EDITORIAL

The Journal Handbook of Research on Urban Mathematics Teaching and Learning: A Resource Guide for the Every Student Succeeds Act of 2015

David W. Stinson

Georgia State University

As a *critical*¹ mathematics educator, it is difficult not to be pessimistic about the Every Student Succeeds Act of 2015 (ESSA), signed into law by President Barak Obama on December 10th. The ESSA, similar to it predecessors, has an admirably worded purpose statement: "To provide all children significant opportunity to receive a fair, equitable, and high-quality education, and to close educational achievement gaps" (ESSA, 2015, Sec. 1001). But after more than a decade of suffering through federal legislation that left far too many children behind and yielded far too many losers in the race to the top, I have become increasingly doubtful that any organization, including the federal government, has "the will" (Hilliard, 1991, p. 31)² to facilitate "the kind of violent reform necessary to change the conditions of African American, Latin@, Indigenous, and poor students [i.e., the collective Black³] in mathematics education" (Martin, 2015, p. 22). Nevertheless, it is being

² In his article titled "Do We Have the Will to Educate All Children?" Hilliard (1991) writes:

³ Martin (2015), attributing the term to Eduardo Bonilla-Silva, named this group of currently and historically underserved students *the collective Black*.

DAVID W. STINSON is an associate professor of mathematics education in the Department of Middle and Secondary Education in the College of Education and Human Development, at Georgia State University, P.O. Box 3978, Atlanta, GA, 30303; e-mail: <u>dstinson@gsu.edu</u>. His research interests include exploring socio-cultural, -historical, and -political aspects of mathematics and mathematics teaching and learning from a critical postmodern theoretical (and methodological) perspective. He is a co-founder and current editor-in-chief of the *Journal of Urban Mathematics Education*.

¹ By *critical*, I mean in the critical theoretical sense. Bronner (2011), in providing a definition of sorts of critical theory, writes:

Critical theory refuses to identify freedom with any institutional arrangement or fixed system of thought. It questions the hidden assumptions and purposes of competing theories and existing forms of practice.... Critical theory insists that thought must respond to the new problems and the new possibilities for liberation that arise from changing historical circumstances. Interdisciplinary and uniquely experimental in character, deeply skeptical of tradition and all absolute claims, critical theory...[is] concerned not merely with how things [are] but how they might be and should be. (pp. 1–2)

If our destination is excellence on a massive scale, not only must we change from the slow lane into the fast lane; we literally must change highways. Perhaps we need to abandon the highways altogether to take flight, because the highest goals that we can imagine are well within reach for those who have the *will to excellence*. (p. 36, emphasis in original)

critical that makes me optimistic as well, albeit a "non-stupid optimism" (McWilliam, 2005, p. 1).⁴ It is this forever oscillating between pessimism and optimism that drives me and many other critical educators to do the work that we do.

For the past 8 years, exemplars of this crucially needed work—completed by a particular group of (largely) critical mathematics educators—are found within the online pages of the *Journal of Urban Mathematics Education (JUME*). The readers, editors, reviewers, and authors of *JUME* (a collective group that numbers more than 1,000 strong) have brought to life over 1,700 pages of scholarly editorials, commentaries, response commentaries, public stories, research articles, and book reviews. This group of educators includes those who have spent decades working *to provide all children significant opportunity to receive a fair, equitable, and high-quality education* (many with a specific focus on the collective Black), as well as those who are just beginning their careers as critical mathematics classroom teachers, teacher educators, and/or education researchers.

The purpose behind the creation of *JUME* was and continues to be to create a movement of change in mathematics education (Matthews, 2008). Over the past 8 years, *JUME* has offered different statements—that is, different knowledges (cf. Foucault, 1969/1972)—about "urban" mathematics education and, in turn, different statements about urban children and urban schools (Stinson, 2010). To date, web views of *JUME* content have exceeded 140,000 views, and Google Scholar citations have exceeded 400, with Google and Google Scholar web searches returning over 2,300 and 340 hits, respectively.

Four years ago, based on the power, in the Foucauldian sense (see, e.g., Foucault, 1980), of the academic edited handbook to produce and reproduce knowledge in both social science research, in general (e.g., Denzin & Lincoln, 1994, 2000, 2005, 2011), and mathematics education research, in particular (e.g., Grouws, 1992; Lester, 2007), I suggested that *JUME* be envisioned "as a both–and rather than an either–or research and pedagogical resource" (Stinson, 2011, p. 3). That is, *JUME* can function as both a peer-reviewed journal and an academic edited handbook on urban mathematics education. I then proceeded to provide the Table of Contents, if you will, of the first edition of the *Handbook of Research on Urban Mathematics Teaching and Learning*.

Here, I offer an expanded version of that Table of Contents, including the research and scholarship published in *JUME* over the past 4 years (see Appendix A).⁵

⁴ McWilliam (2005) argues that teachers who maintain their passion for teaching even after seeing endless rounds of ideas and polices come through do not indulge in mindless optimism but rather a nonstupid optimism.

⁵ See also two *JUME* special issues: the Benjamin Banneker Association and National Science Foundation (BBA-NSF) special issue (Bullock, Alexander, & Gholson, 2012) and the Privilege and Oppression in the Mathematics Preparation of Teacher Educators (PrOMPTE) special issue (Stinson & Spencer, 2013), as well as the editorials, public stories, and book reviews published in nearly every issue.

I also suggest here an expanded use for *JUME* beyond its use as a research and/or pedagogical resource. I suggest that *JUME* be used as an easily accessible resource guide to assist those mathematics education leaders and policy makers who will be busy in the coming months and years translating ESSA into policies and practices intended to ensure that every "urban student" succeeds in mathematics. This time around, however, I hope that members of the larger mathematics education community will neither allow politics to take the place of scientific inquiry (Boaler, 2008) nor erase "race" from a national conversation on mathematics teaching and learning (Martin, 2008), among other policy missteps and omissions of the past.⁶ As the single largest and most up-to-date collection of theoretical and empirical social science on urban mathematics teaching and learning, I hope those members of the mathematics education community who will be charged (both directly and indirectly) to translate ESSA will turn to *JUME* often as they consider Bullock's (2015) most recent direct and timely question:

- "Do all lives matter in mathematics education?"

References

- Bronner, S. E. (2011). *Critical theory: A very short introduction*. Oxford, United Kingdom: Oxford University Press.
- Bullock, E. C., Alexander, N. N, & Gholson, M. L. (Eds.). (2012). Proceedings of the 2010 Philadelphia and 2011 Atlanta Benjamin Banneker Association Conferences – Beyond the Numbers [Special issue]. *Journal of Urban Mathematics Education*, 5(2). Retrieved from http://ed-osprey.gsu.edu/ojs/index.php/JUME/issue/view/10
- Bullock, E. C. (2015, November 18). Do all lives matter in mathematics education? Invited speaker to The Lappan-Phillips-Fitzgerald Mathematics Education Colloquium Series, Program of Mathematics Education at Michigan State University, East Lansing, MI.
- Boaler, J. (2008). When politics took the place of inquiry: A response to the National Mathematics Advisory Panel's review of instructional practices [Special issue]. *Educational Researcher*, *37*(9), 588–594.

Denzin, N. K., & Lincoln, Y. S. (1994). Handbook of qualitative research. Thousand Oaks, CA: Sage.

Denzin, N. K., & Lincoln, Y. S. (2000). *Handbook of qualitative research* (2nd ed.). Thousand Oaks, CA: Sage.

Denzin, N. K., & Lincoln, Y. S. (2005). The Sage Handbook of qualitative research (3rd ed.). Thousand Oaks, CA: Sage.

Denzin, N. K., & Lincoln, Y. S. (2011). The Sage *Handbook of qualitative research* (4th ed.). Thousand Oaks, CA: Sage.

⁶ For instance, although it is stated that the views expressed in *Foundations for Success: The Final Report of the National Mathematics Advisory Panel* [NMAP, 2008] "do not necessarily represent the positions and polices of the [U.S.] Department of Education" (p. ii), both the panel and the resulting report were commissioned under the No Child Left Behind Act of 2001. The panel was charged "with the responsibilities of relying upon the 'best available scientific evidence' and recommending ways '... to foster greater knowledge of and improved performance in mathematics among American students" (p. xiii). For critiques of the *Final Report*, see Kelly (2008) and Sriraman (2008).

Every Student Succeeds Act of 2015, Pub. L. No. 114-95.

- Foucault, M. (1972). *The archaeology of knowledge* (A. M. Sheridan Smith, Trans.). New York, NY: Pantheon. (Original work published 1969)
- Foucault, M. (1980). Power/knowledge: Selected interviews and other writings, 1972–1977 (C. Gordon, Ed.; C. Gordon, L. Marshall, J. Mepham, & K. Soper, Trans.). New York, NY: Pantheon.
- Grouws, D. A. (Ed.). (1992). *Handbook of research on mathematics teaching and learning*. New York, NY: Macmillan.
- Hilliard, A. G., III. (1991). Do we have the *will* to educate all children? *Educational Leadership*, 49(1), 31–36.
- Kelly, A. E. (Ed.). (2008). Reflections on the National Mathematics Advisory Panel Final Report [Special issue]. *Educational Researcher*, 37(9).
- Lester, F. K. (Ed.). (2007). Second handbook of research on mathematics teaching and learning. Charlotte, NC: Information Age.
- Matthews, L. E. (2008). Illuminating urban excellence: A movement of change within mathematics education. *Journal of Urban Mathematics Education*, 1(1), 1–4. Retrieved from <u>http://ed-osprey.gsu.edu/ojs/index.php/JUME/article/view/20/9</u>
- Martin, D. B. (2008). E(race)ing race from a national conversation on mathematics teaching and learning: The National Mathematics Advisory Panel as White institutional space. *The Montana Mathematics Enthusiast*, 5(2-3), 387–398.
- Martin, D. B. (2015). The collective Black and *Principles to Actions. Journal of Urban Mathematics Education*, 8(1), 17–23. Retrieved from

http://ed-osprey.gsu.edu/ojs/index.php/JUME/article/view/270/169

- McWilliam, E. (2005). Schooling the yuk/wow generation. APC Monographs, 17, 1-10.
- National Mathematics Advisory Panel. (2008). Foundations for success: The final report of the National Mathematics Advisory Panel. Washington, DC: U.S. Department of Education.
- No Child Left Behind Act 2001, Pub. L. No. 107-110, 115 Stat. 1425 (2002).
- Sriraman, B. (Ed.). (2008). Critical notice on The National Mathematics Advisory Panel Report [Special section]. *Montana Mathematics Enthusiast*, 5(2-3). Retrieved from <u>http://www.math.umt.edu/tmme/vol5no2and3/</u>
- Stinson, D. W. (2010). How is it that one particular statement appeared rather than another?: Opening a different space for different statements about urban mathematics education. *Journal of Urban Mathematics Education*, 3(1), 1–11. Retrieved from http://ed-osprey.gsu.edu/ojs/index.php/JUME/article/view/116/69
- Stinson, D. W. (2011). *Both* the journal *and* handbook of research on urban mathematics teaching and learning. *Journal of Urban Mathematics Education*, 4(2), 1–6. Retrieved from <u>http://ed-osprey.gsu.edu/ojs/index.php/JUME/article/view/156/96</u>
- Stinson, D. W., & Spencer, J. A. (Eds.). (2013). Privilege and oppression in the mathematics preparation of teacher educators [Special issue]. *Journal of Urban Mathematics Education*, 6(1). Retrieved from <u>http://ed-osprey.gsu.edu/ojs/index.php/JUME/issue/view/12</u>

APPENDIX A

NOTE: Scroll over titles and click, all "chapters" are hyperlinked.

Handbook of Research on Urban Mathematics Teaching and Learning (Expanded edition)

Table of Contents

Part I: Issues

- 1. Putting the "Urban" in Mathematics Education Scholarship William F. Tate – *Washington University in St. Louis*
- 2. The Common Core State Standards Initiative: A Critical Response Eric (Rico) Gutstein – University of Illinois at Chicago
- Mathematics as Gatekeeper: Power and Privilege in the Production of Knowledge
 Danny Bernard Martin, Maisie L. Gholson – University of Illinois at Chicago
 Jacqueline Leonard – University of Colorado Denver
 - 3.1 "Both And"—Equity and Mathematics: A Response to Martin, Gholson, and Leonard Jere Confrey – North Carolina State University
 - 3.1 Engaging Students in Meaningful Mathematics Learning: Different Perspectives, Complementary Goals Michael T. Battista – The Ohio State University
- Changing Students' Lives Through the De-tracking of Urban Mathematics Classrooms Jo Boaler – Stanford University
- 5. Positive Possibilities of Rethinking (Urban) Mathematics Education Within a Postmodern Frame Margaret Walshaw – *Massey University*
- 6. Neoliberal Urbanism, Race, and Equity in Mathematics Education **Pauline Lipman** *University of Illinois at Chicago*
- 7. Erbody Talkin bout Social Justice Aint Goin There Jacqueline Leonard *University of Wyoming*
- 8. Why (Urban) Mathematics Teachers Need Political Knowledge Rochelle Gutiérrez University of Illinois at Urbana-Champaign

Editorial

Stinson

- 9. Place Matters: Mathematics Education Reform in Urban Schools Celia Rousseau Anderson University of Memphis
- Why Should Mathematics Educators Learn from and about Latina/o Students' In-School and Out-of-School Experiences? Marta Civil – The University of Arizona
- 11. The Collective Black and *Principles to Actions* Danny Bernard Martin – *University of Illinois at Chicago*
 - 11.1 Call for Mathematics Education Colleagues and Stakeholders to Collaboratively Engage with NCTM: In Response to Martin's Commentary Diane J. Briars – NCTM President Matt Larson – NCTM President-Elect Marilyn E. Strutchens – NCTM Board of Directors David Barnes – NCTM Associate Executive Director, Research, Learning and Development
- 12. Mathematics and Social Justice: A Symbiotic Pedagogy Gareth Bond, Egan J. Chernoff – University of Saskatchewan, Canada
- 13. From Implicit to Explicit: Articulating Equitable Learning Trajectories Based Instruction Marrielle Myers – Kennesaw State University Paola Sztajn – North Carolina State University P. Holt Wilson – University of North Carolina at Greensboro Cyndi Edgington – North Carolina State University

Part II: Theoretical Perspectives

- 14. A Metropolitan Perspective on Mathematics Education: Lessons Learned from a "Rural" School District Celia Rousseau Anderson, Angiline Powell – University of Memphis
- 15. Mathematical Counterstory and African American Male Students: Urban Mathematics Education From a Critical Race Theory Perspective Clarence L. Terry, Sr. Occidental College
- 16. Caring, Race, Culture, and Power: A Research Synthesis Toward Supporting Mathematics Teachers in Caring With Awareness **Tonya Gau Bartell** – *University of Delaware*
- Ethnomodeling as a Research Theoretical Framework on Ethnomathematics and Mathematical Modeling Milton Rosa, Daniel Clark Orey – Universidade Federal de Ouro Preto, Brazil

Part III: Teachers and Teaching

- Comparing Teachers' Conceptions of Mathematics Education and Student Diversity at Highly Effective and Typical Elementary Schools Richard S. Kitchen – University of New Mexico Francine Cabral Roy – University of Rhode Island Okhee Lee, Walter G. Secada – University of Miami
- Preservice Teachers' Changing Conceptions About Teaching Mathematics in Urban Elementary Classrooms Mindy Kalchman – DePaul University
- Evolution of (Urban) Mathematics Teachers' Identity Mary Q. Foote – *Queens College, CUNY* Beverly S. Smith, Laura M. Gillert – *The City College of New York, CUNY*
- 21. When Am I Going to Learn to be a Mathematics Teacher? A Case Study of a Novice New York City Teaching Fellow Michael Meagher Brooklyn College, CUNY Andrew Brantlinger University of Maryland, College Park
- 22. Success Made Probable: Creating Equitable Mathematical Experiences Through Project-Based Learning Dionne I. Cross – Indiana University Bloomington Rick A. Hudson – University of Southern Indiana Olufunke Adefope – Georgia Southern University Mi Yeon Lee, Lauren Rapacki, Arnulfo Perez – Indiana University Bloomington
- 23. Regarding the Mathematics Education of English Learners: Clustering the Conceptions of Preservice Teachers Laura McLeman – University of Michigan Flint Anthony Fernandes – University of North Carolina Charlotte Michelle McNulty – University of Michigan Flint
- 24. K–8 Teachers' Concerns about Teaching Latino/a Students Cynthia Oropesa Anhalt – The University of Arizona María Elena Rodríguez Pérez – Universidad de Guadalajara
- 25. Affinity through Mathematical Activity: Cultivating Democratic Learning Communities **Tesha Sengupta-Irving** – *University of California, Irvine*
- 26. Delegating Mathematical Authority as a Means to Strive Toward Equity **Teresa K. Dunleavy** *Vanderbilt University*
- 27. "I Just Wouldn't Want to Get as Deep Into It": Preservice Teachers' Beliefs about the Role of Controversial Topics in Mathematics Education Ksenija Simic-Muller Pacific Lutheran University
 Anthony Fernandes University of North Carolina at Charlotte Mathew D. Felton-Koestler Ohio University

Part IV: Teacher Education

- 28. Teaching Mathematics for Social Justice: Reflections on a Community of Practice for Urban High School Mathematics Teachers Lidia Gonzalez *York College, CUNY*
- 29. Math Links: Building Learning Communities in Urban Settings Jacqueline Leonard – *Temple University* Brian R. Evans – *Pace University*
- Learning to Teach Mathematics in Urban High Schools: Untangling the Threads of Interwoven Narratives Haiwen Chu – Graduate Center of City University of New York Laurie H. Rubel – Brooklyn College, CUNY
- 31. The Mathematics Learning Discourse Project: Fostering Higher Order Thinking and Academic Language in Urban Mathematics Classrooms Megan E. Staples, Mary P. Truxaw – University of Connecticut
- Collaborative Evaluative Inquiry: A Model for Improving Mathematics Instruction in Urban Elementary Schools Iman C. Chahine – Georgia State University Lesa M. Covington Clarkson – University of Minnesota
- 33. K–2 Teachers' Attempts to Connect Out-of-School Experiences to In-School Mathematics Learning Allison W. McCulloch, Patricia L. Marshal – *North Carolina State University*
- 34. "Estoy acostumbrada hablar Ingéls": Latin@ Pre-service Teachers' Struggles to Use Spanish in a Bilingual Afterschool Mathematics Program Eugenia Vomvoridi-Ivanović – University of South Florida
- 35. Recruiting Secondary Mathematics Teachers: Characteristics That Add Up for African American Students **Tamra C. Ragland** – *Hamilton County Educational Service Center* **Shelley Sheats Harkness** – *University of Cincinnati*

Part V: Student Learning and Identity

- Social Identities and Opportunities to Learn: Student Perspectives on Group Work in an Urban Mathematics Classroom Indigo Esmonde, Kanjana Brodie, Lesley Dookie, Miwa Takeuchi – University of Toronto
- Exploring the Nexus of African American Students' Identity and Mathematics Achievement Francis M. Nzuki – The Richard Stockton College of New Jersey

- How Do We Learn? African American Elementary Students Learning Reform Mathematics in Urban Classrooms Lanette R. Waddell – Vanderbilt University
- 39. (In)equitable Schooling and Mathematics of Marginalized Students: Through the Voices of Urban Latinas/os
 Maura Varely Gutiérrez – Elsie Whitlow Stokes Community Freedom Public Charter School Craig Willey – Indiana University Purdue University-Indianapolis
 Lena L. Khisty – University of Illinois at Chicago
- 40. High-Achieving Black Students, Biculturalism, and Out-of-School STEM Learning Experiences: Exploring Some Unintended Consequences **Ebony O. McGee** – *Vanderbilt University*
- 41. Urban Latina/o Undergraduate Students' Negotiations of Identities and Participation in an Emerging Scholars Calculus I Workshop Sarah Oppland-Cordell – *Northeaster Illinois University*
- 42. Latina/o Youth's Perspectives on Race, Language, and Learning Mathematics Maria del Rosario Zavala – San Francisco State University
- 43. Latinas and Problem Solving: What They Say and What They Do **Paula Guerra, Woong Lim** *Kennesaw State University*
- 44. Black Male Students and The Algebra Project: Mathematics Identity as Participation
 Melva R. Grant, Helen Crompton, Deana J. Ford – Old Dominion University

Part VI: Policy

- Racism, Assessment, and Instructional Practices: Implications for Mathematics Teachers of African American Students Julius Davis – Morgan State University Danny Bernard Martin – University of Illinois at Chicago
- 46. Practices Worthy of Attention: A Search For Existence Proofs of Promising Practitioner Work in Secondary Mathematics Pamela L. Paek – University of Texas at Austin
- 47. An Examination of Mathematics Achievement and Growth in a Midwestern Urban School District: Implications for Teachers and Administrators **Robert M. Capraro, Jamaal Rashad Young, Chance W. Lewis, Zeyner Ebrar Yetkiner, Melanie N. Woods** – *Texas A&M University*
- 48. Compounding Inequalities: English Proficiency and Tracking and Their Relation to Mathematics Performance Among Latina/o Secondary School Youth Eduardo Mosqueda University of California, Santa Cruz

Editorial

Stinson

49. Success after Failure: Academic Effects and Psychological Implications of Early Universal Algebra Policies
Keith E. Howard – Chapman University
Martin Romero – Santa Ana College
Allison Scott – Level Playing Field Institute
Derrick Saddler – University of South Florida

Part VII: International Perspectives

- 50. Learning Mathematics in a Borderland Position: Students' Foregrounds and Intentionality in a Brazilian Favela Ole Skovsmose – Aalborg University Pedro Paulo Scandiuzzi – University São Paulo States Paola Valero – Aalborg University Helle Alrø – Aalborg University Bergen University College
- 51. Transforming Mathematical Discourse: A Daunting Task for South Africa's Townships Roland G. Pourdavood – Cleveland State University Nicole Carignan – University of Quebec at Montreal Lonnie C. King – Nelson Mandela Metropolitan University
- 52. Forging Mathematical Relationships in Inquiry-Based Classrooms With Pasifika Students Roberta Hunter, Glenda Anthony – Massey University
- Mathematics as (Multi)cultural Practice: Irish Lessons From the Polish Weekend School
 Stephen O'Brien, Fiachra Long – University College Cork
- Reflecting Heritage Cultures in Mathematics Learning: The Views of Teachers and Students Robin Averill – Victoria University of Wellington
- 55. Financial Literacy with Families: Opportunity and Hope Lorraine M. Baron *University of Hawai'i at Mānoa*