• Paper / Proposal Title:
Integrating Sustainability in architectural design studio through blended learning

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• Abstract (300 words):
The complexity of sustainability often makes its integration into architectural education a difficult challenge. Consequently, sustainability is often not taught holistically or critically, leaving students confused as to what sustainable architecture is and how they might approach this themselves. At the same time, sustainable and low energy design must not be at the expense of our architectural imagination, yet this is often the case. Few exemplary buildings exist that are both low impact and also poetic and architecturally imaginary. Sustainable buildings are often aesthetically ‘deterministic’: i.e. their architectural language results in a ‘collage’ of the technological solutions, in a drive to meet energy or sustainability targets.

This paper investigates how to bring sustainability knowledge into the studio instead of bringing the architecture studio to sustainability knowledge. In doing so, the authors illustrate the integration of sustainable design in architecture studio using blended learning, such as making use of pre-recorded video lectures, group seminars and
discussions, workshops and peer-peer learning as well as traditional studio drawing activities.

To embed sustainability in the architectural studio, both poetics and sustainability need to be taught together, focusing especially on the aesthetic and spatial implications of sustainability issues and decision-making. This was done by in-depth investigating and mapping of exemplary sustainable architecture case studies, and by developing studio-specific learning activities that cover both architecture and sustainability aspects.

The key to integrating sustainability in architectural studio is not only to give knowledge, but to ensure that specific learning activities allow for the application of this knowledge into students’ own design projects and tasks and to discuss the implications of this knowledge for the students’ own design project and the architectural language. This supports deep learning, critical thinking and reflection skills.

• Author(s) Biography (200 words each):

Dr Elizabeth Donovan is an assistant professor at Aarhus School of Architecture where she teaches within the bachelor's programme - sustainability. She is educated from New Zealand, USA, Sweden, UK and Denmark. Her PhD research focused on a holistic understanding of the disconnect between sustainable architecture discourse and practice and her subsequent teaching is also interested in how to further connect these two paradigms with a desire for integration and embeddedness at the forefront of activities.

Dr Sofie Pelsmakers is a chartered architect who trained in Belgium and the UK and has been teaching environmental design and sustainable architectural design for over 15 years, in the UK, Denmark and Finland at both undergraduate, Masters and postgraduate level. Dr Pelsmakers authored ‘The Environmental Design Pocketbook’ (RIBA Publishing), a comprehensive publication which distils environmental science, legislation and guidance into one easy to use single source. Her book was commended for outstanding practice based research (RIBA presidents research Medal, 2012) and commended by the UKGBC Rising Star 2013 award. She was selected as a UCL Bartlett PhD Alumni Role Model (2017), an RIBA UK Architecture Role Model (2015), and one of 20 ‘Women influencing Sustainable Architecture’ in the UK by the Architects Journal (2013). She undertook pedagogical training at Aarhus University in Denmark and also holds recognition from the UK Higher Education Academy (SFHEA). In day-day teaching, she has been investigating how to embed sustainability in architectural design studio.