

Social Justice and Mathematics

-a current annotated reference list, compiled July 2019

Rethinking Mathematics: Teaching Social Justice by the Numbers

Gutstein, E. & Peterson, B. (Eds). (2013). *Rethinking mathematics: Teaching social justice by the numbers* (2nd ed.). Milwaukee, WI: Rethinking Schools.

- *Teacher resource with an introduction and overview of teaching social justice as an approach to support students understanding of mathematics as a powerful tool in society. Several classroom-based investigations, written by contributing authors, directly connect the use of mathematics within social justice topics.*

Math That Matters 2: A Teacher Resource Linking Math and Social Justice

Stocker, D. (2019). *Math that matters 2: A teacher resource linking math and social justice*. Ottawa, Ontario: The Canadian Centre for Policy Alternatives.

- *Teacher resource with fifty lessons linking social justice issues to math, most with Canadian content.*

Social Justice and Mathematics: A time for renewed implementation?

Chorney, S. (2015). Social justice and mathematics: A time for renewed implementation? *Vector*, 56(2), 8-11.

- *This article was written as the redesigned BC mathematics curriculum was being released. The author discusses social justice and mathematics through two lenses: as content and as context. Also discussed is the issue of equity, not just in the world but in our classrooms.*

Teaching Mathematics for Social Justice

Wright, P. (2016). *Teaching math for social justice*. Derby, UK: Association of Teachers of Mathematics.

- *This ATM publication addresses inclusive practices in the secondary mathematics classroom while integrating issues of social justice into seven classroom-based projects/investigations.*

Annual Perspectives in Mathematics Education: Rehumanizing Mathematics for Black, Indigenous and Latinx Students

Goffney, I. & Gutierrez, R. (Eds). (2018). *Annual perspectives in mathematics education: Rehumanizing mathematics for Black, Indigenous and Latinx students*. Reston, VA: NCTM.

- *NCTM's annual publication focuses on current issues in mathematics education and is comprised of submitted chapters that discuss the teaching and learning of mathematics. The chapter topics address equity, access, privilege and systemic issues for Black, Indigenous and Latinx students and share the efforts of educators and researchers to provide mathematics learning experiences that are humane, positive and powerful.*

A Qualitative Metasynthesis of Teaching Mathematics for Social Justice in Action: Pitfalls and Promises of Practice

Harper, F. K. (2019). A qualitative metasynthesis of teaching mathematics for social justice in action: Pitfalls and promises of practice. *Journal for Research in Mathematics Education*, 50(3), 268-310.

- *This paper discusses the results of a metasynthesis of thirty-five qualitative reports of social justices learning experiences in diverse classrooms contexts. The guiding framework used for analysis is Critical Race Theory. Possible pitfalls of teaching math through social justice include: 1)the negative implications of not addressing issues of race directly 2) not critiquing liberal assumptions and thus perpetuating racist stereotypes, and 3) time and curricular constraints can lead to superficial connections. Promising practices to address racial inequities in mathematics classrooms include: 1) normalizing the discussion of race so that social justice learning experiences can center voices of colour, 2) encourage considerations of intersectionality (for example, consider not just race but also class, gender, sexism), 3) create counterstories to critique mainstream claims, 4) needing to take a long term and interdisciplinary approach, and 5) plan time for students to take action toward. change*

Mathematics for Human Flourishing (available for pre-order)

Su, F. (2020). *Mathematics for human flourishing*. New Haven, CT: Yale University Press.

- *Building on Su's other publications and presentations, this book shares the beauty of mathematics and how it connects to our common humanity.*

Mathematics for Social Justice: Resources for the College Classroom

Karaali, G. & Khadjavi, L.S. (Eds). (2019). *Mathematics for social justice: Resources for the college classroom*. Washington, DC: MAA Press.

- *A collection of essays about politics and pedagogy in classrooms followed by fourteen modules of lessons with social justice themes.*

Radical Equations: Civil Rights from Mississippi to the Algebra Project

Moses, R.P. & Cobb, C.E. (2002). *Radical equations: Civil rights from Mississippi to the Algebra Project*. Boston, MA: Beacon Press.

- *Sharing the power of community, this book shares stories from the Algebra Project, enacted in twenty-five cities in the USA.*

Living Proof: Stories of Resilience Along the Mathematical Journey

Henrich, A.K., Lawrence, E.D., Pons, M.A. & Taylor, E.G. (Eds). (2019). *Living proof: Stories of resilience along the mathematical journey*. Providence, RI: American Mathematical Society.

- *A collection of contributed stories of struggle and persistence intended to inspire students of mathematics.*
- *Available as a free pdf download at maa.org*

Teaching Mathematics for Social Justice: Conversations with Educators

Stinson, D.W. & Wager, A.A. (Eds). (2012). *Teaching mathematics for social justice: Conversations with educators*. Reston, VA: NCTM.

- *Leading scholars in social justice mathematics share their research and perspectives through a collection of articles that connect both theory/practice and education/social justice.*

Access and Equity: Promoting High-Quality Mathematics in Grades 9-12

White, D.Y., Fernandes, A. & Civil, M. (Eds). (2018). *Access and equity: Promoting high-quality mathematics in grades 9-12*. Reston, VA: NCTM.

- *Part of a grade band series, this volume addresses issues of access, equity and empowerment in secondary classrooms with chapters focused on the themes of engaging students in equity-based classroom projects, developing students' positive mathematical identities and encouraging teachers to reflect upon their own equitable teaching practices.*
- *Also available in volumes for Grades 6-8, Grades 3-5 and Grades Pre-K-Grade 2 through nctm.org*

Critical Science and Mathematics Early Childhood Education: Theorizing Reggio, Play, and Critical Pedagogy into an Actionable Cycle.

McCormick Smith, M. & Chao, T. (2018). Critical science and mathematics early childhood education: Theorizing Reggio, play, and critical pedagogy into an actionable cycle. *Education Science* 8, 162.

- *This paper examines ways to support early childhood educators in engaging in critical conversations with young children about identity, culture, diversity and other critical tensions and draws upon frameworks such as the philosophy of early childhood education in Reggio Emilia, play-based pedagogy and critical pedagogy.*

Online articles, resources and blogposts:

Special Issue of Teaching for Excellence and Equity in Mathematics Mathematics Education: Through the Lens of Social Justice

By TODOS, 2016

https://www.todos-math.org/assets/documents/TEEM/teem7_final1.pdf

Elementary Mathematics and #BlackLivesMatter

By Theodore Chao and Maya Marlowe

<https://www.bankstreet.edu/research-publications-policy/occasional-paper-series/occasional-paper-series-41/elementary-mathematics-and-blacklivesmatter/>

Re-Designing Mathematics Education for Social Justice: A Vision

By Fahmil Shah

<https://www.bankstreet.edu/research-publications-policy/occasional-paper-series/occasional-paper-series-41/re-designing-mathematics-education-for-social-justice-a-vision/>

Math and Social Justice: A Collaborative MTBOS Site

A collaboratively designed collection of resources for exploring social justice issues in the math classroom and striving for equity in math education.

<https://sites.google.com/site/mathandsocialjustice/home>

Radical Math

A website to support educators in integrating issues of social and economic justice into their mathematics classes.

<http://radicalmath.org>

#makemathjust

This hashtag is currently being used on twitter to explore creating social justice investigations and ways to help students use math critically.

with thanks to Twitter colleagues who contributed to this list