Design Institutes and Design Studios. Cases of Permeability Between Teaching and Practice (Including Research)

Publisher copyright

(Article begins on next page)

Michela Barosio
Elena Vigliocco
Santiago Gomes *Editors*

School of Architecture(s) – New Frontiers of Architectural Education

EAAE Annual Conference—Turin 2023

OPEN ACCESS

Springer

Springer Series in Design and Innovation   47

Springer Series in Design and Innovation (SSDI) publishes books on innovation and the latest developments in the fields of Product Design, Interior Design and Communication Design, with particular emphasis on technological and formal innovation, and on the application of digital technologies and new materials. The series explores all aspects of design, e.g. Human-Centered Design/User Experience, Service Design, and Design Thinking, which provide transversal and innovative approaches oriented on the involvement of people throughout the design development process. In addition, it covers emerging areas of research that may represent essential opportunities for economic and social development.

In fields ranging from the humanities to engineering and architecture, design is increasingly being recognized as a key means of bringing ideas to the market by transforming them into user-friendly and appealing products or services. Moreover, it provides a variety of methodologies, tools and techniques that can be used at different stages of the innovation process to enhance the value of new products and services.

The series' scope includes monographs, professional books, advanced textbooks, selected contributions from specialized conferences and workshops, and outstanding Ph.D. theses.

The volumes of the series are single-blind peer-reviewed.

Keywords: Product and System Innovation; Product design; Interior design; Communication Design; Human-Centered Design/User Experience; Service Design; Design Thinking; Digital Innovation; Innovation of Materials.

How to submit proposals

Proposals must include: title, keywords, presentation (max 10,000 characters), table of contents, chapter abstracts, editors'/authors' CV.

In case of proceedings, chairmen/editors are requested to submit the link to conference website (incl. relevant information such as committee members, topics, key dates, keynote speakers, information about the reviewing process, etc.), and approx. number of papers.

Proposals must be sent to: series editor Prof. Francesca Tosi (francesca.tosi@unifi.it) and/or publishing editor Mr. Pierpaolo Riva (pierpaolo.riva@springer.com).

Michela Barosio · Elena Vigliocco ·
Santiago Gomes

Editors

School of Architecture(s) - New Frontiers of Architectural Education

EAAE Annual Conference—Turin 2023

∅ Springer

Editors
Michela Barosio
DAD
Politecnico di Torino
Turin, Italy

Elena Vigliocco
DAD
Politecnico di Torino
Turin, Italy

Santiago Gomes
DAD
Politecnico di Torino
Turin, Italy

School of Architecture(s)

The Torino EAAE Annual Conference 2023 investigates the plurality of architecture as a discipline and the role of architectural education in training, questioning, and practising this plurality. This plurality is intended in terms of approaches, methods, topics, and values. The conference has been an occasion to think differently, reflecting upon the context of the discipline to understand the knowledge of the future, focusing on the question: what is Architecture in the age often described as post-architecture? This new perspective allows us to call into question some historical grounding principles of architectural education: the schools of architecture as a place where a style, a language is transmitted through the technique of the imitation of the masters, the everlasting character of the architectural artefacts built to last and the role of the architect as individual solely talented interpreter and author of architectural and urban artefacts.

A reflection on the ways of transmitting architectural knowledge, specifically design skills, in the age of post-architecture is needed. Several models of architectural education still coexist in the European context. Some of them still refer to the educational model of the Beaux-Arts. Settled in France at the end of the seventeenth century, this model was the first example of architectural schooling, further developed in the eighteenth century by François Blondel. It is still a pedagogical reference for many architectural schools. The central learning experience was structured around small independent ateliers where students learned directly under a "master", following his direction and imitating his language and practice under a strict hierarchy. Two other activities completed the Beaux-Arts way of teaching: The annual Paris Salon, where the best students' works were selected and displayed to the public, and the Parisian life of cafés, an informal extension of the ateliers, where design tendencies were discussed. Opposite to this model is the Polytechnic approach. Dating back to the Ecole Polytechnique, a military educational institution established in France at the end of the eighteenth century, this way of teaching aims to transmit technical-oriented knowledge, focusing on developing skills and competencies more than styles or tendencies. Contemporary schools of architecture tend to combine these two approaches with different balances. Some schools are still grounded on recognized masters leading the design approach of the school, while others decide to aim for the implementation of strategic topics to be developed through different learning experiences or to focus on specific design methodologies in order to build a school of thought more than a style of the school [1].

Thinking the Acropolis in Athens or the San Vitale di Ravenna in Italy as architectures built to last, together with Moneo we can say that buildings are always alone [2]. The architectures that have come down to us from the past have stood the test of time because societies have absorbed and inhabited them without distorting them. In the contemporary debate, however, we talk about the fragility of architecture and its temporary character. The contemporary question, however, is not the architecture itself but rather the modification of the reasons that determine its production. If Architecture was

celebratory in the past and built to restore authority and power, today, Architecture has seen this role reduced. In the past, only those with a role of power asked for Architecture.

On the contrary, today, the demand for Architecture manifests itself through countless possibilities and different objectives. The expansion of users with a demand for Architecture has increased the variety of designed themes. Furthermore, starting from the nineteenth century, the collapse of most travel restrictions has further increased the possibility of contamination, and what once belonged to a specific place is today worldwide spread—just think of the role that International Exhibitions have had in history. We can observe extreme situations in which the Eiffel Tower and the Egyptian Pyramids are rebuilt on a scale in Las Vegas, and in cities worldwide, we can see the same architecture resulting from a globalised culture. If contemporary architectures are often not designed for a specific context, they are more and more designed for a specific lapse, waiving the everlasting ambition of classical architecture.

At the same time, in parallel with the process of globalised homologation that seems to characterise a large part of the material outcomes of architecture in the contemporary condition, the complexification of production processes, the articulation of an ever-increasing number of subjects and demands, and the intensification in the possibilities of exchange, communication, and knowledge are radically transforming the profile of the architect [3]. The mandate that societies assign to architecture is constantly evolving and mutating and, as a consequence, the figure of the architect is also being actualised, leading to the redefinition of the central target of practice in a shift in which the construction and the building, the objects, lose centrality in favour of an ever greater focus on the individual, the community, and the subjects [4].

Furthermore, while it is true that the discipline's interest in community practices, in the participation and inclusion of citizenship in the city's production processes, and the social role of the architect-designer is not new, and that these themes have characterised the debate for a good part of the last century, the scope and the reasons for the rebirth of this interest today have radically changed and transversally reach all professionals, regardless of their civic and political engagement and positioning. It is a transformation of practice that is reflected in the image that architects have of themselves, both inside and outside the discipline, which explains the radical transformation of working methods, the articulated and diversified cultural production of architects' offices and collectives, and the urgent need to rethink and redefine the aims and purposes of the pedagogical proposals offered by schools of architecture, or rather, of architecture(s).

In this context, the conference endeavours to elucidate a contemporary, more expansive, and inclusive definition of architecture by examining six pairs of antinomian concepts. These pairs include architecture as a method and/or as a discipline; architecture of the Masters and/or of the topics; architecture for architects and/or for the community; architecture as avant-garde and/or market-oriented; architecture inside and/or outside the wall; and architecture disciplinary and/or extra-disciplinary.

<div align="right">
Michela Barosio
Santiago Gomes
Elena Vigliocco
</div>

References

1. Kaps V, Staub, P (eds) (2018) New schools of thought: Augmenting the field of architectural education. Zurich, Triest Verlag Fur Architektur.
2. Moneo, R (1999). La solitudine degli edifici e altri scritti. Torino, Allemandi
3. Gutman, R (1997) Architectural Practice: A Critical View. New York, Princeton Architectural Press.
4. UNESCO-UIA. Charter for Architectural Education (updated July 2023) https://www.uia-architectes.org/wp-content/uploads/2023/08/FINAL_UNESCO-UIA_CHARTER2023.pdf, last accessed 2024/06/04.

Organization

Local Organizing Committee

Barosio, Michela	Politecnico di Torino
Crapolicchio, Martina	Politecnico di Torino
Gomes, Santiago	Politecnico di Torino
Gugliotta, Rossella	Politecnico di Torino
Vigliocco, Elena	Politecnico di Torino

Scientific Committee

Atalay Franck, Oya	Zurich University of Applied Sciences
Barosio, Michela	Politecnico di Torino
Bologna, Alberto	Sapienza Università di Roma
Boutsen, Dag	KU Leuven
Cabrera, Ivan	Universitat Politècnica de València
Cavallo, Roberto	TU Delft
Corradi, Emilia	Politecnico di Milano
Flynn, Patrick	TU Dublin
Roth-Čerina, Mia	University of Zagreb
Santanicchia, Massimo	Iceland University of the Arts
Scala, Paola	Università Federico II di Napoli
Stewart, Sally	Glasgow School of Art
Valente, Ilaria	Politecnico di Milano
Xavier, João Pedro	FAUP Universidade do Porto
Zupančič, Tadeja	University of Ljubljana

Organized by

European Association for Architectural Education
Association Européenne pour l'Enseignement de l'Architecture

Sponsored by

Reviewers

Ali, Ahmed K.	Texas A&M University
Blanco, Manuel	Universidad Politécnica de Madrid
Boano, Camillo	Politecnico di Torino
Bologna, Alberto	Sapienza Università di Roma
Boutsen, Dag	KU Leuven
Cabrera, Ivan	Universitat Politècnica de València
Caliskan, Olgu	Middle East Technical University
Cavallo, Roberto	TU Delft
Corradi, Emilia	Politecnico di Milano
Dessì, Adriano	Università degli Studi di Cagliari
Dhlavacek, Dalibor	Czech Technical University in Prague
Ferrando, Davide Tommaso	Free University of Bolzano
Flynn, Patrick	TU Dublin
Geddes, Ilaria	University of Cyprus
Gullberg, Johanna Sofia	Norwegian University of Science and Technology
Ieva, Matteo	Politecnico di Bari
Lo Turco, Massimiliano	Politecnico di Torino
Macaluso, Luciana	Università degli Studi di Palermo
Maretto, Marco	Università degli studi di Parma
Mariné, Nicolás	Universidad Politécnica de Madrid
Mariolle, Beatrice	ENSAP Lille
Marzot, Nicola	Politecnico di Torino
Massarente, Alessandro	Università di Ferrara
Mattone, Manuela	Politecnico di Torino
Minucciani, Valeria	Politecnico di Torino
Mueller, Felix	FH Münster
Pedersen, Claus	Aarhus School of Architecture
Ricchiardi, Ana	University of Cyprus

Rolando, Diana	Politecnico di Torino
Roth-Čerina, Mia	University of Zagreb
Scala, Paola	Università Federico II di Napoli
Segapeli, Silvana	ENSA Saint-Étienne
Sentieri, Carla	Universitat Politècnica de València
Stewart, Sally	Glasgow School of Art
Trisciuoglio, Marco	Politecnico di Torino
Valente, Ilaria	Politecnico di Milano
Weischer, Martin	FH Münster
Zupančič, Tadeja	University of Ljubljana

Contents

Roots of Architecture: Ways of Research

Branches of Architecture: Ways of Practice

Ways of Architecture(s)

Design Institutes and Design Studios

Cases of Permeability Between Teaching and Practice (Including Research)

Marco Trisciuoglio[1,3]([✉]) and Bao Li[2,3]

[1] Politecnico di Torino, Torino, Italy
`marco.trisciuoglio@polito.it`
[2] Southeast University, Nanjing, People's Republic of China
[3] "Transitional Morphologies" Joint Research Unit SEU/PoliTo, Nanjing, China

Abstract. The contribution describes an urban design teaching activity developed in the last eight years (2016–2023) at the top School of Architecture in China. Several Design Studios "Urban morphology, architectural typology, contemporary settlement patterns" has been held at the School of Architecture, in Southeast University Nanjing, China.

One of the main features of the teaching activity has been the strong connection with the practice activities developed within the Design Institute of the same University, such as the Urban Architectural Lab, founded in 2006 as part of the historic Architects & Engineers Co. Ltd. of the same university.

The role of the Design Institutes is specific of the Chinese context, where those public structures are the legacy of the process of collectivization of the professions promoted during the Fifties. The strategic role of the Design Institutes located in the universities allows nowadays not only high quality in design productions, but also the opportunity for students to face real topics of great complexity and to improve their competencies: in design as well as in socio-economic management.

The aim of the contribution is also quoting some urban regeneration projects developed in Nanjing historical urban tissues where the connection between Design Institute and Design Studios was fruitful and strong, from the choice of the topic and the surveys to the exams involving stakeholders within the final jury.

Keywords: Design Studios · Design Institutes · China · Urban regeneration · Urban morphology

1 The Role Played by Design Studios in Chinese Urban and Architectural Design Education

Architectural education in China dates back to a specific date, 1927. In that year, in the Capital city of Nanjing, the first university course aimed at teaching the practice of architectural design was activated.

The institution that takes charge of this initiative was the National Central University (later Nanjing Institute of Technology), divided from 1952 in two different main

high education institutes: the "generalist" Nanjing University (NJU) and the "technical" Southeast University (SEU). This last one, with its School of Architecture SEU-Arch, is considered as the heir of that tradition of the first School of Architecture based in 1927 within the National Central University.

Four are considered the founding fathers of modern Chinese architecture: Liang Sicheng, Liu Dunzhen, Yang Tingbao and Tong Jun. If Liang Sicheng (1901–1972) was the "inventor" (overall operative in Beijing) of historical Chinese architecture as field of knowledge, Liu Dunzhen (1897–1968) founded, as Japanese trained scholar founding the earliest architectural departments in China in 1920s at Suzhou Technical School, Tong Jun (1900–1982) became the leading expert on Chinese garden art, Yang Tingbao (1901–1982) was probably the greatest architect of all of them, crossing the twentieth century with a precise attention to the relationship between tradition and innovation. The last three are directly involved in the establishment of the Nanjing school, while the first one, Liang Sicheng, had a decisive role in the foundation of the Beijing School (at the Tsinghua University), as well as representing an intellectual figure who more than others had the merit, starting from the 1920s, of revealing to the world the existence of a historical Chinese architectural culture of a level and importance equal to the Western classical one.

The Chinese pedagogical model in architecture is imported, in a sort of global circle of references [1]. Many of the Chinese architects who trained in the first half of the 1920s did their studies either in Japan or in the United States. There, in particular, in Philadelphia, at Pennsylvania University, a French architect and professor, Paul Philippe Cret (1876–1945), trained at the Ecole des Beaux Arts in Lyon, was active. Most of the younger professor of late 1920s studied at "Penn", where that French Master had brought the Fine Arts way to teach design. Thus, the Western method of teaching architectural design in Design Studios arrived in China from the US, at the foundation of the Chinese Schools of Architecture in late Twenties on the basis of a European eclectic model [2].

For all these reasons, the pedagogical system on which the Chinese architecture school is built is precisely the "beaux arts" one: an atelier in which a few students (a dozen at most) refer by imitation to a Master who guides them in dealing with precise and given design themes, strong in conspicuous collections of repertoires and catalogs from which to draw ("copying", so exercising the main action of nineteenth-century art, or in the most extraordinary cases reinterpreting, through minimal scraps of minimal emancipation gain from a given model).

Nowadays, Design Studios still exist. In the work of students, the imitation of the Master's design work in Fine Arts ateliers has been replaced by forms of discussion with teachers upon design works and the attempt of investigating more and more design questions (for example the urban contexts) by collecting data is one of the main phases of the work. The design process is defined as an incremental step-based process, which involves different stages: diagnosis of the context, envisioning exercise and development of a number of design options, selection of a design alternative and implementation.

2   The Role Played by Design Institutes in Chinese Professional Practice Ecosystem in Urban and Architectural Design

The Design Institutes are Chinese bodies governed by public law, responsible for the design of works, neighborhoods and urban settlements. After 1949, with the establishment of the People's Republic of China, collectivism radically transformed the work system, no longer oriented towards the market and capitalist profit, but towards effectiveness and efficiency, with respect to the functions to be performed. The old liberal professions are obviously overwhelmed by this revolution. The two main professions (those to which the European Union still today recognizes a special status today due to their necessity for people's lives), those linked to the practice of medicine and architecture, are interpreted in the pivotal role of public utility and therefore it is decided that they be carried out within specific structures. In this sense it can be said that, at least initially, the design institutes (first located within local, municipal or provincial government structures, then also within public universities) are for architects, engineers and planners, at least in their conception and in their functioning, what the hospitals or clinics are for doctors and surgeons [3].

Following the first Five Years Plan (towards a collectivistic transformation of China), in 1952 the East China Industry Bureau Architectural Design Company, as the first Shanghai's state-owned Design Institute, was established. From that moment, the Design Institutes will become the main actors of the architectural and urban transformation until nowadays in China Mainland.

Nowadays, even after the Chinese economic and commercial reforms of the 1990s, design institutes continue to occupy a predominant role in the panorama of Chinese professional practice. There are, as in the whole world, large and powerful private design companies, some of which are multinational in nature, and there are also small studios that offer a sort of brand of their products (with a large circle of real architects/artists with personalities relevant, often at the level of the great international star-architects), but the power of the public design institutes remains unshakeable: they are reliable, have important tools, human resources and skills, a great ability to deal with the public sector of which they are part, often (from within the universities where they are located) have the opportunity to experiment [4].

In China, Design Institutes (within universities or within municipalities) are the dominant subject in the professional environment, where they are the key between local government and developers (as, for example, in the key area of Yuzui CBD of Hexi New City with the interplay among urban infrastructures, ecological resources and high-rises in vertical dimension) [5].

The general framework described here should also be considered as a possible operational horizon to which a Chinese architecture student today aspires: the average student expects to work in a large company (design and development companies carry out frequent enrollment sessions within schools, directed at final year bachelor students), while he/she dreams of doing an apprenticeship that will one day allow him/her to open a business (his own or in a small group) as an independent designer. However, also considering the great difficulties of the Chinese national exam for the qualification to practice the profession which very few are destined to pass and which confers an almost purely notarial seal in the project validation/approval process, the best, most prepared

and most disciplined students are immediately involved in the design institutes and saw operational careers of some interest opening up.

3 "Urban Morphology, Architectural Typology, Contemporary Settlement Patterns" (SEU Nanjing, from 2015)

The Design Studios "Urban morphology, architectural typology, contemporary settlement patterns" held at the School of Architecture in Southeast University (Nanjing, China) are working, since almost a decade (2015–2024), in strong connection with the Design Institute of the same University «Urban Architectural Lab» founded in 2006 as a part of the historic Architects & Engineers Co. Ltd. of the same university.

Design studios have not changed much in the century that has now passed since the founding of the architecture school in China, at least in a high-ranking public university like Southeast University and many others. Above all, the pedagogical structure has remained unchanged. There is always a very small number of students (from 6 to 12) who present themselves as a team. The teacher prefers to exercise his authority with a guiding role (through his projects and/or through its methodological approach), rather than becoming a trainer of students in a series/sequence of practices that can be used in a professional context. The type of project training is still firmly anchored to the evaluation of the formal, constructive and functional outcome of the project action, rather than to the enhancement of the student's educational path read in the form of a design process (Fig. 1).

However, the themes are very current and similar to a lot of architecture schools around the world: the use of innovative technologies and construction systems, the dialogue with traditional forms and techniques also in terms of sustainability, the use of performance satisfaction metrics, the comparison with an elderly and weak society, the search for design solutions capable of developing the opportunities offered by digital devices, the question of heritage as element able to switch on fruitful connections between tourism and marketing.

The themes of urban regeneration have had a certain importance, especially in the last ten years. The innovative design studio named "Urban morphology, architectural typology, contemporary settlement patterns" was experimented in Nanjing from 2015. There, a favorable connection between the Chinese Southeast University and the Italian Politecnico di Torino created the conditions for joint teaching actions, based on a simple mission: using the standard morphological-based method that was characteristic of the Italian school of urban analysis and urban design to teach students how to read the settlement forms, the spaces and the urban objects of the Chinese city (including urban fabrics) and also to design accordingly [6].

This has allowed the conceptual tool represented by the Italian typo-morphological tradition to update itself by dealing with a new theme such as that of the Asian city, and the question of the urban regeneration of the Chinese city to find new possible approaches, not necessarily based on new urbanism practices. or of pushed gentrification, but ultimately oriented (as we will see) on protocols of innovative participatory forms directly played on aspects of urban form.

Fig. 1. Studies on the transitional morphologies of the XiaoXiHu block in Nanjing (Qinhuai District), from the Design Studio "Urban morphology, architectural typology, contemporary settlement patterns" at SEUArch 2018 (Professors Bao Li and Marco Trisciuoglio), traditional typologies and their renovation (from Archive "Transitional Morphologies" Joint Research Unit)

Thus, the first aim of the Design Studios is practicing fundaments of urban morphology and buildings typology in order to read the urban spaces and artefacts. The second aim of the Design Studios is using that reading activity in order to look for innovative design solutions for the contemporary city. The teaching activity is based on the reading of the Chinese city of nowadays and the work in the Design Studios is organized by weekly collective discussions about design development.

A series of more or less extensive areas (in any case at the scale of the urban project, between 1:200 and 1:1000, with in-depth analyzes at 1:100 scale), located in Nanjing or in other Chinese areas, have been the subject of the attention of teachers and students.

Without necessarily distorting the traditional pedagogical structure of the Design Studio, this experiment makes use of at least two important innovations. The first innovation consists in addressing real and not hypothetical issues, having them suggested directly by the Design Institute of the same university (therefore with the involvement of stakeholders both at the level of developers and at the level of politicians and managers directly operational on urban regeneration practices). The second innovation consists in hiring, alongside the usual dozen undergraduate students, about half of master students with the organization of three-person working groups, made up of two undergraduates and one master students, where mentoring by the older students becomes fundamental.

Based on the concepts of TECTONICS, TYPOLOGY and TOPOGRAPHY, the Design Studio lets bachelor and master students together investigate on the interplay between tradition and modernity (through design activities as surveys, sketches, models, diagram) [7] (Fig. 2).
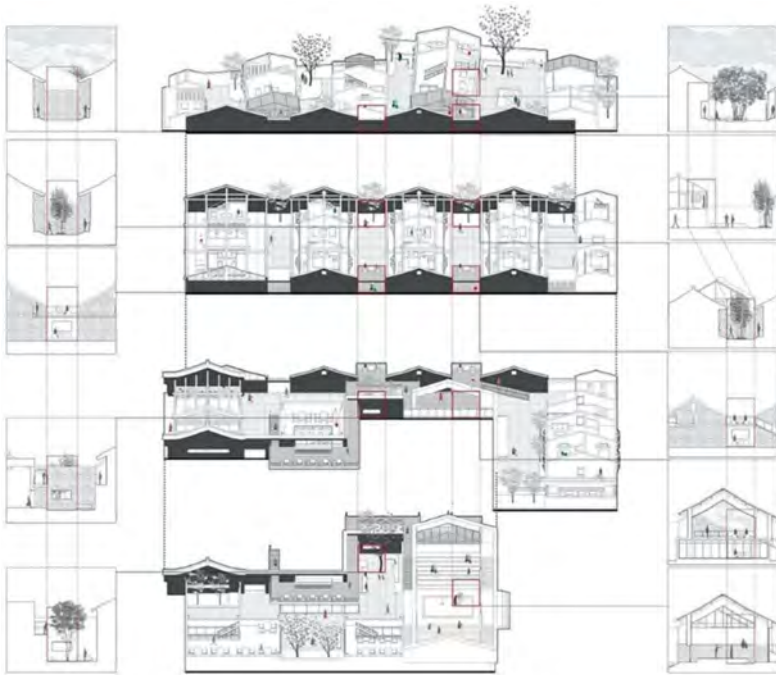

Fig. 2. Studies on the transitional morphologies of the XiaoXiHu block in Nanjing (Qinhuai District), from the Design Studio "Urban morphology, architectural typology, contemporary settlement patterns" at SEUArch 2018 (Professors Bao Li and Marco Trisciuoglio), detail of the entrance (from Archive "Transitional Morphologies" Joint Research Unit)

The master students are not only more adults. It in a pedagogical system like the Chinese one (which is American-style 1+4+2, i.e. one preparatory year, four undergraduate years and two optional master's years), they are often the ones already involved in work as an internship within the school and departments, able to develop, with the relevant professors, projects in preliminary stages intended for the design institutes, when not directly projects already being developed within the design institutes.

4   The «Architectural Lab» Within the Context of the Historical Architects & Engineers Co. Ltd (SEU Nanjing, from 2006)

It should not be thought at all that design institutes are anonymous professional bodies, capable of providing a low-quality service that is in no way comparable to that provided by large design companies or celebrated star architects. In the Chinese system, the reciprocal roles of architecture schools, renowned designer architects, the world of communication that revolves around design, public developers and local governments are very different from those in Europe (and, above all, the university has a pre-eminence of position which is still relevant today).

In this context, it is not uncommon for important practitioners, who are also professors, to set up their own professional studio within the same design institute. One of the most interesting realities on the Chinese professional scene in recent years has been the Urban Architectural Lab of the Southeast University of Nanjing.

The Urban Architectural Lab (UAL), founded in 2006, is based at and part of the Architects & Engineers Co. Ltd., the Design Institute of Southeast University (around 580 employees versus the 800 at the Design Institute at Tsinghua University).

The core members of UAL began the team's professional activities in 2000 and after around 20 years of development, the team has now more than 50 members: 5 architects and faculty, 15 full-time architects, 30 among PhD students and master students.

It is a separate structure, more streamlined than the great Design Institute, and directed today by Han Dongqing, former Dean of the School of Architecture, well known Master of urban and architectural design [8].

The Design Institutes signed at 2020 around 70 projects (mostly in Nanjing), some of them are very important works, published on international journals as demonstrative. One interesting case for the SEU Design Institute UAL is the reconstruction in Nanjing, with a great symbolic intention, of the Jinling Da Bao En Temple (financed in 2015 by the investor Wang Jianlin of Dalia Wanda Group), the former Porcelain Tower, described in 17th century as one of the Seven Wonders in the World [9].

Being part of an academic environment (or the bridge between the academic world and the practice world), the activity of the Design Institute is often not only focused on design, but also on methodological investigations. In the last three years, for example, UAL made great efforts in linking ownership's data with typo-morphological map in order to improve innovative participatory models, for the for the implementation of large and innovative urban regeneration projects.

5   The Southern Part of the Walled Center of Nanjing Between Real Estate and Urban Regeneration

Nanjing today still retains much of its Ming-era city wall (when it was Capital City of Chinese Empire). The southern part of the city in particular, called Qinhuai District and crossed from west to east by a navigable canal, still shows large parts of the ancient city, with its urban fabric made up of courtyard houses. Of course, much of the extension of this sector (which still constitutes a fifth of the surface area of historic Nanjing enclosed by the walls) is also irremediably compromised by the presence of functionalist building types built between the 1960s and the 1980s, by the presence of a series of road infrastructures that do not respect historical routes, by the looming heavy gentrification, especially of a commercial nature, which has significantly altered the urban spaces of the traditional city [10, 11].

For a first-level Chinese city, capital of the province of Jiangsu, the most technologically advanced of all the provinces of the People's Republic, therefore with prospects of a lively city of the future, the theme of urban regeneration is urgent. Furthermore, the general conditions of the historical spaces and buildings aren't at a level so sufficient to let inhabitants live in a safe and healthy way. However, the sense of community is very strong: every house, every small courtyard, every person tells stories about the places and the vivid daily life into them [12].

Over the last twenty years the local government has sequentially experimented with three different regeneration methods. A first phase, with an exquisitely commercial imprint, has reconstructed the urban fabric around the Confucius Temple (Fuzimiao) through an operation dictated by a pop culture of tourism and tradition. A second phase, suggested by unbridled real estate practices, razed part of the historical fabric to the ground (in Laomendong), moving the resident population to much more functional

suburbs and creating very expensive and refined urban villas in the choice of materials, all immediately sold but all left irremediably uninhabited. A third phase, based on the direct involvement of citizens, has in fact invented almost from scratch a participation system which has borne excellent and clearly extraordinary results (for example in the case of the Xiaoxihu block) (Fig. 3).

Fig. 3. View of the regeneration project at Xiaoxihu, Nanjing 2023 (photo by Author).

The stubbornly sought connection between the activities of the Design Institute and the activities of the Design Studio contributed significantly to the development of this third phase, after the local government asked SEU a help to find different design processes after the experiences of Fuzimiao and Laomendong.

In fact, for the first time, starting around six/seven years ago, the involvement of stakeholders, developers and local decision makers has intensified in the discussion of the outcomes (even partial) of the training activity conducted by the Design Studios. At the same time, the Design Institute entrusted entire sections of blocks to be redeveloped to some of the teachers directly operating in the same project areas [13].

In this way, on the one hand the approach of the Design Studio took strictly into consideration professional opportunities gradually proposed to the Design Institute, on the other hand the work carried out with the students immediately found a testing ground in entire passages of the real city. In short, an incredible virtuous circularity has been created between operators and students, under the guidance of designers/professors capable of keeping the world of study and that of the profession closely together.

6 The Regeneration of the Block XiaoXiHu as a Living Lab for Students' Design Investigation. Coincidences

Within the context of a series of Design Studios, students analysed the pilot block of Xiaoxihu (very close either to Laomendong or to Fuzimiao) in order to demonstrate a more careful approach to what still exists (and what was existed) of the old town.

The design activity within the Design Studios (attended by mixed groups of Bachelor and Master Students) gave some first important guidelines and suggestions for the future uses of buildings and spaces and for the image of Xiaoxihu.

The final results of Design Studios were an important pre-figuration of the possible processes to reactivate ways of living in the block, with its internal spaces and its paths, so as to recreate the typical porosity of traditional fabric and daily life.

The system of images produced within the Design Studios and the results of the physical and social surveys became shared element of critical discussion in the context of the Design Institute, in a harmonious relationship of reciprocity where the two institutions, the didactic one and the professional one, have worked "shoulder to shoulder" (Fig. 4).

Fig. 4. View of the regeneration project at Xiaoxihu, Nanjing 2023 (photo by Author).

A first result was a real urban regeneration project nowadays almost completed, which won the 2022 UNESCO Asia Pacific Award for Cultural Heritage Conservation.

A second result was the improvement of the competences of students, thanks to the opportunity to work on real project in the connection Design Studio + Design Institute.

The more important result was the regeneration and the improvement of the urban social daily life of the Xiaoxihu block, through a mix of technical skills and investigation for innovation (Design Institute) and braveness, imagination and attention in design (Design Studios).

Xiaoxihu is today an important demonstration project in China.

The shared activities between Design Studios and the Design Institute helped a lot the scientific research: papers, books, seminars, international conferences, PhD dissertations were and are promoted, also deeply supporting the activities of the "Transitional Morphologies" Joint Research Unit (established in 2018 between Southeast University and Politecnico di Torino) [14].

Generally speaking, in China, the permeability between Design Studios and Design Institutes was until now not only advantageous from the point of view of both project training and the choice of specific design solutions to the detriment of others. Actually, it has allowed us to identify and develop important lines of research. One of these concerned, for example in Nanjing, the possibility of creating "augmented" urban typological maps with property and land value data deduced from the intersection of old land registers with a current survey of building structures and also of housing conditions. Another line of research prefigured, tested and then verified an innovative participation system based in Nanjing on the so called "diagram of the five actors" (local government, developers, designers, insiders and outsiders) and on the possibility of alienating part of the families' assets in favor of activities of microeconomics to be achieved in the most complete respect of building types and settlement morphologies. The most recent line of research concerns, always in Nanjing, the monetary valorization of urban spaces and objects involved in participatory negotiation, imagining connections between urban morphology and urban economics.

All three of these shortly described three lines of research used, as a case study, the Xiaoxihu block, located in the Qinhuai District, characterized by the presence of some structures from the historical era and also by a very high number of modern compromises. For some years now, the block has been the subject of redevelopment actions which aim not only at the mere protection of the buildings placed under protection, but also and above all at identifying new, "transitional" roads to prefigure the urban settlement of the future.

As mentioned above, Xiaoxihu's project won the 2022 UNESCO Asia Pacific Award for Cultural Heritage Conservation. At the same time, the same block became the subject of some Design Studios also held in Italy, at the Politecnico di Torino. One of the purposes of the connections established between the Politecnico di Torino and Southeast University is in fact to mutually exchange experiences and solutions, again in pedagogy, research, urban design practice.

References

1. Li, X., Chong, K.H.: Implications of Chinese architectural education in contemporary Chinese architecture. J. Archit. **8**(3), 303 (2003)
2. Cody, J.W., Steinhardt, N.S., Atkin, T.: Chinese Architecture and the Beaux-Arts. University of Hawaii Press, Honolulu (2011)

3. Trisciuoglio, M., Lei, J.: L'ombra della pagoda. Note sul progetto di architettura tra mestiere e scuola nella Cina contemporanea. In: Giovanni Rocco Cellini. La domanda di architettura. Le risposte del progetto. Atti del VI Forum della Società scientifica nazionale del progetto. Docenti ICAR 14-15-16 ProArch, pp. 130–133. Roma, (2018)
4. Wu, F., Xu, J., Gar-On Yeh, A.: Urban development in post reform China. State, market, and space. Routledge, New York, Oxon (2007)
5. Santi, E.: Il 'dispositivo' dell'architettura sperimentale cinese. Identità e soft power nell'era del sogno cinese. Territorio 76 (2016)
6. Bao, L., et al.: Typological Permanencies and Urban Permutations. Design Studio of Regeneration in Hehua Tang Area. SEU Press, Nanjing (2017)
7. Trisciuoglio, M., Bao, L.: Capire le Città Cinesi. Ri-Disegnare gli Strumenti Italiani/Understanding Chinese Cities. Redesigning Italian Methods. Agathón. In: International Journal of Architecture, Art and Design 3 (Didattica e Progetti nelle Scuole di Architettura. Teaching and Projects of Architecture Schools), pp. 123–132 (2018)
8. Han, D., et al.: Multiple dimensions of urban design development from a practice perspective: a case study of an institute in Nanjing. Front. Archit. Res. **10**, 79–91 (2021)
9. Anonymous: The Porcelain Tower of Nanjing: History and Legacy of One of the China's Most Famous Buildings. Charles River Editors, Amazon Kindle (2017)
10. Chen, F., Thwaites, K.: Chinese Urban Design. The Typomorphological Approach. Ashgate, Farnham Burlington (2013)
11. Jiang, L.: Morphological research of the historical urban boundary. In: The Inner Fringe Area of Nanjing, Nanjing/Torino. Transitional Morphologies" Joint Research Unit/Southeast University – Politecnico di Torino, Nanjing/Torino (2019)
12. Tang, L., Li, Q., Ding, W.: The role of urban design in urban regeneration process – an urban design research in Nanjing, China. In: 9th IFOU Conference - International Forum on Urbanism. The 9th International Conference of the International Forum on Urbanism (IFoU) 2016 Buenos Aires/UBA, FADU (2016). https://www.researchgate.net/publication/316787487_THE_ROLE_OF_URBAN_DESIGN_IN_URBAN_REGENERATION_PROCESS_-AN_URBAN_DESIGN_RESEARCH_IN_NANJING_CHINA. Accessed 18 May 2024
13. Dong, Y., Han, D., Trisciuoglio, M.: A graphical method of presenting property rights, building types, and residential behaviors: a case study of Xiaoxihu historic area, Nanjing. Front. Archit. Res. **11**, 1077–1091 (2022)
14. Trisciuoglio, M., et al.: Transitional morphologies and urban forms: generation and regeneration processes - an agenda. Sustainability **13**, 6233 (2021)