

## Guest Editorial

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Case study-based learning is a common active learning technique used in Medicine, Business and Law education but is underutilised in engineering education. This special issue is focusing on case-based learning in engineering and applied science education to fill gap in the library on this topic. Here we highlight the six successful papers accepted in the special issue after intensive, double blind peer review:

Wen-Chih Chang and Moocharoen Charoenwat in the paper: “Case-based Learning in Artificial Intelligence Course – A Case Study Using Microsoft Azure in University Course” found that case-based learning not only makes better learning performance, but also promotes significance in “systematic analysis”, and “thinking out of the box”.

Jenny Elfsberg, Christian Johansson Askling, Andreas Larsson, and Tobias Larsson in the paper entitled “Guiding Global Innovation Teams on their Exploration Journey: Learning from Aspiring Engineering Students” concluded that this study holds implications for academia and industry, particularly organizations reliant on radical innovation for competitiveness and future-proving. Lastly, the study’s findings could inform the design and delivery of future problem-oriented, project-organized learning-based courses in engineering education.

Riadh Habash in the paper entitled “Amalgamation of Research-, Case-, Project-, and Video-based Learning in Teaching Engineering and Computing Ethics” found that students’ self-assessments and feedback revealed noticeable improvements in their skills and competencies. This integrated approach to curriculum and pedagogy fosters critical and creative thinking in learners and cultivates a growth mindset that empowers them to take charge of their learning.

Faiez Alani and Rehmat Grewal in the paper “Comparison between In-person versus Virtual case-based Learning for an Upper Year Course in Engineering Technology Education” showed that the resultant findings indicate that CBL proved to be a superior learning tool for an in-person delivery platform, opposed to a virtual platform. Acclimatized with the virtual learning environment, students also found it challenging to return back to an in-person learning environment.

Ga Xiang, Lei Wang, Xuan Sun, Weiran Tang in the paper “A Work-based Project Practice Motivated by Problem-Solving in Software Engineering” demonstrated that it shows students’ motivations are improved by facing engineering problems, taking specific roles, and tracking project status weekly, and the students are inspired better to apply software engineering knowledge to solve complex engineering problems.

Moon-Soo Kim in the paper “The Effects of Online Project-based Learning with Real Enterprise Data in Two Interdisciplinary Courses” found that also, from the student survey, it was found that students expect that the possibility of using it in future companies will be high. In addition, the results of this study were able to identify educational implications for the application of company case oriented PBL to various curriculums.

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