

Journals of Interest - Mathematics and Science Education

April 2016

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Educational Researcher

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Feature Articles

Kris D. Gutiérrez

2011 AERA Presidential Address: Designing Resilient Ecologies: Social Design Experiments and a New Social Imagination

Educational Researcher April 2016 45: 187-196, doi:10.3102/0013189X16645430

Rami Benbenishty, Ron Avi Astor, Ilan Roziner, and Stephani L. Wrabel

Testing the Causal Links Between School Climate, School Violence, and School Academic Performance: A Cross-Lagged Panel Autoregressive Model

Educational Researcher April 2016 45: 197-206, first published on April 13, 2016doi:10.3102/0013189X16644603

Margaret R. Blanchard, Catherine E. LePrevost, A. Dell Tolin, and Kristie S. Gutierrez

Investigating Technology-Enhanced Teacher Professional Development in Rural, High-Poverty Middle Schools

Educational Researcher April 2016 45: 207-220, first published on April 7, 2016doi:10.3102/0013189X16644602

Educational Studies in Mathematics

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Communicational perspectives on learning and teaching mathematics: prologue

Michal Tabach, Talli Nachlieli

An early algebra approach to pattern generalisation: Actualising the virtual through words, gestures and toilet paper

Francesca Ferrara, Nathalie Sinclair

Proposing and testing a model to explain traits of algebra preparedness

Linda Venenciano, Ronald Heck

The unit of analysis in mathematics education: bridging the political-technical divide?

Paul Ernest

Alienation in mathematics education: critique and development of neo-Vygotskian perspectives

Julian Williams

Rationality and belief in learning mathematics

Tony Brown

Does it help to use mathematically superfluous brackets when teaching the rules for the order of operations?

Robert Gunnarsson, Wang Wei Sönnerhed, Bernt Hernell

Erratum to: Does it help to use mathematically superfluous brackets when teaching the rules for the order of operations?

Robert Gunnarsson, Wang Wei Sönnerhed, Bernt Hernell

An analysis of different representations for vectors and planes in R^3

Ivonne Sandoval, Edgar Possani

Prospective teachers' understanding of the multiplicative part-whole relationship of fraction

Elena Castro-Rodríguez, Demetra Pitta-Pantazi

Mathematical Thinking and Learning

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Introducing Modeling Transition Diagrams as a Tool to Connect Mathematical Modeling to Mathematical Thinking

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The Social Construction of Authority Among Peers and Its Implications for Collaborative Mathematics Problem Solving

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Kindergartners' Spontaneous Focusing on Numerosity in Relation to Their Number-Related Utterances During Numerical Picture Book Reading

Sanne Rathé, Joke Torbeyns, Minna M. Hannula-Sormunen & Lieven

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Approaches to Qualitative Research in Mathematics Education by A. Bikner-Ahsbabs, C. Knipping, & N. Presmeg (Eds.)

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Journal of Research in Science Teaching

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Learning in a community of practice: Factors impacting english-learning students' engagement in scientific argumentation (pages 527–553)

María González-Howard and Katherine L. McNeill

Article first published online: 12 JAN 2016 | DOI: 10.1002/tea.21310

Special education teachers' nature of science instructional experiences (pages 554–578)

Bridget K. Mulvey, Jennifer L. Chiu, Rajlakshmi Ghosh and Randy L. Bell

Article first published online: 12 JAN 2016 | DOI: 10.1002/tea.21311

Elementary teachers' science knowledge and instructional practices: Impact of an intervention focused on english language learners (pages 579–597)

Okhee Lee, Lorena Llosa, Feng Jiang, Alison Haas, Corey O'Connor and Christopher D. Van Booven

Article first published online: 5 FEB 2016 | DOI: 10.1002/tea.21314

Understanding the influence of intrinsic and extrinsic factors on inquiry-based science education at township schools in South Africa (pages 598–619)

Umesh Ramnarain

Article first published online: 5 FEB 2016 | DOI: 10.1002/tea.21315

International Journal of Science Education

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Scientific Argumentation for All? Comparing Teacher Beliefs About Argumentation in High, Mid, and Low Socioeconomic Status Schools (pages 410–436)

REBECCA KATSH-SINGER, KATHERINE L. McNEILL and SUZANNA LOPER

Article first published online: 29 MAR 2016 | DOI: 10.1002/sce.21214

Lyricism, Identity, and the Power of Lyricism as the Third Space (pages 437–458)

BRYAN A. BROWN, JAMAL COOKS and KEITH CROSS

Article first published online: 29 MAR 2016 | DOI: 10.1002/sce.21212

How Students View the Boundaries Between Their Science and Religious Education Concerning the Origins of Life and the Universe (pages 459–482)

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Article first published online: 2 FEB 2016 | DOI: 10.1002/sce.21213

Assessing Understanding of the Energy Concept in Different Science Disciplines(pages 483–516)

MIHWA PARK and XIUFENG LIU

Article first published online: 28 MAR 2016 | DOI: 10.1002/sce.21211



Molecular Mechanistic Reasoning: Toward Bridging the Gap Between the Molecular and Cellular Levels in Life Science Education (pages 517–585)

MARC H. W. van MIL, PAULIEN A. POSTMA, DIRK JAN BOERWINKEL, KEES KLAASSEN and AREND JAN WAARLO

Article first published online: 29 MAR 2016 | DOI: 10.1002/sce.21215

Framing the Genetics Curriculum for Social Justice: An Experimental Exploration of How the Biology Curriculum Influences Beliefs About Racial Difference (pages 586–616)

BRIAN M. DONOVAN

Article first published online: 15 FEB 2016 | DOI: 10.1002/sce.21221

Journal of College Science Teaching

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A Hands-On Activity to Build Mastery of Intermolecular Forces and Its Impacts on Student Learning

By: Laura B. Bruck

To Flip or Not to Flip? Analysis of a Flipped Classroom Pedagogy in a General Biology Course

By: William H. Heyborne and Jamis J. Perrett

Deliberative Pedagogy in a Nonmajors Biology Course: Active Learning That Promotes Student Engagement With Science Policy and Research

By: Lisa H. Weasel and Liza Finkel

Developing Student Presentation Skills in an Introductory-Level Chemistry Course With Audio Technology

By: Susan M. Fredricks, John Tierney, Matthew Bodek, and Margaret Fredricks

Undergraduate Journal Club as an Intervention to Improve Student Development in Applying the Scientific Process

By: Conner I. Sandefur and Claire Gordy

An Interdisciplinary Approach to Success for Underrepresented Students in STEM

By: Anura U. Goonewardene, Christine A. Offutt, Jacqueline Whitling, and Donald Woodhouse

Research and Teaching: Undergraduate Science Students' Attitudes Toward and Approaches to Scientific Reading and Writing

By: Heather Verkade and Saw Hoon Lim

Research and Teaching: Association of Summer Bridge Program Outcomes With STEM Retention of Targeted Demographic Groups

By: David L. Tomasko, Judith S. Ridgway, Rocquel J. Waller, and Susan V. Olesik

Point of View: How Important Is Achieving Equity in Undergraduate STEM Education to You?

By: Amy B. Mulnix, Eleanor V.H. Vandegrift, and S. Raj Chaudhury

Two-Year Community: Time for Action: Vision and Change Implementation in an Online Biology Course at a Community College

By: Beatriz Gonzalez

Case Study: Feeling Detoxified: Expectations, Effects, and Explanations

By: Giselle McCallum and Annie Prud'homme-Genereux

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Matthew E. Foster and Jason L. Anthony, University of Texas Health Science Center at Houston; Doug H. Clements and Julie Sarama, University of Denver; Jeffrey M. Williams, University of Texas Health Science Center at Houston

More Than Just Skill: Examining Mathematics Identities, Racialized Narratives, and Remediation Among Black Undergraduates

Gregory V. Larnell, University of Illinois at Chicago

Prospective Elementary Teachers Making Sense of Multidigit Multiplication: Leveraging Resources

Ian Whitacre, Florida State University; Susan D. Nickerson, San Diego State University

Explorations of Shifting Forms of Numerical Representations and Cognitive Functions Grounded in and Emergent From Changing Collective Practices

Reviewed by Ylva Jannok Nutti, Sámi University College, Norway; Jrène Rahm, Université de Montréal, Canada

Surveying Current Research on Young Children's Mathematical Learning

Reviewed by Amanda L. Miller and Jeffrey E. Barrett, Illinois State University

Journal of Stem Teacher (Online)

(Current issue is Fall 2015)

International Journal of Research in Undergrad Mathematics Education

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Mathematics Majors' Perceptions of the Admissibility of Graphical Inferences in Proofs

Bo Zhen, Keith Weber, Juan Pablo Mejia-Ramos

Conceptual Structure of the Accumulation Function in an Interactive and Multiple-Linked Representational Environment

Osama Swidan, Michal Yerushalmy

Facilitating Instructor Adoption of Inquiry-Based Learning in College Mathematics

Charles N. Hayward, Marina Kogan

Students' Use of Computational Thinking in Linear Algebra

Spencer Bagley, Jeffrey M. Rabin

A Characterization of Calculus I Final Exams in U.S. Colleges and Universities

Michael A. Tallman, Marilyn P. Carlson

Real, Meaningful Mathematics

Koeno Gravemeijer

Journal of Mathematics Teacher Education

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Keith Jones, Birgit Pepin

Reflective analysis as a tool for task redesign: The case of prospective elementary teachers solving and posing fraction comparison problems

Eva Thanheiser, Dana Olanoff, Amy Hillen

Task design for ways of working: making distinctions in teaching and learning mathematics

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Teachers, tasks, and tensions: lessons from a research-practice partnership

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Collective design of an e-textbook: teachers' collective documentation

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Supporting teachers' technological pedagogical content knowledge of fractions through co-designing a virtual manipulative

Alice Hansen, Manolis Mavrikis, Eirini Geraniou

Supporting primary-level mathematics teachers' collaboration in designing and using technology-based scenarios

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Professional learning through the collaborative design of problem-solving lessons

Geoff Wake, Malcolm Swan, Colin Foster

New perspectives for didactical engineering: an example for the development of a resource for teaching decimal number system

Frédéric Tempier

Roles of a teacher and researcher during in situ professional development around the implementation of mathematical modeling tasks

Hyunyi Jung, Corey Brady

The Mathematics Teacher Educator