

Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences



Graduation Plan: All tracks

Personal information	
Name	Max Bernaerts
Student number	4852192

Studio		
Name / Theme	Explore Lab	
Architecture mentor	Jorge Mejía Hernández	Architecture
BT mentor	Georgios Karvelas	AE+T
Research mentor	Mieke Vink	Architecture
Argumentation of choice of the studio	Development of a project that explores the values of hands-on methodologies through empirical research, aiming to critically reflect on and contribute to the current educational offerings by envisioning an extended model of our school.	

Graduation project	
Title of the graduation project	Values in the Making. An Exploration of Tangible Learning Methods in Architectural Education
Goal	
Location:	Faculty of Architecture, TU Delft, Delft
The posed problem,	The abstraction and theorisation of the architectural education and practice, disrupting our relationship with the material reality in which we work as architects, but also live as human beings.
research questions and	How can direct, hands-on material exploration in architectural education equip students with practical skills and knowledge, enhancing their understanding of materials as well as bridging the gap between the conceptual focus of academic methods and the physicality of building practice?
design assignment in which these result.	Redesign/reinterpretation of our own faculty building. How can the architectural learning environment encourage hands-on learning to improve students' practical knowledge of materials and bridge the gap between the conceptuality of academic schooling and the physicality of the architectural practice?

Process

Method description

The methodology of the research consists out of three parts.

Research into the existing pedagogies

Hands-on learning methods aren't any new. To understand previous applications of this methodology, I plan to examine several case studies, spanning from historic hands-on pedagogical programs to contemporary examples. One notable example is the Yale Building Project, initiated by Charles Moore in 1967 and still active today. This program was innovative for formal architectural training, emphasising that students should learn construction early in their studies—not through traditional classes alone, but by collaboratively designing and building a structure in a yearlong, immersive exercise. Another valuable example is Les Grands Ateliers, where architecture students from across France expand their material knowledge through full-scale building exercises, gaining direct, practical experience. This part of the research will take the form of comparison of the different case studies by means of literature review and optionally visits or interviews with the organisers or participants.

Research into existing architectural practices and their ecologies

Alongside the many 'traditional' architecture firms, there are also certain architecture firms that are redefining the role of the architect by operating within a 'hybrid' approach. These practices are moving beyond the traditional role of design-only architects, engaging more directly in the processes of making and construction. I believe there is substantial value in gathering insights from these practitioners, as their experiences and knowledge offer a nuanced perspective on the intersection of design and making. This research will be conducted in the form of interviews, gathering the voices of these practitioners.

Personal material explorations

As this research focuses on hands-on learning, I want to integrate this physicality and learning through the body directly into the research methodology. To expand my own material knowledge, my goal is to participate in several building workshops throughout the research period during which there is the chance for the acquisition of implicit, tacit knowledge. Each workshop will focus on a specific material, such as clay, wood, or steel. As a tangible record of the insights gained from these experiences, I plan to create physical artefacts in the vedute format (7 x 32 x 44 cm), building an archive of my material explorations.

The aim of the research is to demonstrate the values that practice-based pedagogies can add to architectural education. This will be used to reflect on the architectural learning environment that is our own Faculty of Architecture at TU Delft and how it could be reinterpreted to facilitate this kind of experimental learning in a more stimulating way.

Literature and general practical references

Andrade Castro, O. (2021). *Ronda: Architectural education and practice from the construction of a milieu in common: The PUCV School of Architecture and Design and Ciudad Abierta, Chile*. A+BE | Architecture and the Built Environment.

Colomina, B., Ignacio G, G., Kotsioris, E., & Meister, A.-M. (2022). *Radical pedagogies*. The MIT Press.

Ingold, T. (2013). *Making : anthropology, archaeology, art and architecture*. Routledge.

Lefebvre, P., Neuwels, J., Possoz, J.-P., & Ingold, T. (2021). *Penser-faire : quand les architectes se mêlent de construction = Thinking-making : when architects engage in construction*. Editions de l'Université de Bruxelles.

Polanyi, M. (1966). *The Tacit Dimension*. Chicago: University of Chicago Press.

Roesler, S. (2014). Visualization, Embodiment, Translation: Remarks on Ethnographic Representation in Architecture. *Candide. Journal for Architectural Knowledge*(08), 9-29.

Schrijver, L., Schnell, A., Lending, M., Schreurs, E., Avermaete, T., Buchert, M., & Grafe, C. (2021). *The Tacit Dimension*. (L. Schrijver, Ed.) Leuven: Leuven University Press.

Technische Universität München Architekturmuseum. (2020). *Experience in Action! : DesignBuild in Architecture*. (V. S. Bader, & A. Lepik, Eds.) Munich: Edition Detail.

Tsukamoto, Y., Chiba, M., Kuan, S., & Tane, T. (2023). *How is Life? — Designing for our Earth*. TOTO出版.

Reflection

1. What is the relation between your graduation (project) topic, the studio topic (if applicable), your master track (A,U,BT,LA,MBE), and your master programme (MSc AUBS)?

The project positions itself within the Master of Architecture track as a reflection on education itself and an investigation into and through alternative ways of doing. It aims to contribute to the existing versatility of the curriculum by providing options for direct material exploration.

2. What is the relevance of your graduation work in the larger social, professional and scientific framework?

It aims to highlight an alternative way of academic learning in the context of universities, one that is focused the acquisition of knowledge through physical experience, learning by doing. In doing so, it draws on a long-standing movement within architecture and its education, including among others, approaches like pragmatism in the United States and the Bauhaus in Europe. My hypothesis is that direct material explorations in the architecture education can lead to a more profound understanding and thoughtful consideration of materials, their cycles and processing.