
 Journals of Interest - Mathematics and Science Education

February - March 2017

TABLE OF CONTENTS

Journal.....	Page
Educational Researcher.....	2
Volume 46, Issue 1.....	2
Educational Studies in Mathematics.....	3
Volume 94, Issue 3 Pages 241-345.....	3
Mathematical Thinking and Learning.....	4
Volume 19, Issue 1.....	4
Journal of Research in Science Teaching.....	5
Volume 54, Issue 2 , Pages 139-295.....	5
Volume 54, Issue 3, Pages 297-433.....	6
International Journal of Science Education	7
Volume 39, Issue 1	7
Volume 39, Issue 2.....	7
Volume 39, Issue 3.....	8
Science Education.....	9
Volume 101, Issue 1, Pages 1-198.....	9
Journal of College Science Teaching	10
(Current Issue March 2017).....	10
International Journal of Mathematical Education in Science and Technology.....	12
Volume 48, Issue 1.....	12
Volume 48, Issue 2.....	12
Volume 48, Issue 3.....	13
Volume 48, Issue 4.....	14
The Journal of Mathematical Behavior.....	15
Volume 45, Pages 167-182.....	15
Research in Mathematics Education.....	16
Volume 18, Issue 1.....	16
Volume 18, Issue 2.....	16
Volume 18, Issue 3.....	17
Journal for Research in Mathematics Education	19
Volume 48, Issue 1.....	19
The Mathematics Teacher Educator(online).....	20
(Current Issue Volume 5, Issue 2 March 2017).....	20
Educational Psychologist	21
Volume 52, Issue 1(Pages 1-62).....	21
Educational Psychology Review.....	22
Volume 29, Issue 1 ,Pages 1-197.....	23

Educational Researcher

[Volume 46, Issue 1](#)

Kids Today: The Rise in Children's Academic Skills at Kindergarten Entry

Daphna Bassok, Scott Latham.

Central Office Supports for Data-Driven Talent Management Decisions: Evidence From the Implementation of New Systems for Measuring Teacher Effectiveness

Jason A. Grissom, Mollie Rubin, Christine M. Neumerski, Marisa Cannata, Timothy A. Drake, Ellen Goldring, Patrick Schuermann.

Who Are the Homeless? Student Mobility and Achievement in Michigan 2010-2013

Joshua M. Cowen.

Student Enrollment Patterns and Achievement in Ohio's Online Charter Schools

June Ahn, Andrew McEachin.

Educational Studies in Mathematics

[Volume 94, Issue 3, Pages 241-345](#)

Guiding reinvention of conventional tools of mathematical logic: students' reasoning about mathematical disjunctions

Pages 241-256

Paul Christian Dawkins, John Paul Cook.

Developing a deeper understanding of mathematics teaching expertise: an examination of three Chinese mathematics teachers' resource systems as windows into their work and expertise

Pages 257-274

Birgit Pepin, Binyan Xu, Luc Trouche, Chongyang Wang.

Objects, signs, and representations in the semio-cognitive analysis of the processes involved in teaching and learning mathematics: A Duvalian perspective

Pages 275-291

Maura Lori.

Using culturally relevant teaching in a co-educational mathematics class of a patriarchal community

Pages 293-307

David Mogari.

Classroom-based professional expertise: a mathematics teacher's practice with technology

Pages 309-328

Gulay Bozkurt, Kenneth Ruthven.

Teachers' pedagogical content knowledge and mathematics achievement of students in Peru

Pages 329-345

Santiago Cueto, Juan Leon, M. Alejandra Sorto, Alejandra Miranda.

Mathematical Thinking and Learning

[Volume 19, Issue 1](#)

The State of Proof in Finnish and Swedish Mathematics Textbooks- Capturing Differences in Approaches to Upper Secondary Integral Calculus

Andreas Bergwall, Kirsti Hemmi.

The Prevalence and Disadvantage of Min-Counting in Seventh Grade: Problems with Confidence As Well As Accuracy?

Sarah Hopkins, Donna Bayliss.

Attributes of Instances of Student Mathematical Thinking that Are Worth Building on in Whole-Class Discussion

Laura R. Van Zoest, Shari L. Stockero, Keith R. Leatham, Blake E. Peterson, Napthalin A. Atanga, Mary A. Ochieng.

Relation of Spatial Skills to Calculus Proficiency: A Brief Report

Jennifer G. Cromley, Julie L. Booth, Theodore W. Wills, Briana L. Chang, Nhi Tran, Michael Madeja, Thomas F. Shipley, William Zahner.

Journal of Research in Science Teaching

[Volume 54, Issue 2, Pages 139-295](#)

Issue Information | Version of Record online: 17 JAN 2017 | DOI:
10.1002/tea.21351

An exploration of teacher learning from an educative reform-orientated science curriculum: Case studies of teacher curriculum use

Pages 141-168

Lisa M. Marco-Bujosa, Katherine L. McNeill, Maria Gonzalez-Howard, and Suzanna Loper.

Cultivating minority scientists: Undergraduate research increases self-efficacy and career ambitions for underrepresented students in STEM

Pages 169-194

Anthony Carpi, Darcy M. Ronan, Heather M. Falconer, Nathan H. Lents.

Writing from different cultural contexts: How college students frame an environmental SSI through written arguments

Pages 195-218

Meena M. Balgopal, Alison M. Wallace, Steven Dahlberg.

Exploring the relationship between secondary science teachers' subject matter knowledge and knowledge of student conceptions while teaching evolution by natural selection

Pages 219-246

Margaret M. Lucero, Anthony J. Petrosino, Cesar Delgado.

Secondary school students' reasoning about evolution

Pages 247-273

Cheryl To, Harriet R. Tenenbaum, Henriette Hogh.

Assessment of scientific literacy: Development and validation of the Quantitative Assessment of Socio-Scientific Reasoning (QuASSR)

Pages 274-295

William L. Romine, Troy D. Sadler, Andrew T. Kinslow.

[Volume 54, Issue 3, Pages 297-433](#)

Issue Information | Version of Record online: 10 FEB 2017 | DOI:
10.1002/tea.21352

Gender and choosing a STEM major in college: Femininity, masculinity, chilly climate, and occupational values

Pages 299-323

Richard M. Simon, Ashley Wagner, Brooke Killion.

Secondary science teachers as curriculum makers: Mapping and designing Scotland's new Curriculum for Excellence

Pages 324-349

Carolyn S. Wallace, Mark R. Priestley.

Serendipitous science engagement: A family self- ethnography

Pages 350-378

Dana Vedder-Weiss

Learned inequality: Racial labels in the biology curriculum can affect the development of racial prejudice

Pages 379-411

Brian M. Donovan

Factors Contributing to lifelong science learning: Amateur astronomers and birders

Pages 412-433

M. Gail Jones, Elysa Nicole Corin, Thomas Andre, Gina M. Childers, Vanessa Stevens.

International Journal of Science Education

[Volume 39, Issue 1](#)

A Longitudinal Investigation of the preservice science teachers' beliefs about science teaching during a science teacher-training programme

Serkan Buldur.

'Let your data tell a story:' climate change experts and students navigating disciplinary argumentation in the classroom

Elizabeth Mary Walsh, Veronica Cassone McGowan.

The role of socioscientific issues in biology teaching: from the perspective of teachers

Sofie Tidemand, Jan Alexis Nielsen.

Making learning last: teachers' long- term retention of improved nature of science conceptions and instructional rationales

Bridget K. Mulvey, Randy L. Bell.

Adolescents' goal orientations for science in single-gender Israeli religious schools

David Fortus, Limor Daphna.

[Volume 39, Issue 2](#)

Exploring teachers' meta-strategic knowledge of science argumentation teaching with the repertory grid technique

Yu-Ren Lin, Cheng-Yu Hung, Jeng-Fung Hung.

The roles of teachers' science talk in revealing language demands within diverse elementary school classrooms: a study of teaching heat and temperature in Singapore

Lay Hoon Seah, Larry D. Yore.

The relation between students' communicative moves during laboratory work in physics and outcomes of their actions

J. Andersson, M. Enghag.

From the teachers' eyes: facilitating teachers noticings on informal formative assessments (IFAs) and exploring the challenges to effective implementation

Asli Sezen-Barrie, Gregory J. Kelly.

Using doubly latent multilevel analysis to elucidate relationships between science teachers' professional knowledge and students' performance

Daniela Mahler, Jorg GroBschedl, Ute Harms.

Primary teachers conducting inquiry projects: effects on attitudes towards teaching science and conducting inquiry

Sandra I. van Aalderen- Smeets, Juliette H. Walma van der Molen, Erna G.W.C.M. van Hest, Cindy Poortman.

Volume 39, Issue 3

Learning from a distance: high school students' perceptions of virtual presence, motivation, and science identity during a remote microscopy

Gina Childers, M. Gail Jones.

Exploring students' conceptions of science learning via drawing: a cross-sectional analysis

Wen-Min Hsieh, Chin-Chung Tsai.

Students' understandings of nature of science and their arguments in the context of four socio-scientific issues

Rola Khishfe, Fahad S. Alshaya, Saouma BouJaoude, Nasser Mansour, Khalid I. Alrudiyan.

The development and validation of the Instructional Practices Log in Science: a measure of K-5 science instruction

Elizabeth L. Adams, Sarah J. Carrier, James Minogue, Stephen R. Porter, Andrew McEachin, Temple A. Walkowiak, Rebecca A. Zulli.

Engaging Karen refugee students in science learning through a cross-cultural learning community

Susan G. Harper.

Challenges and opportunities in analysing students modelling

Paloma Blanco- Anaya, Rosaria Justi, Joaquin Diaz de Bustamante.

Science Education

[Volume 101, Issue 1, Pages 1-198](#)

Version of Record Online: 14 DEC 2016 | DOI
10.1002/sce.21262

(Editorial) Messages in a Bottles: Valuable Insights from and by Researchers

Pages 5-7

Sherry A. Southerland, John Settlage.

Styles of Scientific Reasoning: A Cultural Rationale for Science Education?

Pages 8-31

Per Kind, Jonathan Osborne.

Development and Validation of the Learning Progression- Based Assessment of Modern Genetics in a High School Context

Pages 32-65

Amber Todd, William L. Romine, Katahdin Cook Whitt.

Investigating Purposeful Science Curriculum Adaptation as a Strategy to Improve Teaching and Learning

Pages 66-98

Angela Haydel Debarger, William R. Penuel, Savitha Moorthy, Yves Beauvineau, Cathleen A. Kennedy, Christy Kim Boscardin.

The Knowledge and Practices of High School Science Teachers in Pursuit of Cultural Responsiveness

Pages 99-133

Julie C. Brown, Kent J. Crippen.

Tensions Teaching Science for Equity: Lessons Learned From the Case of Ms. Dawson

Pages 134-164

Melissa Braaten, Manali Sheth.

Unpacking Sensemaking

Pages 165-198

Shulamit Kapon.

Journal of College Science Teaching

(Current Issue of March 2017)

Estimating a Missing Examination Score

Michael C. Loui and Athena Lin

Inquiring Astronomy: Incorporating Student-Centered Pedagogical Techniques in an Introductory College Science Course

Debbie A. French and Andrea C. Burrows

A Problem-Solving Framework to Assist Students and Teachers in STEM Courses

Jeffrey A. Phillips, Katharine W. Clemmer, Jeremy E. B. McCallum, and Thomas M. Zachariah

Students Own Their Introductory Chemistry Experience: Becoming an Element for a Semester

Jessica M. Fautch and James B. Foresman

Paired Courses: A New Paradigm for College Teaching

W. R. Klemm

Research and Teaching: Development of Course-Based Undergraduate Research Experiences Using a Design-Based Approach

John C. Mordacq, Denise L. Drane, Su L. Swarat, and Stanley M. Lo

Research and Teaching: Encouraging Science Communication in an Undergraduate Curriculum Improves Students' Perceptions and Confidence

Tonya Laakko Train and Yuko J. Miyamoto

Research and Teaching: Examining the Effectiveness of a Postexam Review Activity to Promote Self-Regulation in Introductory Biology Students

Gillian Andaya, Victoria D. Hrabak, Sarah T. Reyes, Rafael E. Diaz, and Kelly K. McDonald

Research and Teaching: From Gatekeeper to Gateway: Improving Student Success in an Introductory Biology Course

Amy N. Scott, Delores E. McNair, Jonathan C. Lucas, and Kirkwood M. Land

Point of View: Diversity in STEM: Doctor, Heal Thyself

Melanie R. Nilsson

Two-Year Community: Integrating Undergraduate Research at Two-Year Colleges

Matthew C. Tuthill and John M. Berestecky

Case Study: Formulating Questions That Address Student Misconceptions in a Case Study

Annie Prud'homme-Généreux

International Journal of Mathematical Education in Science and Technology

[Volume 48, Issue 1](#)

Problem solving in the borderland between mathematics and physics

Jens Hojgaard Jensen, Martin Niss, Uffe Thomas Jankvist.

Cause-effect analysis: improvement of a first year engineering students' calculus teaching model

Quay van der Hoff, Ansie Harding.

Subject design and factors affecting achievement in mathematics for biomedical science

Steven Carnie, Anthony Morphet.

Students' challenges with polar functions: covariational reasoning and plotting in the polar coordinate system

Samer Habre.

A case study of pedagogy of mathematics support tutors without a background in mathematics education

Richard Walsh.

Teachers' understanding of inflation: developing a crystalline concept

Sarah Bansilal.

Classroom Notes

Various authors.

Pages 94-161.

[Volume 48, Issue 2](#)

Pre-service teachers' free and structured mathematical problem posing

Steven Silber, Jinfa Cai.

Using a virtual population to authentically teach epidemiology and biostatistics

Peter K. Dunn, Sharn Donnison, Rachel Cole, Michael Bulmer.

Implementing a flipped instructional model in college algebra: profiles of student activity

Kristin Lesseig, Paul Krouss.

Applying an alternative mathematics pedagogy for students with weak mathematics: meta-analysis of alternative pedagogies

Warren Lake, Margie Wallin, Geoff Woolcott, Wendy Boyd, Alan Foster, Christos Markopoulos, William Boyd.

How useful are closed captions for learning mathematics via online video?

Chris Tisdell, Brigit Loch.

Towards a framework for developing students' fraction proficiency

Tsung-Lung Tsai, Hui-Chuan Li.

Classroom Notes

Various authors.

Pages 256-324.

Volume 48, Issue 3

Some environmental and attitudinal characteristics as predictors of mathematical creativity

Abhishek Kanhai, Bhoodev Singh.

Mathematical modelling and the learning trajectory: tools to support the teaching of linear algebra

Andrea Dorilla Carcamo Bahamonde, Josep Maria Fortuny Aymemi, Joan Vicenc Gomez i Urgelles.

Developing the roots of modelling conceptions: 'mathematical modelling is the life of the world'

Jill Patricia Brown, Gloria Ann Stillman.

Thematization of derivative schema in university students: nuances in constructing relations between a function's successive derivatives

Claudio Fuentealba, Gloria Sanchez-Matamoros, Edelmira Badillo, Maria Trigueros.

Introducing computational thinking through hands-on projects using R with applications to calculus, probability, and data analysis

Nadia Benakli, Boyan Kostadinov, Ashwin Satyanarayana, Satyanand Singh.

Classroom notes and corrigendum (Pages 428-483)

Various authors.

[Volume 48, Issue 4](#)**Implementing a flipped classroom approach in a university numerical methods mathematics course**

Barbara M. Johnston.

Undergraduate students' initial conceptions of factorials

Elise Lockwood, Sarah Erickson.

Student teachers' concept definitions of area and their understanding about two-dimensionality of area

Timo Tossavalnen, Hannele Suomalainen, Tomi Makalainen.

Exploring high-achieving sixth grade students' erroneous answers and misconceptions on the angle concept

Suphi Onder Butuner, Mehmet Filiz .

How young students communicate their mathematical problem solving in writing

Anna Teledahl.

The notion of motion: covariational reasoning and the limit concept

Courtney Nagle, Tyler Tracy, Gregory Adams, Daniel Scutella.

The role of informal learning spaces in enhancing student engagement with mathematical sciences

Jeff Waldock, Peter Rowlett, Claire Cornock, Mike Robinson, Hannah Bartholomew.

Classroom notes

Pages 603-645

Various authors.

The Journal of Mathematical Behavior

[Volume 45 \(Pages 167-182\)](#)

Graphing formulas: Unraveling experts' recognition processes

Pages 167-182

Peter M.G.M Kop, Fred J.J.M. Janssen, Paul H.M. Drijvers, Jan H. van Driel.

Research in Mathematics Education

[Volume 18, Issue 1](#)

Editorial

Pages 1-2

Jeremy Hodgen, Adrian Simpson, Yvette Solomon.

Mathematics capital in the educational field: Bourdieu and beyond

Julian Williams, Sophina Choudry.

Bringing Bourdieu to mathematics education: a response to Williams and Choudry

Andrew Noyes.

A process of students and their instructor developing a final closed- book mathematics exam

Tina Rapke.

Four (algorithms) in one (bag): an integrative framework of knowledge for teaching the standard algorithms of the basic arithmetic operations

Ira Raveh, Boris Koichu, Irit Peled, Orit Zaslavsky.

Measuring pre-service teachers' self-efficacy in tutoring children in primary mathematics: an instrument

Annette Hessen Bjerke, Elisabeta Eriksen.

Book reviews

Pages 80-88

Various authors.

[Volume 18, Issue 2](#)

Studying the evolution of school mathematics as change in discourse

Editorial

Candia Morgan, Anna Sfard.

Investigating changes in high-stakes mathematics examinations: a discursive approach

Candia Morgan, Anna Sfard.

Studying the role of human agency in school mathematics

Candia Morgan.

To what extent are students expected to participate in specialised mathematical discourse? Change over time in school mathematics in England

Candia Morgan, Sarah Tang.

Investigating the geometry curriculum in Palestinian textbooks: towards multimodal analysis of Arabic mathematics discourse

Jehad Alshwaikh.

Policy and the standards debate: mapping changes in assessment in mathematics

Stephen Lerman, Jill Adler.

Commentary

Pages 200-210

Various authors.

Book reviews

Pages 211-218

Various authors.

Day Conference Abstracts

Pages 219-228.

Announcement and Corrigendum

Pages 229-230.

Various authors.

[Volume 18, Issue 3](#)

Studying advanced mathematics in England: findings from a survey of student choices and attitudes

Andrew Noyes, Michael Adkins.

Paraprofessionals in Cyprus and England: perceptions of their role in supporting primary school mathematics

Andreas O. Kyriakides, Jenny Houssart.

Learning activities and discourses in mathematics teachers' synchronous oral communication online

Eva-Lena Erixon.

The answer depends on your lecturer

Igor' Kontorovich.

Developing flexible procedural knowledge in undergraduate calculus

Wes Maciejewski, Jon R. Star.

Book review

Victoria Simms.

Day Conference Abstracts, Announcement, and Reviewer Panel

Pages 321-331.

Various authors.

Journal for Research in Mathematics Education

[Volume 48, Issue 1](#)

Improving the Impact of Educational Research

Editorial

Jinfa Cai, Anne Morris, Stephen Hwang, Charles Hohensee, Victoria Robison, James Hiebert.

Toward a Framework for Research Linking Equitable Teaching with the Standards for Mathematical Practice

Commentary

Tonya Bartell, Michigan State University, Anita Wager, University of Wisconsin-Madison, Ann Edwards, Carnegie Foundation for the Advancement of Teaching, Dan Battey, Rutgers University, Mary Foote, Queen College, Joi Spencer, University of San Diego.

Mathematical Thinking and Learning Through Robotics Play for Children with Critical Illness: The Case of Amelia

Megan Nickels, University of Central Florida, Craig J. Cullen, Illinois State University.

Psychological Imprisonment or Intellectual Freedom? A Longitudinal Study of Contrasting School Mathematics Approaches and Their Impact on Adults' Lives

Jo Boaler, Stanford University, Sarah Kate Selling, University of Utah.

Book Review: Reconsidering Affect in Mathematics Education

Reviewed by: Amanda Jansen, Joseph Di Napoli, and Kristin McKenney, University of Delaware.

Book Review: Roots and Sprouts: Cultivating Research on Mathematical Problem Posing

Reviewed by Edward A. Silver and Kwame Yankson, University of Michigan.

The Mathematics Teacher Educator (Online)

Current Issue: Volume 5, Issue 2, March 2017.

So You Want to Be an MTE Author? A Tool for Writing Your Next MTE Manuscript

Editorial. Sandra Crespo, Editor, Michigan State University; Kristen Bieda, Associate Editor, Michigan State University

Supporting Prospective Middle School Teachers' Learning to Revise a High-Level Mathematics Task to Be Culturally Relevant

Heather R. Gallivan, University of Northern Iowa

Supporting PSTs in Using Appropriate Tools Strategically: A Learning Sequence for Developing Technology Tasks That Support Students' Mathematical Thinking

Milan F. Sherman, Drake University; Charity Cayton, East Carolina University; Kayla Chandler, North Carolina State University

Eliciting and Analyzing Preservice Teachers' Mathematical Noticing

Julie M. Amador, University of Idaho; Anne Estapa, Iowa State University; Zandra de Araujo, University of Missouri; Karl W. Kosko, Kent State University; Tracy L. Weston, Middlebury College

Enhancing Teachers' Formative Assessment Practices Through Learning Trajectory-Based Professional Development

Nicole Panorkou, Montclair State University, New Jersey; Jennifer L. Kobrin, City University of New York

Educational Psychologist

[Volume 52, Issue 1 \(Pages 1-62\)](#)

Natural- Born Arguers: Teaching How to Make the Best of Our Reasoning Abilities

Pages 1-16

Hugo Mercier, Maarten Boudry, Fabio Paglieri, Emmanuel Trouche.

Supporting Learners' Agentic Engagement with Feedback: A Systematic Review and a Taxonomy of Recipience Processes

Pages 17-37

Naomi E. Winstone, Robert A. Nash, Michael Parker, James Rowntree.

Evaluating the Validity of Classroom Observations in the Head Start Designation Renewal System

Pages 38-49

Andrew J. Mashburn.

How Instruction Influences Conceptual Development: Vygotsky's Theory Revisited

Pages 50-62

Marc Clara.

Educational Psychology Review

[Volume 29, Issue 1, Pages 1-197](#)

Relational Reasoning in STEM Domains: a Foundation for Academic Development

Pages 1-10

Patricia A. Alexander.

Using Relational Reasoning to Learn About Scientific Phenomena at Unfamiliar Scales

Pages 27-39.

Ilyse Resnick, Alexandra Davatzes, Nora S. Newcombe, Thomas F. Shipley.

Supporting Mathematical Discussions: the Roles of Comparison and Cognitive Load

Pages 41-53

Lindsey E. Richland, Kreshnik Nasi Begolli, Nina Simms, Rebecca R. Frausel, Emily A. Lyons.

A Relational Reasoning Approach to Text- Graphic Processing

Pages 55-72

Robert W. Danielson, Gale M. Sinatra.

Relational Reasoning in Science, Medicine, and Engineering

Pages 73-95

Denis Dumas.

Building from In Vivo Research to the Future of Research on Relational Thinking and Learning

Pages 97-104

Christian D. Schunn.

Enriching Students' Scientific Thinking Through Relational Reasoning: Seeking Evidence in Texts, Tasks, and Talk

Pages 105-117

P. Karen Murphy, Carla M. Firetto, Jeffrey A. Greene.

Gender Gap in Science, Technology, Engineering, and Mathematics (STEM): Current Knowledge, Implications for Practice, Policy, and Future Directions

Pages 119-140

Ming-Te Wang, Jessica L. Degol.

Flipped Classrooms: a Review of Key Ideas and Recommendations for Practice

Pages 141-151

Sarah J. DeLozier, Matthew G. Rhodes.

Enhancing Preschoolers' Executive Functions Through Embedding Cognitive Activities in Shared Book Reading

Pages 153-174

S. J Howard, T Powell, E Vasseleu, S Johnstone, E Melhuish.

Writing Instruction, Writing Research, and Educational Psychology: an Interview with Steve Graham

Pages 175-187

Xinghua Liu.

Commentary: Should Gender Differences be Included in the Evolutionary Upgrade to Cognitive Load Theory?

Pages 189-194

Andy Bevilacqua.

Erratum to: Individual and Institutional Productivity in Educational Psychology Journal from 2009-2014

Pages 195-197

Hannah Greenbaum, Lisa Meyer, M Cecil Smith, Amanda Barber, Heather Henderson, David Riel, Daniel H. Robinson.