

## Chapter 2

# A Construction Management Education Focus and Process Direction: The Power of Focusing on Four Outcomes Using Formative Teaching, Learning, and Assessment

**Matthew Steele Stevens**  
*Western Sydney University, Australia*

**Jennifer E. Day**  
*University of Melbourne, Australia*

### ABSTRACT

*This chapter outlines culminates experience and thinking from two environments: 1) the construction contracting industry and 2) the built environment classroom – undergraduate and graduate. The authors’ combined teaching experience covers more than two decades, but they do not pretend their knowledge is exhaustive. Others know more. Their desire is to add to their thoughts. They first address what the contractor desires of construction graduates. From there, they proceed to list focuses they believe important in sequential order for the teaching and learning process: 1) vocabulary, 2) conceptual frameworks, 3) iterative problem solving, 4) writing. After that, they describe their preferred delivery method: formative teaching, learning, and assessment.*

DOI: 10.4018/978-1-5225-8452-0.ch002

## **INTRODUCTION**

Construction education is a critical component to improving the construction industry. The newly graduated have been immersed in today's effective practices of leadership, management, and technology. Each one of us has out-of-date ideas, but new graduates bring much up-to-date thinking to the industry. They have "fresh eyes" and want to learn to be efficient in our challenging environment. Overall, they have a positive effect on the industry.

We believe that improving industry readiness of the newly graduated is an important discussion. In this Chapter, structured in a white paper style, we suggest a limited number of teaching, learning and assessment focus as suggested by our industry interactions and classroom experience. We discuss our reasoning and conclusions for recommending four general learning focuses along with an already credible learning, teaching, and assessment process commonly known as the Formative Approach (Bloom 1968). Additionally, we attempt to address common criticisms.

This Chapter outlines our culminative experience and thinking from two environments – 1) The Construction Contracting Industry and 2) The Built Environment Classroom – undergraduate and graduate. Our combined teaching experience covers more than two decades, but we do not pretend our knowledge is exhaustive. Others know more. Our desire is to add to their thoughts.

Our work with clients has given to us a useful understanding of the contractor's desires of newly hired graduates' skills. Between us, we have been engaged by more than 150 contractors. As part of our engagements, we have interviewed dozens of graduates whose titles include Assistant PM, Field Engineer, Project Coordinator, Safety Manager, and Project Accountant. Regardless of their final educational degree – there appears to be an opportunity to improve this transformative process.

We see construction education as a journey that is never static nor complete. Our intent is to prompt more thinking and discussion about this important industry subject. We will use undergraduate education for applying our assertions.

We list suggestions that can be implemented in any course - standard or elective. Our focus is not about content. The proposed approach concerns the process and focuses for bringing along the knowledge and skills of the aspiring construction contracting professional.

Contractors will hire the majority of any construction program's graduates. This discussion is part of the healthy evolution of how to increase the quality of those graduates. We are not calling for new requirements nor expanded curriculum, only a consolidation of instructional direction to what construction contractors appear to want.

We first address what the contractor desires of construction graduates, in "Construction Contractor Wants." From there, we proceed to list focuses we believe

14 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: [www.igi-global.com/chapter/a-construction-management-education-focus-and-process-direction/234858](http://www.igi-global.com/chapter/a-construction-management-education-focus-and-process-direction/234858)

## Related Content

---

### Prevention of Corrosion in Austenitic Stainless Steel through a Predictive Numerical Model Simulating Grain Boundary Chromium Depletion

M.K. Samal (2017). *Modeling and Simulation Techniques in Structural Engineering* (pp. 374-389).

[www.irma-international.org/chapter/prevention-of-corrosion-in-austenitic-stainless-steel-through-a-predictive-numerical-model-simulating-grain-boundary-chromium-depletion/162926](http://www.irma-international.org/chapter/prevention-of-corrosion-in-austenitic-stainless-steel-through-a-predictive-numerical-model-simulating-grain-boundary-chromium-depletion/162926)

### On the Assessment of the Seismic Vulnerability of Ancient Churches: The Case of "San Francesco ad Alto" in Ancona (Italy)

Pardo Antonio Mezzapelle and Stefano Lenci (2015). *Handbook of Research on Seismic Assessment and Rehabilitation of Historic Structures* (pp. 794-830).

[www.irma-international.org/chapter/on-the-assessment-of-the-seismic-vulnerability-of-ancient-churches/133369](http://www.irma-international.org/chapter/on-the-assessment-of-the-seismic-vulnerability-of-ancient-churches/133369)

### Seasonal Statistical Variability of Precipitations in Dobrogea and Danube Delta

Gabriel Minea, Georgeta Bandoc and Gianina Neculau (2016). *Civil and Environmental Engineering: Concepts, Methodologies, Tools, and Applications* (pp. 311-323).

[www.irma-international.org/chapter/seasonal-statistical-variability-of-precipitations-in-dobrogea-and-danube-delta/144501](http://www.irma-international.org/chapter/seasonal-statistical-variability-of-precipitations-in-dobrogea-and-danube-delta/144501)

### Holistic and Law Compatible IT Security Evaluation: Integration of Common Criteria, ISO 27001/IT-Grundschutz and KORA

Daniela Simi-Draws, Stephan Neumann, Anna Kahlert, Philipp Richter, Rüdiger Grimm, Melanie Volkamer and Alexander Roßnagel (2015). *Transportation Systems and Engineering: Concepts, Methodologies, Tools, and Applications* (pp. 927-946).

[www.irma-international.org/chapter/holistic-and-law-compatible-it-security-evaluation/128705](http://www.irma-international.org/chapter/holistic-and-law-compatible-it-security-evaluation/128705)

### The Plastic Hinge

(2015). *Fracture and Damage Mechanics for Structural Engineering of Frames: State-of-the-Art Industrial Applications* (pp. 172-230).

[www.irma-international.org/chapter/the-plastic-hinge/124598](http://www.irma-international.org/chapter/the-plastic-hinge/124598)