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The central role of learning

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POLITECNICO
MILANO 1863

DIPARTIMENTO DI ARCHITETTURA
E STUDI URBANI



DIPARTIMENTO
D'ECCELLENZA
FRAGILITÀ TERRITORIALI
2018–2022

 **TU**Delft

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DESIGN ACTIONS FOR SHIFTING CONDITIONS

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CITY MAKING IN TIMES OF TRANSITIONS. THE CENTRAL ROLE OF LEARNING

Roberto Cavallo

Introduction

Europe with its large variety of cities has to cope with a range of current challenges, such as rising urbanization, mobility, energy and environmental pressure. Already by now the environmental pressure on cities, due to extensive car ownership and use and due to the distribution of goods, have forced cities to limit access for polluting vehicles. Yet, the daily urban system of large and mid-sized cities is pushed to its limits due to an ever-growing mobility and transport demand stemming from metropolitan and regional spatial developments. While cities are attracting more and more people and will keep doing so in the next years, economic growth and social segregation are dividing them in neighbourhoods where its inhabitants are stigmatized by their identity and reputation. In short, the quality of living in our cities is under threat.

The cities of today and tomorrow need to consider more and more different and sometimes diverging issues in order to keep their attractiveness and become truly inclusive. But it is not only about reducing the CO₂ emissions and improving the built environment in terms of measurable performances. In this framework, the New European Bauhaus (NEB) initiative¹ launched in 2020 by the president of the European Commission Ursula von der Leyen, underlines the importance of linking the European Green Deal² to the people via more cultural and human centred ways of doing. Through the three pillars 'Sustainability (including circularity), Quality of experience (including aesthetics) and Inclusion (including affordability)', the NEB is pushing for the development of an interdisciplinary movement aiming at connecting people, built environment and nature, where art, culture and science play a central role to envision and design the future.

In short, the above-mentioned calls for stronger engagement of professionals in the built environment not only with users and stakeholders, but also with people and society in a broad sense. Therefore, linking professionals with each other, connecting various views and perspectives that are at the base of how professionals develop themselves, and at the same time enhancing inclusion and active citizenship, are fundamental steps to be made towards a better society. Learning and keep learning is herein pivotal.

¹ See: https://europa.eu/new-european-bauhaus/about/about-initiative_en.

² See: https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en.



Imagine of the intermediate results participatory Lab 'Educating for the built environment: life-long and "life-wide" learning in arts, architecture and engineering', NEBC conference 'Common Ground: Making the Renovation Wave a Cultural Project'. (screenshot: R. Cavallo)

Learning across disciplines and design as inquiry

«For years my family poked fun at me for saying, after some hesitation, 'Bunt ist meine Lieblingsfarbe'. (Multi-coloured is my favourite colour). The strong desire to include every vital component of life instead of excluding part of them for the sake of too narrow and dogmatic an approach has characterized my whole life». (Gropius 1962)

This pandemic period is laying bare some vulnerable sides of our society. What is happening in this remarkable time confirms the fact that we have to relate more than ever to an increasingly complex and unpredictable reality and deal with a wide range of interdependent and unstable factors stemming from different disciplinary realms that are disconnected to one another. Uncertainty and wicked problems (Rittel and Webber, 1973; Buchanan, 1992) at the one hand, and the constantly growing drive for specialization that brought us into the 'era of hyperspecialization' (Malone, Laubacher and Johns 2011, Millgram 2015, Douglas 2018) at the other. Meanwhile, today's society has to face challenges that are becoming more and more integrative in their nature, requiring cooperation among different disciplines.

As early as 1919, among the basis principles of the Bauhaus, Walter Gropius advocated about the «[...] common citizenship of all forms of creative work, and their logical interdependence on one another in the modern world» (Gropius 1962). Working towards the training of next generation of professionals, with the emphasis on their cooperation which «[...] symbolizes the co-operative organism of what we call society» (Gropius 1962), was at the centre of the Bauhaus mission. And as matter of fact, after a century, we are facing similar issues. Let's pose the question to ourselves: where does the knowledge reside? Knowledge has many facets in our discipline, even if only looking from the perspective of architectural design. Without delving into what characterizes designing itself, considering the complexity of the challenges mentioned before, these days we have embrace the idea that the knowledge bringing us further can often be found across disciplines. This is clearly pointed out by scholars who argue that increasing specialization creates a continuous formation of fragments of specialities across disciplines (Dogan and Pahre 1990). This is further elaborated in the book *Transdisciplinary Knowledge Production in Architecture and Urbanism* (Doucet and Janssens, 2011). The authors state the importance of integrating academia and profession in knowledge production as well as the importance of experimental, designerly modes of inquiry.

In order to understand how to proceed in this framework of disciplines and themes, at the intersection of several, often diverging entities, designs should help in getting to know the various matters at stake, becoming themselves the main vehicle of inquiry and driving force towards the setting of agendas for projects.

Hence, the process of inquiry has an experimental character and it is a pathway in which hypotheses, theories, concepts and ideas are used as instruments to think (De Walsche, 2018) and problem-solving plays a role but it's not predominant. As the result of the inquiry is about getting to know, knowledge can be also transferred to new experiences (Elkjaer, 2009). Besides, when changes take place so quickly – as is the case today – that involved actors cannot generate stable ontological categories connected with their disciplinary realms, ‘ontological uncertainty’ may occur, a situation in which new generative relationships can arise, enhancing creativity and potentially leading to innovation (Lane and Maxfield 2005). Using design as inquiry can therefore strengthen design itself as a knowledge activity, at the same time connecting different issues into synergic interplays, fostering creativity and possibly leading to innovation.

Interplay between education, research and practice

In a world in which complexity and uncertainty make the typical engineering systemic way of problem-solving less effective, the designerly approach is increasingly gaining interest. Designing is a process in which possibilities and solutions are constantly sought and evaluated until the right concept is reached. It is a complex and very often cyclical activity that is far from autonomous, depending in fact from a large number of external factors, some of them being often even uncertain. This becomes very clear, and actually more complicated, when we have to tackle with complex built environment challenges of today and tomorrow. The recurring problem is that the involvement of many variables and factors of different nature and from different fields of expertise, is leading to a much higher degree of uncertainty. Consequently, the old-fashioned way of operating through separate disciplines and scale levels is not effective anymore. As changes are difficult to be predicted, to get grip on transformation processes is necessary to involve various disciplines throughout the different stages of projects. Research and education at the (technical) universities have to take into account this new condition, reflecting on its implications while deploying activities.

The above-mentioned framework applies in a strong way in and around the field of the built environment. Design is par excellence a synthetic act and can fulfil a key role when working with different disciplines in cross-disciplinary projects. Design and specifically architectural design have the potential to enclose ideas and experiments while balancing several heterogeneous components at the same time. For these reasons architectural design must be pushed more prominently to the foreground as an effective tool able to create synergies among disciplines, becoming in this way a precious added value in unravelling the multi facets problematic of current

and future urban challenges. The potential of architectural design will be relevant to further explore, understand and share knowledge on the ways designers can collaborate with each other and work together with other, sometimes not design driven disciplines. Projects like *Stad van de Toekomst / City of the Future* clearly emphasize that. It will be pivotal to further enhance the interplay between education and research in multidisciplinary settings, reaching out to professional practice as well.

The way ahead; life-long and life-wide learning

Within the New European Bauhaus initiative, several European network organisations, such as the EAAE (European Association Architectural Education), ACE (Architects' Council of Europe), ECEC (European Council of Engineers Chambers), ARENA (Architectural Research European Network Association), ELIA (Network of Higher Art Education), but also ICLEI (Local Governments for Sustainability), CAE (Culture Action Europe), TEH (Trans Europa Halles) and Europa Nostra have teamed up, starting the so-called NEBC collective³.

Embracing the motto 'Making the Renovation Wave a Cultural Project', the NEBC network organisations joined forces in order to developed collaborative actions. The first step has been a successful conference that took place in April 2021, where the various drivers contributing to the design and the achievement of sustainable, beautiful and inclusive living spaces, were debated in participatory labs⁴. One of the labs was about education.

With the working title *Educating for the built environment: life-long and "life-wide" learning in arts, architecture and engineering*, the lab on education put forward the importance of 'learning' throughout all ages in order to nurture active citizenship and awareness, enhancing social inclusion. Life-long learning is key for expanding the knowledge of architects, engineers and artists about the common good of sustainable cultural and social development. Yet, to be truly inclusive we need to have a better consideration about who can access which education encounters and at which stage in their lives, reducing limitations as much as possible; life-long as well as life-wide learning. A shared objective should be linking students, professionals, stakeholders and citizens of all disciplines and ages, reinforcing awareness and sensitivity through multi perspective approaches. During a lively discussion, animated via an interactive Miro panel, it became clear that sharing experiences, starting with sharing the ways we see things in our world, is an important point of departure. It is about educators becoming learners and are able to position themselves more side to side to other learners. We should create the conditions to stimulate these interactions to exchange viewpoints and knowledge across disciplines and ages; herein the ludic aspect, having fun together, can play an important role.

³ See: <https://www.ace-cae.eu/activities/new-european-bauhaus-collective-nebc/>.

⁴ See: <https://www.ace-cae.eu/activities/new-european-bauhaus-collective-nebc/nebc-conference-programme-2904/>.

Ultimately, while pondering about learning, a shift is needed from keep measuring knowledge and competences, such as in the case of exit qualifications of education, towards disposition, attitude and approach. More initiative and specific projects are needed where the different disciplines, groups and ages can be brought together.

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