

Teaching Timber: The Role of the Architectural Student and Studio Course within an Interdisciplinary Research Project

Authors : Catherine Sunter, Marius Nygaard, Lars Hamran, Børre Skodvin, Ute Groba

Abstract : Globally, the construction and operation of buildings contribute up to 30% of annual green house gas emissions. In addition, the building sector is responsible for approximately a third of global waste. In this context, the utilization of renewable resources in buildings, especially materials that store carbon, will play a significant role in the growing city. These are two reasons for introducing wood as a building material with a growing relevance. A third is the potential economic value in countries with a forest industry that is not currently used to capacity. In 2013, a four-year interdisciplinary research project titled "Wood Be Better" was created, with the principle goal to produce and publicise knowledge that would facilitate increased use of wood in buildings in urban areas. The research team consisted of architects, engineers, wood technologists and mycologists, both from research institutions and industrial organisations. Five structured work packages were included in the initial research proposal. Work package 2 was titled "Design-based research" and proposed using architecture master courses as laboratories for systematic architectural exploration. The aim was twofold: to provide students with an interdisciplinary team of experts from consultancies and producers, as well as teachers and researchers, that could offer the latest information on wood technologies; whilst at the same time having the studio course test the effects of the use of wood on the functional, technical and tectonic quality within different architectural projects on an urban scale, providing results that could be fed back into the research material. The aim of this article is to examine the successes and failures of this pedagogical approach in an architecture school, as well as the opportunities for greater integration between academic research projects, industry experts and studio courses in the future. This will be done through a set of qualitative interviews with researchers, teaching staff and students of the studio courses held each semester since spring 2013. These will investigate the value of the various experts of the course; the different themes of each course; the response to the urban scale, architectural form and construction detail; the effect of working with the goals of a research project; and the value of the studio projects to the research. In addition, six sample projects will be presented as case studies. These will show how the projects related to the research and could be collected and further analysed, innovative solutions that were developed during the course, different architectural expressions that were enabled by timber, and how projects were used as an interdisciplinary testing ground for integrated architectural and engineering solutions between the participating institutions. The conclusion will reflect on the original intentions of the studio courses, the opportunities and challenges faced by students, researchers and teachers, the educational implications, and on the transparent and inclusive discourse between the architectural researcher, the architecture student and the interdisciplinary experts.

Keywords : architecture, interdisciplinary, research, studio, students, wood

Conference Title : ICAUD 2016 : International Conference on Architecture and Urban Design

Conference Location : Vancouver, Canada

Conference Dates : August 04-05, 2016