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International Council of Associations for Science Education

Supporting and promoting science education internationally

Editorial

Welcome to the March issue of Science Education International (SEI). This issue consists of 5 articles, coming from Croatia, Portugal, Turkey (2) and Australia.

The first article presents results of a survey among school children aged 10 to 14 years, who participated in science or mathematics workshops which are relate to their interest and motivation. The results show that students value demonstration, applications and practical, hands-on experimentation, and they express positive attitude towards science and mathematics.

The second article explores the factors, related to school science, which can interfere with the engagement of students-at-risk-of-dropping-out of school science and what kind of activities and teaching strategies are suitable for these students. The research reports that linking science with society by means of practical activities – that are student centred and require agency, autonomy, and the mobilization of complex competencies – facilitated the students' engagement with school science.

The third article investigates preservice elementary teachers' personal science teaching efficacy (PSTE) beliefs, science anxiety (SANX) levels, and common science misconceptions during a science methods course. The research concluded that, similar to mastery experiences as a source of efficacy beliefs, the issue arises that participants' unawareness of their science misconceptions are seeing these contributing to their enhancement of their personal science teaching efficacy beliefs.

The fourth article explores the effectiveness of the two predominant forms of examination questions - multiple-choice questions and short-answer questions for Chemistry lesson, including the relationship between performance and gender. The article reports that male students achieve higher scores than female students with respect to mean scores on both test and sub-test forms. However, when student abilities, as measured by Rasch analysis were considered, male and female students of equal abilities perform equally well in each test comparison suggesting that chemistry is equally accessible to students of both genders.

The last article compares the effectiveness of the conceptual change oriented instruction through cooperative learning (CCICL) and traditional science instruction (TI) on 4th grade students' understanding of earth and sky concepts and their attitudes toward earth and sky concepts. The research concludes that students who used conceptual change oriented instruction through cooperative learning have a significantly better acquisition of earth and sky concepts than students who received traditional science instruction.

All submissions should be made online at the Journal Website.
Bulent Cavas, Chair of Publications Committee

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