

IJE

**M
S
T**

**International Journal of Education
in Mathematics, Science and
Technology**

Volume 5
Number 2
Year 2017

ISSN 2147-611X

EDITORIAL BOARD

Editor

Mack SHELLEY - Iowa State University, U.S.A.

Guest Editors (Special Issue on Socioscientific Issues)

Dana L. ZEIDLER - University of South Florida, U.S.A.

Mustafa Sami TOPCU - Yildiz Technical University, TURKEY

Section Editors

Arthur POWELL - Rutgers University, U.S.A.

Utkun AYDIN - MEF University, Turkey

Chun-Yen CHANG - National Taiwan Normal University, Taiwan

Jacqueline MCDONNOUGH - Virginia Commonwealth Univ., U.S.A.

Meric OZGELDI - Mersin University, Turkey

Lina TANKELEVICIENE - Siauliai University, Lithuania

Sandra ABEGGLEN - London Metropolitan University, U.K.

Robert M. CAPRARO - Texas A&M University, U.S.A.

Editorial Board

Ann D. THOMPSON - Iowa State University, U.S.A

Bill COBERN - Western Michigan University, U.S.A.

Douglas B. CLARK - Vanderbilt University, U.S.A.

Gokhan OZDEMIR - Nigde University, Turkey

Hakan AKCAY - Yildiz Technical University, Turkey

Huseh-Hua CHUANG - National Sun Yat-sen University, Taiwan

Igor M. VERNER - Technion - Israel Institute of Technology, Israel

Ilhan VARANK - Yildiz Technical University, Turkey

James M. LAFFEY - University of Missouri, U.S.A.

Kamisah OSMAN - National University of Malaysia, Malaysia

Lynne SCHRUM - George Mason University, U.S.A.

Mary B. NAKHLEH - Purdue University, U.S.A.

Musa DIKMENLI - Necmettin Erbakan University, Turkey

Muteb ALQAHTANI - Rutgers University, U.S.A.

Ok-Kyeong KIM - Western Michigan University, U.S.A.

Pasha ANTONENKO - Oklahoma State University, U.S.A.

Paul ERNEST - University of Exeter, UK

Pornrat WATTANAKASIWICH - Chiang Mai University, Thailand

Robert E. YAGER - University of Iowa, U.S.A.

Sanjay SHARMA - Roorkee E&M Technology Institute, India

Sinan ERTEN - Hacettepe University, Turkey

Tsung-Hau JEN - National Taiwan Normal University, Taiwan

William F. MCCOMAS - University of Arkansas, U.S.A.

International Journal of Education in Mathematics, Science and Technology (IJEMST)

The International Journal of Education in Mathematics, Science and Technology (IJEMST) is a peer-reviewed scholarly online journal. The IJEMST is published quarterly in January, April, July and October. The IJEMST welcomes any papers on math education, science education and educational technology using techniques from and applications in any technical knowledge domain: original theoretical works, literature reviews, research reports, social issues, psychological issues, curricula, learning environments, research in an educational context, book reviews, and review articles. The articles should be original, unpublished, and not in consideration for publication elsewhere at the time of submission to the IJEMST. Access to the Journal articles is free to individuals, libraries and institutions through IJEMST's website.

Abstracting/ Indexing

The IJEMST is indexed by the following abstracting and indexing services: Ulrich Index, ASOS Index, Journal Seek, JournalRate, Directory of Research Journals Indexing (DRJI), Infobase Index, ResearchBib, Index Copernicus, TUBITAK ULAKBIM Dergipark, ERIH, Scientific Indexing Service (SIS), Education Resources Information Center (ERIC), and Emerging Sources Citation Index (ESCI).

Submissions

All submissions should be in electronic (.Doc or .Docx) format. Submissions in PDF and other non-editable formats are not acceptable. Manuscripts can be submitted through the journal website. All manuscripts should use the latest APA style. The manuscript template for formatting is available on the journal website.

Contact Info

International Journal of Education in Mathematics, Science and Technology (IJEMST)

Email: ijemst@gmail.com

Web: <http://www.ijemst.com>

TABLE OF CONTENTS

Evolution of a Model for Socio-Scientific Issue Teaching and Learning	75
<i>Troy D. Sadler, Jaimie A. Foulk, Patricia J. Friedrichsen</i>	
Eliciting Students' Understanding of a Local Socioscientific Issue Through the Use of Critical Response Pedagogies	88
<i>Engin Karahan, Senenge T. Andzenge, Gillian Roehrig</i>	
Argumentation as a Strategy for Increasing Preservice Teachers' Understanding of Climate Change, a Key Global Socioscientific Issue	101
<i>Julie L. Lambert, Robert E. Bleicher</i>	
Engaging Elementary School Pre-service Teachers in Modeling a Socioscientific Issue as a Way to Help Them Appreciate the Social Aspects of Science	113
<i>Maria Evagorou, Blanca Puig Mauriz</i>	
Indicators of Informal and Formal Decision-making about a Socioscientific Issue	124
<i>Michelle Lute, Jenny M. Dauer, Olivia Straka</i>	
Contextualization of Nature of Science Within the Socioscientific Issues Framework: A Review of Research	139
<i>Dilek Karisan, Dana L. Zeidler</i>	