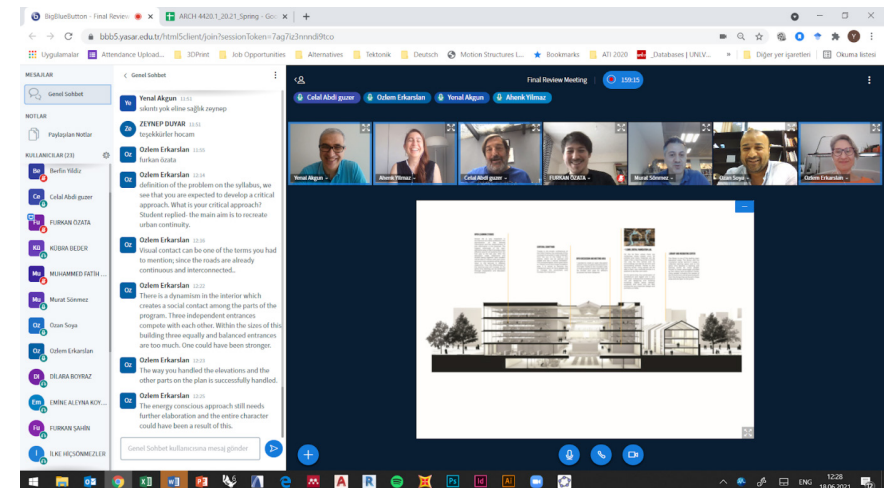


Fig.04 Use of Chat box as a Brief during the Online Reviews

Table 1. Diagrams Explaining the Urban Interaction on Template Perspective Views

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