

Exploring circular construction Insights into research-oriented teaching and learning

Daniela Konrad

*City University of Applied
Sciences Bremen*

Sustainability can benefit greatly from a circular economy, due to the potential of avoiding waste and thus limiting the consumption of finite resources – or at best avoiding the latter altogether. To strengthen research-oriented learning on prevailing topics, a series of elective modules was initiated at the chair of Sustainable Planning and Building in the Urban Context, School of Architecture Bremen. The aim of the first module was to understand which theoretical and practical knowledge is available on circular construction and how learnings can be applied to future architectural design. Four key findings guide our future research-oriented teaching on circular construction:

(1) To comprehensively analyze and understand reference projects, research methods such as on-site analyses and stakeholder interviews need to be integrated. (2) Research should focus more on the origin, transportation, and storage of building materials and components. (3) The degree of circularity needs to be quantified in order to better compare knowledge gained in theory and practice. (4) Follow-up modules on the application of theoretical knowledge with emphasis on the design of single material and reversible construction details are essential.

