
 Journals of Interest - Mathematics and Science Education

February 2018

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Did States Use Implementation Discretion to Reduce the Stringency of NCLB? Evidence From a Database of State Regulations

Vivian C. Wong, Coady Wing, David Martin, Anandita Krishnamachari.

Converging on Choice: The Interstate Flow of Foundation Dollars to Charter School Organizations

Joseph J. Ferrare, R. Renee Setari.

American Educators' Confrontation With Fascism

Thomas Fallace.

Thinking Critically in Space: Toward a Mixed-Methods Geospatial Approach to Education Policy Analysis

Ee-Seul Yoon, Christopher Lubienski.

Rethinking Teacher Turnover: Longitudinal Measures of Instability in Schools

Jennifer Jellison Holme, Huriya Jabbar, Emily Germain, John Dinning.

Sex Differences in Doctoral Student Publication Rates

Sarah Theule Lubienski, Emily K. Miller, Evthokia Stephanie Saclarides.

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2016 AERA Presidential Address: Public Scholarship: Education Research for a Diverse Democracy

Jeannie Oakes.

Who Feels Included in School? Examining Feelings of Inclusion Among Students With Disabilities

Leanna Stiefel, Menbere Shiferaw, Amy Ellen Schwartz, Michael Gottfried.

Going Without: An Exploration of Food and Housing Insecurity Among Undergraduates

Katharine M. Broton, Sara Goldrick-Rab.

Spaces, Places, and Policies: Contextualizing Student Homelessness

Alexandra E. Pavlakis.

Experiences With "Acute" Food Insecurity Among College Students

J. Luke Wood, Frank Haris, III.

Educational Studies in Mathematics

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Developing mathematical fluency: comparing exercises and rich tasks

Colin Foster.

Order of operations: On convention and met-before acronyms

Rina Zazkis, Annette Rouleau.

The role of perceptual similarity, context, and situation when selecting attributes: considerations made by 5-6-year olds in data modeling environments

Aisling Leavy, Mairead Hourigan.

The influence of theoretical mathematical foundations on teaching and learning: a case study of whole numbers in elementary school

Christine Chambris.

Book review: Anthropomorphizing mathematics education Review of Hauke Staehler-Pohl, Nina Bohlmann, and Alexandre Pais (Eds). (2017).

The disorder of mathematics education: challenging the sociopolitical dimensions of research. 329 pp.

Bharath Sriraman.

[Volume 97, Issue 3](#)

Prototype images in mathematical education: the case of graphical representation of the definite integral

Steven R. Jones.

Exploring intrinsic and extrinsic motivational aspects of middle school students' aspirations for their mathematics learning

Karina J. Wilkie, Peter Sullivan.

Comparison of students' understanding of functions in classes following English and Israeli national curricula

Anne Watson, Michal Ayalon, Stephen Lerman.

Professional development of mathematics teachers toward the facilitation of small-group collaboration

Michal Tabach, Baruch B. Schwarz.

A link between students' discernment of variation in unidirectional change and their use of quantitative variational reasoning

Heather Lynn Johnson, Evan McClintock.

Journal of Research in Science Teaching

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Gender, complexity, and science for all: Systemizing and its impact on motivation to learn science for different science subjects

Albert Zeyer.

Development and validation of an instrument to assess student attitudes toward science across grades 5 through 10

Ryan Summers, Fouad Abd-El-Khalick.

Counterspaces for women of color in STEM higher education: Marginal and central spaces for persistence and success

Maria Ong, Janet M. Smith, Lily T. Ko.

Forms of science capital mobilized in adolescents' engineering projects

Amy Wilson-Lopez, Christina Sias, Allen Smithee, Indhira Maria Hasbún.

Supporting girls' and boys' engagement in math and science learning: A mixed methods study

Jennifer A. Fredricks, Tara Hofkens, Ming-Te Wang, Elizabeth Mortenson, Paul Scott.

Validity evidence for a learning progression of scientific explanation

Jian- Xin Yao, Yu-Ying Guo.

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Young children's near and far transfer of the basic theory of natural selection: An analogical storybook transformation

Natalie Emmons, Kristin Lees, Deborah Keleman.

"We do not know what is the real story anymore." Curricular contextualization principles that support indigenous students in understanding natural selection

Ingrid Sánchez Tapia, Joseph Krajcik, Brian Reiser.

Assessing students' disciplinary and interdisciplinary understanding of global carbon cycling

Hye Sun You, Jill A. Marshall, Cesar Delgado.

Uncovering young children's motivational beliefs about learning science

Elisa Oppermann, Martin Brunner, Jacquelynne S. Eccles, Yvonne Anders.

The contribution of science-rich resources to public science interest

John H. Falk, Scott Pattison, David Meier, David Bibas, Kathleen Livingston.

The role of high school racial composition and opportunities to learn in students' STEM college participation

Martha Cecilia Bottia, Roslyn Arlin Mickelson, Jason Giersch, Elizabeth Steams, Stephanie Moller.

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Secondary school science teachers' arguments for the particulate nature of matter

Robert Gunnarsson, Björn Hellquist, Helge Strömdahl, Dusan Zelic.

Adjusting claims as new evidence emerges: Do students incorporate new evidence into their scientific explanations

Ann M. Novak, David F. Treagust.

The influence of instruction, prior knowledge, and values on climate change risk perception among undergraduates

Osman Aksit, Karen S. McNeal, Anne U. Gold, Julie C. Libarkin, Sara Harris.

Positioning as not-understanding: The value of showing uncertainty for engaging in science

Jessica Watkins, David Hammer, Jennifer Radoff, Lama Z. Jaber, Anna M. Phillips.

Students' environmental NOS views, compassion, intent, and action: impact of place-based socioscientific issues instruction

Benjamin C. Herman.

International Journal of Science Education

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An industrial educational laboratory at Ducati Foundation: narrative approaches to mechanics based upon continuum physics

Federico Corni, Hans U. Fuchs, Giovanni Savino.

Comparative study of middle school students' attitudes towards science: Rasch analysis of entire TIMSS 2011 attitudinal data for England, Singapore, and the U.S.A as well as psychometric properties of attitudes scale

Oon Pey Tee, R. Subramaniam.

Reading for meaning: The foundational knowledge of every teacher of science should have

Alexis Patterson, Diego Roman, Michelle Friend, Jonathan Osborne, Brain Donovan.

Scientific literacy for democratic decision-making

Hagop A. Yacoubian.

Engaging in vocabulary learning in science: the promise of multimodal instruction

Dianna Townsend, Cynthia Brock, Jennifer D. Morrison.

Taking risks with a growth mindset: long-term influence of an elementary pre-service after school science practicum

T.J. Cartwright, B. Hallar.

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Examining the progression and consistency of thermal concepts: a cross-age study

Emine Adadan, Merve Nur Yavuzkaya.

Adapting to a large-scale changes in Advanced Placement Biology, Chemistry, and Physics: the impact of online teacher communities

Kim Frumin, Chris Dede, Christian Fischer, Brandon Foster, Frances Lawrenz, Arthur Eisenkraft, Barry Fishman, Abigail Jurist Levy, Ayana McCoy.

Effects of explicit instruction on the acquisition of students' science inquiry skills in grades 5 and 6 of primary education

P.M. Kruit, R.J. Oostdam, E. van den Berg, J.A. Schuitema.

Integrative assessment of Evolutionary theory acceptance and knowledge levels of Biology undergraduate students from a Brazilian university

Gustavo Medina Tavares, Vera Lucia Bobrowski.

Withholding answers during hands-on scientific *investigations*? Comparing effects on developing students' scientific knowledge, reasoning, and application

Lin Zhang.

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Science Education

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The pursuit of a “better” explanation as an organizing framework for science teaching and learning

Nicos Papadouris, Stamatis Vokos, Constantinos P. Constantinou.

Improving STEM program quality in out-of-school time: Tool development and validation

Ashima Mathur Shah, Caroline Wylie, Drew Gitomer, Gil Noam.

What are critical features of science curriculum materials that impact student and teacher outcomes?

Natalie Pareja Roblin, Christian Schunn, Susan McKenney.

The conundrum of social class: Disparities in publishing among STEM students undergraduate research programs at a Hispanic majority institution

Sara Grineski, Heather Daniels, Timothy Collins, Danielle X. Morales, Angela Frederick, Marilyn Garcia.

Students as researchers: What and why seventh-grade students choose to write when investigating their own research question

Tuva Bjokvold, Marte Bilkstad-Balas.

Characterizing elementary teachers’ enactment of high-leverage practices through engineering design-based science instruction

Brenda M. Capobianco, Jacqueline DeLisi, Jeffrey Radloff.

Becoming science learners: A study of newcomers’ identity work in elementary school science

Rebeca Gamez, Carolyn A. Parker.

Children’s idea about fossils and foundational concepts related to fossils

Lisa A. Borgerding, Sara Raven.

DIALOGUE, ARGUMENTATION AND EDUCATION: HISTORY, THEORY AND PRACTICE Baruch B. Schwarz Michael J. Barker Cambridge University Press, New York City, New York. 2017. 316 pages. ISBN:

9781107141810

Michael J. Ford.

Journal of College Science Teaching

[Volume 47, No. 4](#)

Course-Based Support for Peer-Led Study Group Facilitators in a Large Instructional Team

Rachel A. Barnard, Allison Boone, Claire Sandler, Jordan R. Boothe, Joe Salvatore, Kelley Emerson, Brian P. Coppola.

Evolution in Student Perceptions of a Flipped Classroom in a Computer Programming Course

Casey E. Davenport.

Science and Community Engagement: Connecting Science Students With the Community

Rachael Lancor, Amy Schiebel.

The Role of Faculty in Fostering STEM Transfer Student Success

Laura Reiser Wetzel, Kelly R. Debure.

Breaking Down Barriers: A Bridge Program Helps First-Year Biology Students Connect With Faculty

Katelyn M. Cooper, Michael Ashley, Sara E. Brownell.

Student and Faculty Views on Process of Science Skills at a Large, Research-Intensive University

Elizabeth A. Addis, Jo Anne Powell-Coffman.

Students' Understanding and Perceptions of Assigned Team Roles in a Classroom Laboratory Environment

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Exploring Power Distribution and Its Influence on the Process of Argumentation in a POGIL Biochemistry Classroom

Annabel N. Prince, Wesley B. Pitts, David W. Parkin.

Point of View: The Professional Science Master's Degree at Twenty

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Two-Year Community: Modeling Tiktaalik: Using a Model-Based Inquiry Approach to Engage Community College Students in the Practices of Science During an Evolution Unit

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Case Study: Putting Words in Their Mouth: Writing Dialogue For Case Studies

Clyde Freeman Herreid.

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Examining the design features of a communication-rich, problem-centered mathematics professional development

Zandra de Araujo, Chandra Hawley Orrill, Erik Jacobson.

The effect of attending tutoring on course grades in Calculus I

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A typological analysis: understanding pre-service teacher beliefs and how they are transformed

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Capturing student mathematical engagement through differently enacted classroom practices: applying a modification of Watson's analytical tool

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A multidimensional approach to training mathematics students at a university: improving the efficacy through the unity of social, psychological and pedagogical aspects

Elena Kuznetsova, Marina Matytcina.

Incentivizing advanced mathematics study at upper secondary level: the case of bonus points in Ireland

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An interesting property of hexagons

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Various solution methods, accompanied by dynamic investigation, for the same problem as a means for enriching the mathematical toolbox

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Wine and maths: mathematical solutions to wine-inspired problems

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Learning fraction comparison by using a dynamic mathematics software-GeoGebra

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How mathematicians assign points to student proofs

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Eye color and the practice of statistics in Grade 6: Comparing two groups

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Real analysis students' understanding of pointwise convergence of function sequences in a DGS assisted learning environment

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Secondary mathematics teachers' instrumental integration in technology-rich geometry classrooms

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An investigation of an undergraduate student's reasoning with zero-divisors and the zero-product property

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From course design to presentations of proofs: How mathematics professors attend to student independent proof reading

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Effects of constructing, critiquing, and revising arguments within university classrooms

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Undergraduates' images of the root concept in \mathbb{R} and \mathbb{C}

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Brief Report: A Progression of Fraction Schemes Common to Chinese and U.S. Students

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A Guide to Analyzing Mathematics Tasks and Their Implementation in Curriculum Resources

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Audible conversational affordances and constraints of verbalizing professional noticing during prospective teacher lesson study

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More than meets the eye: patterns and shifts in middle school mathematics teachers' descriptions of models

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Assessing key epistemic features of didactic-mathematical knowledge of prospective teachers: the case of the derivative

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ABC problem in elementary mathematics education: Arithmetic before comprehension

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The preparation experiences of elementary mathematics specialists: examining influences on beliefs, content knowledge, and teaching practices

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Examining change in K-3 teachers' mathematical knowledge, attitudes, and beliefs: the case of Primarily Math

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An Online Professional Development Model to Support Teachers' Abilities to Examine Student Work and Thinking

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When Mathematics Teacher Educators Come Under Attack

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**Conversations with Four Highly Productive German Educational
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