

From Editorial Board

This STEM special issue includes eight research articles after strictly reviewing procedure. The papers come from different countries, i.e. Turkey, Indonesia, Malaysia, Korea and USA. This indicates influential roles of massive curriculum reforms in developed and developing countries. Given the articles in special issue, some promising results denote potential of STEM approach at solving some problems. However, we should continue to discuss how to integrate STEM in learning environment(s). Hence, research-based evidences and/or empirical preliminary studies will be able to help decision-makers, researchers, teachers and practitioners think about further efforts towards development of STEM education. Moreover, we should inquiry whether developing countries (i.e. Turkey, Indonesia, Malaysia, Korea) act as an open laboratory for any approach released by developed ones (e.g. USA, England, Germany).

The articles in special issue are outlined as follows:

The first article entitled '**The Effectiveness of an in-Service Training of Early Childhood Teachers on STEM Integration through Project-Based Inquiry Learning**' reports how to integrate STEM into early childhood education through Project-Based Inquiry Learning in Malaysia.

The second article entitled '**Students' Attitudes towards STEM Education: Voices from Indonesian Junior High Schools**' elicits Indonesian students' attitudes STEM.

The third article entitled '**Integrating GIS into Science Classes to Handle STEM Education**' depicts how to integrate Geographic Information Systems (GIS) as a pedagogical tool into STEM education in Turkey.

The fourth article entitled '**Low Socioeconomic Status Students' STEM Career Interest in Relation to Gender, Grade Level, and STEM Attitude**' researches Turkish students' STEM career interests and attitudes towards STEM areas (science, math, engineering, and 21st century skills) for some variables.

The fifth article entitled '**Pre-Service Science Teachers' Cognitive Structures Regarding Science, Technology, Engineering, Mathematics (STEM) and Science Education**' reveals pre-service science teachers' cognitive structures regarding Science, Technology, Engineering, Mathematics (STEM) and science education.

The sixth article entitled '**STEM Education Program for Science Teachers: Perceptions and Competencies**' examines the effects of the professional development programme on in-service science teachers' perceptions and competencies of STEM education.

The seventh article entitled '**The Effect of Science, Technology, Engineering and Mathematics (STEM) Project Based Learning (PBL) on Students' Achievement in Four Mathematics Topics**' seeks the effectiveness of Science, Technology, Engineering, and Mathematics

project-based learning lessons on students' achievement in algebra, geometry, probability and problem solving.

The last article entitled '**The Effect of STEM Education on Pre-Service Science Teachers' Perception of Interdisciplinary Education**' investigates outcomes of interdisciplinary STEM education.

We would like to thank all reviewers and technical staffs for their invaluable efforts in preparing this issue.

Looking forward to receiving your comments and contributions for the next issues.

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