



Editorial

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Welcome to Volume 7 of the Engineering Project Organization Journal, and the inaugural digital and open access issue. This issue represents the beginning of the next stage of the Journal. This new stage was prompted both by demand for access to articles published by the EPO community and the need for a journal that did not charge authors to publish in an open access format. However, in moving to an open access format it was also paramount that the academic standards and integrity of the EPO journal must remain at the highest level. The result of the community discussions around these issues is the launch of the open access, digital-based Engineering Project Organization Journal.

As you will see on this site, the entire library of the EPO journal is now available electronically as open access. We encourage individuals to share these papers with colleagues and students as they represent the core of the EPO community research efforts. Additionally, you will see there are no author fees for publishing in the EPO Journal. This follows the belief that academic research should be available to all those who are interested in gaining knowledge from the community as well as making a stand that cost should never be a hindrance to authors wanting to share knowledge. Thus, we invite all researchers to consider publishing in the EPO Journal and continuing the history of high-

quality, peer-reviewed papers on which the community is based.

Volume 7

The first paper presented in Volume 7 is a formalized review and presentation of the Grand Challenges in Engineering Project Organizations by Sakhrani, Chinowsky, and Taylor. The paper presents a summary of the grand challenges identified by a panel of senior leaders from the engineering project organization community. The paper then formally analyzes the challenge statements to identify the drivers that underlie these challenges. The paper finishes with a reflection on the state of the engineering project organization community in terms of meeting these challenges and a charge to the community for advancing towards solutions to the Grand Challenges.

Special Issue on Engineering Education

Following the paper on Grand Challenges, we present a special collection of papers focused on engineering education. The study of projects, specifically those that focus on the engineering of infrastructure and related arenas, inherently seeks to improve both the infrastructure and the organization of teams for future projects and generations. The impact of

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people and their underlying education as engineers is a core influence on all of the subsequent design and construction work they engage. As many new challenges, technologies, and responsibilities are placed on engineers, the role and how their education enables their success is of critical importance. In this stream of papers, the EPO community explores the role of education in the organization of projects. We examine the challenges of educating the next generation of engineers, the challenges constraints and opportunities, such as new technologies, place on engineering programs, and the role that new teaching methods play in engineering education. The authors present these challenges through new student and organization perspectives, such as social networks, emotional intelligence, and others that inform programs about the new generation of engineering students.

In the first paper, “Building Information Modelling skills in construction-related disciplines: A social network and job advertisement-based comparative analysis,” Rahman et al explore the changing demands for BIM-related skills sought by industry in comparison with the current state of undergraduate education in providing BIM skills, while still fulfilling the fundamental engineering and construction knowledge still expected by industry.

Continuing on the opportunities arising from technology, Drs. Michael Filzmoser and Iva Kovacic present their study of the implementation of interdisciplinary education, using BIM as an enabling technology. In their interdisciplinary studio, they explore the evolving benefits in pursuit of exchange of ideas among disciplines in the education of design. Bringing together architects and engineers, they also identify the challenges of escaping ‘silo’ thinking when approaching interdisciplinary designs.

Furthering our understanding of how these disciplinary identities take shape in undergraduates, Dr. Michael Puddicombe investigates whether the ends justify the means. In his paper titled, “The development of inter-organizational belief systems: the effect of academic disciplines,” he explores these belief systems through a look at Machiavellianism within the disciplines of developing undergraduate minds.

Through a different lens on how engineering and construction education is shaping student’s minds, Dr. Charles Skipper explores, “Emotional Intelligence and Undergraduate Engineering Students.” In the comparison, Dr. Skipper identifies trends in how our students are developing as individuals and people as well as engineers. Dr. Skipper also contextualizes some of the other factors influencing that development that help us reflect on the whole education experience in shaping young engineering minds.

In the final paper of the issue, Drs. Paul Chan and Christine Räisänen look at new approaches to education in sustainability. Using a novel interaction and workshop approach to help in the visualization and the engagement through debate to help students co-develop their full understanding of sustainability. The exploration of novel engagements in an educational setting reflect some of the changes emerging in industry as new organizational approaches are being tested to improve project collaboration.

On behalf of the entire editorial board, we thank you for your continued interest in the *Engineering Project Organization Journal*. We are committed to continuing to bring you the highest quality articles, while also providing an outlet for every researcher to publish and access knowledge in the engineering projects domain. We look forward to working with the engineering projects community to achieve the next step in knowledge exchange. Please



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contact us with any comments, questions, or suggestions for the Journal.

Sincerely,

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Issue Editors