Educating the next generation of architects for interdisciplinary BIM environments

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In a study of architecture and Building Information Modelling (BIM) in the UK and USA, experienced architects and recent graduates working on BIM projects, in internationally leading architectural firms raised issues relevant to architectural education. The design studio has been central to architectural education, evolving from a traditional apprenticeship of a designer within a master architect’s studio. Much has been written about the pedagogy of the design studio. However changes in the architecture profession raise new questions. BIM is being adopted to address issues of cost, value and carbon. It facilitates collaborative design using a central model in a standard way across disciplines to create information to be used through the life cycle of building and infrastructure projects. Using BIM is shifting professional roles as it changes the mechanics of working and interacting with others. This paper uses data from the study to explore the new questions raised for educating the next generation of architects to work in interdisciplinary BIM environments.

Architectural professionals emphasize the need to teach architecture differently. Graduates are now expected to have learnt about BIM not from a theoretical perspective only but technically as well. They need to understand the professional responsibilities of the architect and the relationship with other professions to fully participate in BIM collaboration, suggesting a need for interdisciplinary design studios. They should be aware of the options of technologies available and identify BIM not as individual software packages only. Moreover the data revealed a perceived gap in architectural students’ knowledge of construction. They create 3D virtual models but have no idea how they can be constructed as the focus is on the picture and technologies used not the systems. The paper poses questions regarding individual work in design studios to facilitate interdisciplinary BIM environments. It has implications for research and the architectural pedagogy required to train the next generation of architects.

Key words: architects, architecture, BIM, collaboration, design studio, educating, interdisciplinary.