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ArchéA
Architectural
European Medium-sized City
Arrangement

IO3
2021

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

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DIA Dipartimento di Ingegneria e Architettura

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

edited by Enrico Prandi and Paolo Strina

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State of Art: the experiences of
ArchéA's Network

Fig. 01 Homepage of the ArchéA MOOC's website

Lamberto Amistadi, Enrico Prandi
**The ArchéA online Course on the themes of Urban Design.
A teaching/learning educational path**

University of Bologna, Italy
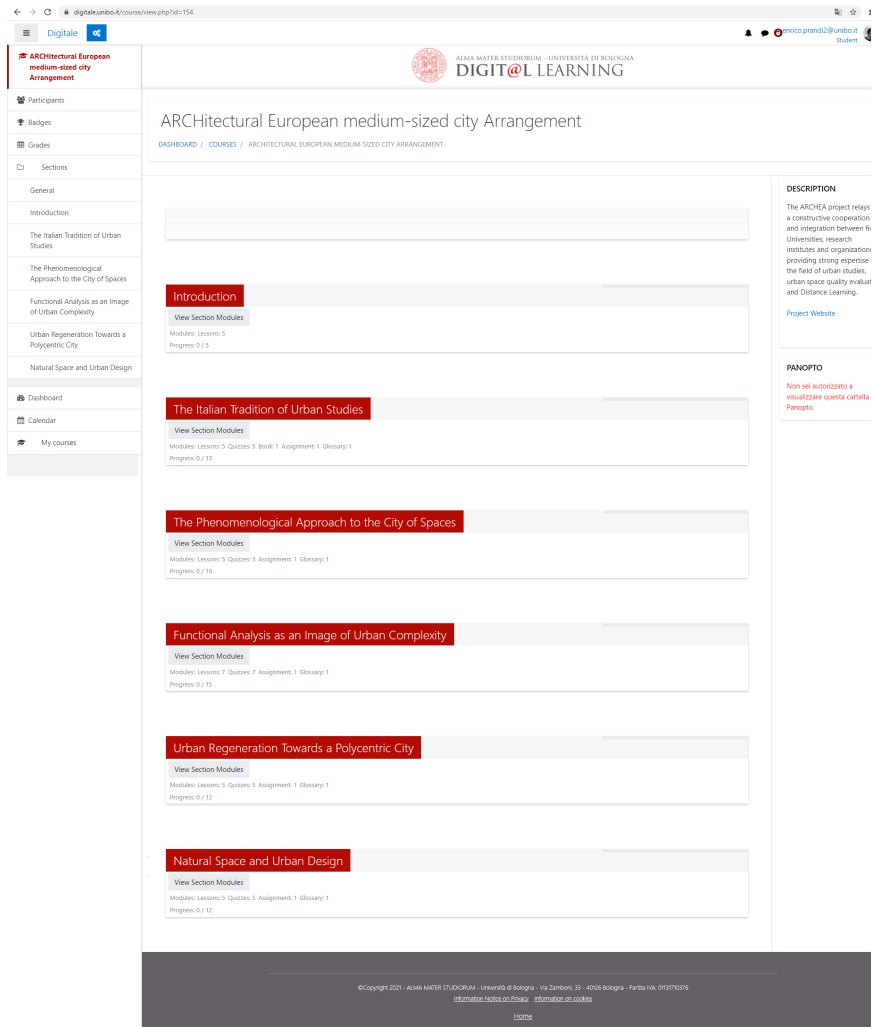*University of Parma, Italy*

Within the Archea research, an e-learning course was planned and implemented on the specific topics of investigation, or the Urban Design of the European medium-sized city.

In general, the term e-learning (in Italian apprendimento a distanza) means the use of multimedia technologies and the Internet to support the learning of users who cannot always be physically present in the place where the teacher is located (classroom). The term means both an electronic course and lessons delivered via videoconference, or a mixed set of tools. In general, the common characteristics of e-learning are: a) the distance of the users (in an environment that can also be hybrid or blended, or with a combination of e-learning and traditional classroom lessons); b) electronic support; c) dissemination on the net [1].

We are not interested in delving into the educational models of online teaching here as much as defining the reasons for the choices we made for the creation of the Archea online course.

A fundamental difference to be taken into consideration when talking about e-learning is that relating to the availability of courses: closed courses are defined as those defined by a training institution for groups of users regularly enrolled and distributed through platforms. Generally, these types of courses (which can also be hybrid) are led by teachers and / or tutors who define the times and relationships (between students and students and teachers). On the other hand, open courses are defined as those provided by a training institution to non-registered users (but registered on the platform and authenticated) who follow independently when attending the course (which is available 24/7). In this case the training is authenticated through self-correcting exercises or quizzes, which allow the student to evaluate his understanding of the topics and monitor his progress.

In the panorama of e-learning at university level, a widely used tool is the MOOC, Massive Open Online Course, an "open and mass online course" (according to the definition of IATE 'Interactive Terminology for Europe'), which has characteristics. They allow remote training of a large number of users, with different geographical origins, expectations and backgrounds.

The term MOOC is often used as a synonym for online course or even more generically as e-learning but it is good to keep in mind the differences.

The University of Colorado has defined the following differences between Mooc and Online courses [2]. (Table 01 below)

MOOC: Content	Traditional Online Course: Content
- Content is accessible 24/7 - Media is open source - Learners are encouraged to share and contribute materials - Modules are 5 to 10 minutes - Content is edited when needed	- Often material is only available one week at a time - Media is restricted by the university - Students search within an institution's library database - Modules are 45 to 60 - Content is edited by semester
MOOC: Delivery	**Traditional Online Courses: Delivery**
- Lectures are pre-recorded - All content is available from the start - Self-paced / customized learning path - Feedback is dependent on classmates - Course is open-ended with no due dates	- Often include live lectures - Content is often locked until it is completed by the student - Group learns at the same pace / linear learning path - Feedback is dependent on teacher - Course is closed ended with due dates

Table 01 Differences between Mooc and Online courses by University of Colorado

MOOCs were born with the first MIT course "Connectivism and Content Knowledge" in 2008, the phenomenon grew exponentially between 2011 and 2012, (Menichetti, 2014)[3].

Moocs fully embody the "open" culture, in the different meanings that the term acquires depending on the context (free, accessible to all, manageable independently, flexible, innovative in use, reusable, in the public domain, etc.).

According to Hill (2012)[4], all MOOCs rank among the "fully online" courses, but the innovative scope of MOOCs does not exhaust its relevance in the context of online learning processes. The design and use methods can be very diversified.

From the earliest stages, MOOCs were designed to be anything but independent or opposed to face-to-face teaching.

One of the main objectives that moved large universities such as Stanford, Harvard or MIT to engage in the promotion of MOOCs was in fact to identify new online and face-to-face educational mix formulas that could cut costs, and therefore reduce taxes for students, which have now reached unsustainable levels in the USA (Denhar, 2013), without worsening the face-to-face teaching quality, indeed improving it. Technology is helping to revolutionize education.

In February 2014 Anant Agarwal, CEO of EdX, the non-profit and open-source platform founded by Harvard and the Massachusetts Institute of Technology (MIT) which has 5 million students and provides 500 courses, during a TED Talk highlighted how the MOOCs make it possible to innovate traditional teaching methods and to obtain greater effectiveness of face-to-face teaching interventions. In the case of Inverted Learning, MOOCs can be important resources for individual study.

This direction has not been taken only by EdX: even its direct competitor, Coursera, a platform of Stanford University which has over 16 million students and provides 1,490 courses, shows that it cultivates with particular attention the Inverted Learning approach, as described within the "Flipped classroom field guide" (Adam et al., 2013) which reports concrete cases and indications for the development of courses using this method.

In addition to edX and Coursera, the third giant is Udacity, a Stanford University commercial start-up that offers paid online higher education courses for web developers, data analysts, mobile developers etc.

There are two major categories:

cMOOC, with a constructivist-connectivist slant (http://www.connectivistmoocs.org/what-is-a-connectivist-mooc), in which the participants have an active and predominant role over that of the teacher who becomes a facilitator;

xMOOC, of a donor-instructivist style, more widespread and implemented by large institutions (mainly the major US universities such as Stanford, MIT, Harvard).

In recent years, Europe has also increased the number of MOOCs provided and today covers about 25% of the total courses available (SURF; http://openeducationeuropa.eu/en/european_scoreboard_moocs). A pan-European initiative, OpenupEd, has been active since mid-2013, in which several universities have been consortiumed with the support of the European Union.

Compared to those enrolled, only 5% -6% complete the training (which in absolute value however is equivalent to tens of thousands of students within a year). The very high dropout rate of MOOCs, compared to classroom training, is reported by critics as an indication of low appreciation of this training method. In reality, the behavior of the students is in line with the participation in other activities on the web: about 35% enroll only because they are attracted by free admission but then do not even connect to a lesson; others are operators in the sector who observe to acquire useful elements for planning but not to grapple with the objectives of the specific course; still others follow all the lessons but do not turn in their homework because they are not interested in certification.

Among the most disparate platforms available[5], the choice through which to carry out the course fell on MOODLE, Modular Object-Oriented Dynamic Learning Environment [in Italian an environment for modular, dynamic, object-oriented learning] as it turned out to be in many countries Europeans including Italy the most widespread and used in the university environment[6]. Other tools widely used internationally are Coursera, EdX and EMMA.

Moodle is a learning management system (LMS) inspired by pedagogical constructionism, a theory according to which all learning would be facilitated by the production of tangible objects. Beyond this, Moodle, in addition to being Open Source, is a very flexible and adaptable environment to the different needs of university education.

Almost the only experience in Italy on Urban Design according to the list of MOOCs[7] in the themes of Architecture, the ARCHEA course is part of a training offer limited to very few experiences mainly conducted at the Federico II University of Naples as part of the "Federica WebLearning"[8]. Other universities have also developed similar platforms such as POK[9] of the Politecnico di Milano and BOOK[10] of the University of Bologna.

The aim of the ARCHEA course is to innovate teaching in the field of architecture with an independent but high-profile online course of content on the issues addressed by the strategic partnership.

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The course consists of 5 chapters (each of which was managed by the single university partner) plus a general introduction. The introduction consists of a general part on the project and 5 short videos by the scientific managers of the various universities (The 5 approaches); 3 Lectio Magistralis close the introduction: Urban Space and Theatrical Scene by Gino Malacarne, , Landscape at the Heart of Urban Projects by Jacqueline Osty, and City, Life, Architecture by Klaus Theo Brenner.

The five chapters follow: The Italian Tradition of Urban Studies (UniBo); The Phenomenological Approach to the City of Spaces (RWTH); Functional Analysis as an Image of Urban Complexity (POLSL); Urban Regeneration Towards a Polycentric City (UniPR); Natural Space and Urban Design (ENSAN).

Each Chapter provides a part of training and self-training according to the usual format of university teaching.

Each Chapter is an autonomous entity, it is composed of a set of Lessons (videos + written parts), an Assignment, a Book (optional), a Glossary and provides for the verification of the contents through quizzes (3 questions for each lesson). multiple choice.

The assessment of learning is given by the outcome of the quizzes (whose correction is automatic) plus the assessment of the Assignment by the teacher.

Each Chapter, if learning is sufficient, gives rise to 1 ECTS for a total of 5 ECTS if the entire course is passed.

Being an international course, the contents are available both in the language of origin of the research groups (Italian, German, Polish and French) and in English (the official language of the project) through deactivable subtitles.

It is a course that includes about 800 minutes of video lessons, many of which are integrated by parts directly written on the platform.

Since the course is compatible with the rules on university teaching, architecture students (of different levels and degrees, three-year master's or doctorate) will be able to attend (by registering) and download the certificate of the ECTS obtained

which can subsequently be validated by the office's supervisors of the various universities.

The course could also become part of the different curricula of studies through the mechanism of the courses chosen by the different universities.

The future goal is to make the course available also as a professional refresher for the various figures working in the field of urban design (Architects, Planners, Planners, etc.).

The structure of the course is reported in its breakdown by parts.

The Italian Tradition of Urban Studies course (by University of Bologna) consists of the following lessons:

Lesson 1. The Beginnings: Rogers, Muratori, Samonà, Quaroni, by Lamberto Amistadi

Lesson 2. Venice as a Paradigm. The Value of the Void on the Urban Design, by Giovanni Marras

Lesson 3. The Architecture of the City, by Gino Malacarne (with a synthesis of the Aldo Rossi's book)

Lesson 4. Projects for the City: Gianugo Polesello, Luciano Semerani and Gigetta Tamaro, by Ildebrando Clemente

Lesson 5. The Urban Design, by Raffaella Neri

Total video time (90 min.)

The **Phenomenological Approach to the City of Spaces** course (by RWTH Aachen) consists of the following lessons:

Lesson I. Theoretical Foundations I.I. Concept of Space. Landmarks in a Theory of Architectural Space, by Uwe Schröder

Lesson I. Theoretical Foundations. I.II. Spatial Mapping. Landmarks in a History of Spatial Mapping, by Felix Mayer

Lesson II. The Red-Blue Plan as a Mapping. II.I. Method. The Approach of the Red-Blue Plan, by Timo Steinmann

Lesson II. The Red-Blue Plan as a Mapping. II.II. Instrument. The Legend of the Red-Blue Plan, by Timo Steinmann

Lesson III. The Red-Blue Plan as a Design Tool. III.I. Application Examples. The Red-Blue Plan in Design and Research, by Ilaria Maria Zedda

Lesson III. The Red-Blue Plan as a Design Tool. III. II. Experiment. Using the Red-Blue Plan in Design Process

Total video time (120 min.)

The **Functional Analysis as an Image of Urban Complexity** course (by Politechnica Slawska) consists of the following lessons:

Lesson 1. Public Space – Definition, Types, Importance, by Michał Stangel (Definitions and approach to public space of various disciplines; Types of public space; Importance for city structure and implications for urban design).

Lesson 2. Mapping of Space – Overview, by Tomasz Bradecki (History of mapping of spaces; Methods, themes, tools, examples; Experiments).

Lesson 3. Behavioral Maps of Urban Spaces, by Katarzyna Ujma-Wąsowicz & Krzysztof Kafka (Mapping of behavioral patterns (daily patterns); Mental maps)

Lesson 4. Urban Open Space Prototyping, by Michał Stangel (Urban space prototyping; Tactical urbanism; Placemaking and evaluation of public space)

Lesson 5. Large Scale Mapping, by Krzysztof Kafka (Overview of the method; Examples; Modes of use)

Lesson 6. Blue-Green Infrastructure, by Agata Twardoch (Role of blue and green infrastructure in the city; Relations between b/g infrastructure and the cities environment; Good examples)

Lesson 7. Contemporary Threats to Public Open Space, by Katarzyna Ujma-Wąsowicz (Privatization of open spaces; Availability constraints; Accessibility mapping as a part of protection against threats).

Total video time (155 min.)

The **Urban Regeneration Towards a Polycentric City** course (by University of Parma) consists of the following lessons:

Lesson 1. The Long-Term Method of The Urban Project in Italy and The Parma School, by Carlo Quintelli

Lesson 2. The European Medium-Sized City: The Characteristics of the Urban Form, by Marco Maretto

Lesson 3. Urban Regeneration Technique Through the Structured Densification of The Centrality System (TDSC), by Enrico Prandi

Lesson 4. Application Examples of The TDSC Methodology: The Project for Bologna, by Paolo Strina

Lesson 5. Application Examples of The TDSC Methodology: The Project for Aachen, by Giuseppe Verterame

Total video time (130 min.)

The **Natural Space and Urban Design** course (by ENSA, Rouen) consists of the following lessons:

Lesson 1. The Natural Space as a Structuring Material for the Urban Design. Part 1: The Search for an Urban System, by Valter Balducci

Lesson 2. The Natural Space as a Structuring Material for the Urban Design. Part 2: Nature as Substrate and Structure, by Valter Balducci

Lesson 3. The Natural Space as a Structuring Material for the Urban Design. Part 3: Natural Space and Urban Transformation, by Valter Balducci

Lesson 4. Toward a More "Natural" City? by Jean-Marc Bichat (conference held at the ENSA de Normandie the March 7th, 2019).

Lesson 5. Uses of Mapping Territories and Urban Space, by Anne Portnoï

Total video time (145 min.)

Notes

[1] R. Maragliano, Pedagogie dell'e-learning, Bari, Laterza, 2004.

[2] https://www.cu.edu/moocs-vs-online-courses

[3] Menichetti L., 2014, Open education e modelli di apprendimento flessibile, Form@re, Open Journal per la formazione in rete, [S.l.], v. 14, n. 1, p. 5-21, mar. 2014. ISSN 1825-7321 Disponibile all'indirizzo: <http://www.fupress.net/index.php/formare/article/view/14750/13795>.

[4] Hill P. (2012), "Online Educational Delivery Models: A Descriptive View", Educause Review 85, November-December, 85-97.

[5] http://www.apprendimentocapovolto.it/le-piattaforme-mooc.html

[6] See also the document of the CRUI Foundation, MOOCs - MASSIVE OPEN ON-LINE COURSES: Prospettive e Opportunità per l'Università italiana. Available at https://moodle2.units.it/pluginfile.php/75836/mod_resource/content/1/MOOC_CRUI_VersioneFinale.pdf

[7] https://www.mooc-list.com/

[8] https://www.federica.eu/

[9] https://www.pok.polimi.it/

[10] https://book.unibo.it/

Lamberto Amistadi - Associate Professor in architectural and urban Design at the DA of the University of Bologna. He is deputy director of the online magazine "FAMagazine", devoted to research and projects concerning architecture and the city, and co-director of the series "TECA. Teorie della Composizione architettonica" (Clean). Along with Ildebrando Clemente, he founded and directs the series "SOUNDINGS: Theory and Architectural Openness" (Aión), which has included monographic volumes on John Hejduk and Aldo Rossi. He is author of numerous publications, including the books Paesaggio come rappresentazione (Clean, 2008), La costruzione della città (Il Poligrafo, 2012), Architettura e Città (with Enrico Prandi, FAEdizioni 2016).

In 2018 he won a position as Coordinator and Chief Science Officer in the European-level call of Erasmus+ Strategic Partnerships for Higher Education, entitled "*ArchéA* Architectural European Medium-Sized City Arrangement".

Enrico Prandi - (scientific coordinator of the Parma local unit), Associate Professor in Architectural and Urban Design, is departmental referent for Erasmus+ activities. Since 2010 he has been Erasmus + delegate for Architecture courses and in 2012 and 2013 he participated in the CCA project (LLP-Intensive Programme).

He is director of the Festival of Architecture, that organizes events (exhibitions, conferences, seminars, etc.) for the dissemination of architectural and urban culture. He is Director of the Open Access Scientific e-Journal FAMagazine. Research and Projects on Architecture and City (ISSN: 2039-0491, Scopus and WoS indexed, www.famagazine.it), Placement and Internationalisation experts, Urban Design Expert. His pubblications include: L'architettura della città lineare (FrancoAngeli, Milan 2016); "The Architectural Project in European Schools" (in European City Architecture, FAEdizioni, Parma 2012); Mantova. Saggio sull'architettura (FAEdizioni, Parma 2005).