An Interdisciplinary Approach towards Academic Education on Sustainable Building Design

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Global challenges of sustainable development are strongly interlaced with building sector. The changed relations towards the built environment, the resources and energy use in building sector as well as the permanent investigations on the effects that the buildings have not only to the environment in general but to the health and wellbeing of their users and occupants require modifications in formation and education of designers and engineers who will be dealing with these emerging issues in the decades to come.

Interdisciplinary approach seems to be one of key prerequisites for sustainable design. Current educational models, therefore, should be able to prepare future designers and engineers for productive and effective work in dynamic environment with permanent collaboration with various professionals and stakeholders. In the broad aspect of sustainable design practices and processes, the integration of disciplines can contribute to a more comprehensive design and a better understanding of the different aspects and challenges of other fields.

The monograph Interdisciplinary Approach Towards Academic Education on Sustainable Building Design represents a multidisciplinary collaboration between the architectural, urban, transport and construction professions to address various aspects of sustainable design in the education process.

The monograph consists of a short introduction followed by six extensive chapters by different authors coming from different disciplines: interdisciplinary approach in education, different aspects of creating liveable neighbourhoods, sustainable transport design and safety, integration of advanced digital technologies for energy performance simulations and structural design of sustainable buildings in timber construction. Together, they provide a systematic approach to the educational process in sustainable building design to ensure environmental protection and quality of life. The sixth chapter is essentially a graphical appendix with the presentation of the final results of the student design workshop, in which the implementation of the different aspects and themes has occurred.

The monograph is clearly structured and written in a way that can serve as a tool for various experts and professors in the field of sustainable building design education. The topics presented cover some of the key aspects of sustainability in contemporary building design. Through individual chapters, a strong integration of scientific research findings into the educational process is visible, as individual research topics emerge as guidelines for teaching and effective collaboration through interdisciplinarity.
The idea of an interdisciplinary approach is no longer new in the educational process, but it is introduced in a book in a manner that emphasizes both interdisciplinarity in student groups and interdisciplinarity within mentors and consultants, and highlights extensive expert linking with the aim of creating a dynamic learning environment. A positive contribution of the presented workshop is the demonstration of the effective and fruitful cooperation between University of Maribor, Faculty of Civil Engineering, Transportation Engineering and Architecture (UM FGPA) with the Municipality of Podlehnik in Southeast Slovenia and the involvement of local communities, which enables the students contact with real problems in practice.

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