

EDITORIAL

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In this issue of J-STEM, we have four articles focusing on diverse issues in STEM education. Mäkelä, Fenyvesi and Mäki-Kuutti (2020) designed a pedagogical framework for learning environments (LEs) based on feedback from students, teachers, school directors, parents, and STEM professionals. They recommended considering a wide range of different LE design principles to support multiple ways of teaching and learning, and to develop both subject-related and cross-curricular knowledge, skills, attitudes, values, and ethics, instead of focusing on singular design principles.

Hatisaru, Fraser and Beswick (2020) address the effective leadership position and understanding of STEM learning environments. They have drawn on a drawing test called (D-STEM) to investigate school principals' perceptions of STEM learning. The findings of the research make valuable contributions to different aspects of the STEM learning environment.

Relkin and colleagues explore informal learning experiences with robots and their parents' support. The focus group of the research constitutes 5-7 ages child and their parents. Findings indicated that parents predominantly used cognitive scaffolding strategies, such as asking questions, offering suggestions, and verbally acknowledging their child's actions.

Stohlmann (2020) from the University of Nevada, explores the STEM integration for high school mathematics teachers. This article discusses three methods that high school mathematics teachers can utilize for integrated STEM education. Stohlmann emphasized that by focusing on open-ended problems through engineering design challenges, mathematical modeling, and mathematics integrated with technology, high school students are more likely to see mathematics as meaningful and valuable.

Collectively, the articles in this issue of J-STEM make unique contributions to the STEM education literature ranging from early childhood education to teacher recruitment.