Education, Design and Practice – Understanding skills in a Complex World

• Paper / Proposal Title:
Ten Years of Building Technology at City Tech: Reflections on the Evolution of First Year Building Technology Courses in an Open Enrollment Candidate BARCH Program

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• Abstract (300 words):
A BARCH candidate program at City Tech, an open enrollment CUNY college in Brooklyn, New York, offers a portal for increasing access to an architectural career path in the United States.

Emerging from a historically vocational culture, the building technology curriculum at City Tech is a case study in the goal for balance between job readiness and critical skills-based education. Formally referred to as construction documents courses, the building technology courses are becoming dynamic laboratories for investigation that integrate with the design curriculum. They also incorporate history and theory to place discussion of structure, materials, tectonics, and performance into context.

With all the possibility of new directions for building technology teaching, the foundational skills of reading and drawing cannot be jettisoned, especially for the education of underprepared college students. These students need to build their technical knowledge through enhancing their general education skills of effective reading in the discipline. They also need to develop their visualization/three-dimensional thinking through challenging 2d and 3d drawing construction. Further, all students need
to integrate these skills and apply them to understand how buildings are put together and perform, but also how architecture is born through these explorations.

This paper reviews the experimentation and development of first-year building technology courses over a ten-year period at City Tech. Case studies of prominent buildings ranging from the Empire State Building to the Yale Center for British Art are presented as a vehicle to provide a place-based laboratory and a historical/theoretical context for learning. Emphasis on three-dimensional explorations of structure and assemblies developed through hand drafting and digital modeling will be reviewed for their learning efficacy. Finally, assessment and improvement techniques for reading technical texts and “reading” orthographic drawings will be presented. These strategies are shown to be particularly useful for a diverse and often underprepared student cohort.

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

Professor Jason Montgomery is an architect, urban designer, and educator. Professor Montgomery has worked in a number of international practices where he led design projects in Morocco, Costa Rica, England, and Egypt, New York, California, South Carolina, West Virginia, Tennessee, and Montana. These projects include the extension to Selwyn College, Cambridge, the Columbia School of Social Work, the site feasibility analysis for a New Residential College at Yale University, the renovation of the School of Architecture at the University of Notre Dame, and the Summit Bechtel Family National Scout Reserve.

His work focuses on the nature of place, building tectonics, rural and urban space. Professor Montgomery’s teaching experience is diverse including appointments at University of Notre Dame’s Rome Program, Yale University, and Andrews University. His is currently an Assistant Professor at the New York City College of Technology.

Applying his expertise in classical and traditional architecture, Professor Montgomery was a significant contributor to a recently published monograph authored by Professor Elizabeth Macaulay-Lewis, Bayt Farhi and the Sephardic Palaces of Ottoman Damascus.

Professor Montgomery holds a Masters of the Arts from University of Wales at Cardiff, Graduate Diploma from the Prince of Wales’s Institute for Architecture, and Bachelor of Architecture from the University of Notre Dame.