

Empowerment through Access and Equity

Matt Larson
NCTM President

Disclaimers



- I am on my own journey to better understand issues of access and equity.
- I am working to unpack my own whiteness & privilege.
- I am working to understand NCTM's current and historical role in these issues.

Disclaimers



- I will likely make unintentional errors in interpretation and misuse language. I welcome feedback from critical friends.

The Need for Grace and Space

We have a duty, all of us, to understand race issues, especially with all that's going on in our nation today. We have a duty to approach it with a culture of inquiry ... in the mathematical community, let's provide each other the grace and space to talk about these difficult things

Francis Su, MAA Past President.

"Freedom through Inquiry." Address at the Inquiry-Based Learning Forum & 19th Annual Legacy of R. L. Moore Conference. August 4, 2016.

The Need for Grace and Space

And if we provide each other with the grace and space to talk about race without shame, we won't have to fear saying ridiculous things. We'll be able to forgive each other for ways in which we might inadvertently offend.

Francis Su, MAA Past President.

"Freedom through Inquiry." Address at the Inquiry-Based Learning Forum & 19th Annual Legacy of R. L. Moore Conference. August 4, 2016.

Goals

- **Look at how I think NCTM found itself in its current position with respect to Access and Equity.**
- **Discuss NCTM's re-framing of Access and Equity.**
- **Respond to some issues raised by critics of NCTM's (in)actions, i.e. continue the dialogue.**

Goals

- Look at some NCTM action steps with respect to access, equity and empowerment.
- Look at why we teach mathematics.
- Comments/Questions

NCTM's Current Focus on Access and Equity

COMMENTARY

The Collective Black and Principles to Actions
James Brown-Vincent
University of Illinois at Chicago

Response Commentary
David Brown
NCTM Executive Director

Response Commentary
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NCTM Executive Director

The Conversation Continues

RESPONSE COMMENTARY

**A Critical Dialogue:
Continuing the Conversation about**

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The NCTM Board Discussed

these Articles and

Implications at its February

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Concerns Raised About NCTM's Response to the Martin Critique

I am thankful for Professor Martin's courageous voice in continuing to raise these important issues, for NCTM's opening themselves to critical analysis, and for JUME's hosting of this important dialogue. I hope that NCTM will embrace these and other issues with genuine interest and action and that all of us as educators will critically interrogate our own complicity.

Meyer, B. (2016). A critical dialogue: Continuing the conversation about 'the collective Black and Principles to Actions. *Journal of Urban Mathematics Education*, 9(2), 29-32.

How did NCTM find itself in its current position?

Math Education Reform Has Been Driven by Economic Concerns

The current reform movement in mathematics education has been framed within a discussion of national economic interests.

Tate, W. F. (2013). Race, retrenchment, and the reform of school mathematics. In E. Gutstein & B. Peterson (Eds.), *Rethinking mathematics: Teaching social justice by the numbers, second edition* (pp. 42-51). Milwaukee, WI: Rethinking Schools.

Economic Concerns Have Long Driven Mathematics Education

Mercantile schools in 14th century Europe began teaching commercial arithmetic out of a growing economic need for efficient calculation.

Harouni, H. (2015). Toward a political economy of mathematics education. *Harvard Educational Review*, 85(1), 50-74.

Economic Concerns Have Long Driven Mathematics Education

As business grew in the [American] colonies, the need for more citizens to be able to perform simple arithmetic increased, and eventually, schools added arithmetic to the required subjects.

Jones, P. S., & Coxford, A. F. Jr. (Eds.). (1970). *A history of mathematics education in the United States and Canada* (32nd Yearbook). Reston, VA: National Council of Teachers of Mathematics.

Economic/National Defense Origins of 20th Century Math Education Reforms

- WWII: American recruits did not have sufficient basic computational and problem solving skills.
- Soviet launching of Sputnik in 1957.

Fey, J. T., & Graeber, A. O. (2003). From the new math to the Agenda for Action. In G.M.A. Stanic & J. Kilpatrick (Eds.), *A history of school mathematics* (Vol. 1, pp. 521-558). Reston, VA: National Council of Teachers of Mathematics.

An Agenda for Action Pointed to Mathematics Learning for More Than Economic/National Defense Reasons

All reasonable means should be employed to assure that everyone will have the foundation of mathematical learning essential to fulfilling his or her potential as a productive citizen.



NCTM. (1980). *An agenda for action*. Reston, VA.

Standards-Based Reform Has Its Origin in National Defense/Economic Concerns

A Nation at Risk (1983):

If an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war.

National Commission on Excellence in Education. (1983, April). *A nation at risk: The imperative for educational reform*. Washington, DC: US Department of Education.

NCTM Joined the Dominate Narrative

The social injustices of past schooling practices can no longer be tolerated ... Mathematics has become a critical filter for employment and full participation in our society.

We cannot afford to have the majority of our population mathematically illiterate: Equity has become an economic necessity. (p. 4)

NCTM. (1989). *Curriculum and evaluation standards for school mathematics*. Reston, VA: NCTM.

Professional Teaching Standards for Mathematics (NCTM, 1991)

Called for teachers to (among other things):



- Build on strengths from students' **linguistic, ethnic, racial, gender, and socioeconomic backgrounds**;
- Help students to become aware of the **role of mathematics in society and culture**;
- Expose students to the **contributions of various cultures to the advancement of mathematics**.

NCTM Attempted to Broaden the Narrative

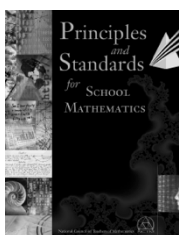
The need for mathematics in a changing world:

- *Mathematics for Life* – knowing mathematics can be personally satisfying and empowering.
- *Mathematics as a part of cultural heritage*.
- *Mathematics for the workplace*.
- *Mathematics for the scientific and technical community*.



NCTM. (2000). *Principles and Standards for School Mathematics*. Reston, VA: NCTM. (p. 4)

Principles for School Mathematics



Decisions made by teachers, school administrators, and other education professionals about the content and character of school mathematics have important consequences both for students and for society. These decisions should be based on sound professional guidance. *Principles and Standards for School Mathematics* is intended to provide such guidance. The Principles describe the particular features of high-quality mathematics education. The Standards describe the mathematical content and processes that students should learn. Together, the Principles and Standards constitute a vision to guide educators as they strive for the continual improvement of mathematics education.

- **Equity.** Excellence in mathematics education requires equity—high expectations and strong support for all students. It must be coherent, focused on important mathematics, and well articulated across the grades.
- **Teaching.** Effective mathematics teaching requires understanding what students know and need to learn and then challenging and supporting them to learn it well.
- **Learning.** Students must learn mathematics with understanding, actively building new knowledge from experience and prior knowledge.
- **Assessment.** Assessment should support the learning of important mathematics and furnish useful information to both teachers and students.
- **Technology.** Technology is essential in teaching and learning mathematics; it influences the mathematics that is taught and enhances students' learning.

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NCLB Emphasized Traditional Economic National Interest Arguments

No Child Left Behind motives are cast in the national interest rather than aimed at developing a truly democratic society.

Berry, R. Q. III, Ellis, M., & Hughes, S. (2014). Examining a history of failed reforms and recent stories of success: mathematics education and Black learners of mathematics in the United States. *Race Ethnicity and Education*, 17(4), 540-568.

The Common Core Initiative Continued the Same Narrative

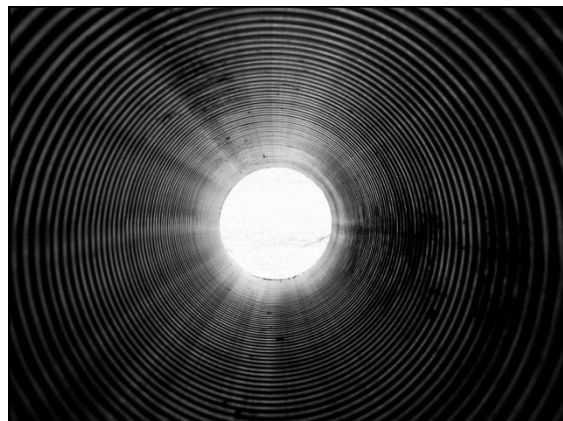
The standards are designed to be robust and relevant ... reflecting the knowledge and skills that our young people need ... With American students fully prepared for the future, our communities will be best positioned to compete successfully in the global economy.

National Governors Association Center for Best Practices and Council of Chief State School Officers. 2010a. Common Core State Standards Initiative, Mission Statement. <http://www.corestandards.org/>.

What is Usually Missing From Current Mathematics Education Debates?

There are intense debates focusing on curriculum, teaching, learning, and assessment, but few debates on **understanding the realities of children's lives**.

Berry, R. Q. III, Ellis, M., & Hughes, S. (2014). Examining a history of failed reforms and recent stories of success: mathematics education and Black learners of mathematics in the United States. *Race Ethnicity and Education*, 17(4), 540-568.



We Must Recognize Students' Realities in Our Work

The work to become truly effective educators [of marginalized students] requires a new approach to teaching that embraces the complexity of place, space, and their collective impact on the psyche of urban youth ... Teaching to **who students are** requires a recognition of **their realities**.



Emdin, C. (2016). *For white folks who teach in the hood ... and the rest of y'all too: reality pedagogy and urban education*. Boston, MA: Beacon Press.

Concerns Raised About NCTM's Response to the Martin Critique

'Equity' is framed [in PtA] almost exclusively in the dominant terms of access and achievement ... Why don't these issues [identity, agency, power] feature more prominently in the framing of equity and in the recommendations for practice?

Meyer, B. (2016). A critical dialogue: Continuing the conversation about 'the collective Black and *Principles to Actions*. *Journal of Urban Mathematics Education*, 9(2), 29-32.


NCTM Action Steps

- NCTM has re-framed Access and Equity to include Empowerment, to capture the critical constructs of identity, agency, and social justice.
- The Board modified its strategic priorities to reflect this reframing of NCTM's scope to include more than just access and equity.


Principles to Actions Professional Resources Toolkit

Leverages Identity and Agency to Frame Access and Equity

- Vignettes and the voices of students, teachers, and other school personnel are used to develop identity (beliefs about oneself, mathematics, etc.) and agency (the presentation of one's identity) as a framework for defining and addressing obstacles.
- Effective Teaching Practices support the cultivation of a positive identity and agency.




2017



Breaking Barriers: Actionable Approaches to Reach Each and Every Learner in Mathematics

November 15 – 17, 2017

Las Vegas, NV



Concerns Raised About NCTM's Response to the Martin Critique

Educationally, mathematics has played a role as a gatekeeper, resulted in intellectual trauma, and been used as a tool for the preservation of White privilege, e.g. through the justification of tracking ... Why is NCTM virtually silent about the role of mathematics as an instrument of oppression?

Meyer, B. (2016). A critical dialogue: Continuing the conversation about 'the collective Black and *Principles to Actions*. *Journal of Urban Mathematics Education*, 9(2), 29-32.

Mathematics Education is a Powerful Force (Positive and Negative)

Mathematics education often reinforces, rather than moderates, inequalities in education.

OECD. (2016). *Equations and inequalities: Making mathematics accessible to all*. Paris: PISA OECD Publishing. Downloaded at <http://dx.doi.org/10.1787/9789264258495-en>.

Access Remains a Critical Issue

Students from marginalized groups not only attend schools with fewer qualified teachers but also have less access to college preparatory pathways, and are more likely to be enrolled in a district that employs instructional practices that center on preparation for standardized tests.

Nasir, N. S. (2016). Why should mathematics educators care about race and culture? *Journal of Urban Mathematics Education*, 9(1), 7-18.

Access Remains a Critical Issue

Access and Equity. An excellent mathematics program requires that *all* [each and every] students have access to high-quality mathematics curriculum, effective teaching and learning, high expectations, and the support and resources needed to maximize their learning potential.

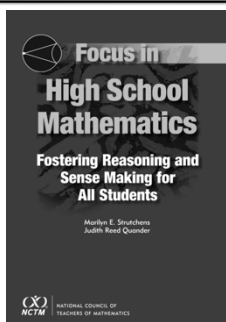
NCTM. (2014). *Principles to Actions: Ensuring Mathematical Success for All*. Reston, VA: NCTM.

Beliefs about access and equity in mathematics, *continued*

Unproductive beliefs	Productive beliefs
Mathematics learning is independent of students' culture, conditions, and language, and teachers do not need to consider any of these factors to be effective.	Effective mathematics instruction leverages students' culture, conditions, and language to support and enhance mathematics learning.
Tracking promotes students' achievement by allowing students to be placed in "homogeneous" classes and groups where they can make the greatest learning gains	The practice of isolating low-achieving students in low-level or slower-paced mathematics groups should be eliminated.
Only high-achieving or gifted students can reason about, make sense of, and persevere in solving challenging mathematics problems.	All students are capable of making sense of and persevering in solving challenging mathematics problems and should be expected to do so. Many more students, regardless of gender, ethnicity, and socioeconomic status, need to be given the support, confidence, and opportunities to reach much higher levels of mathematical success and interest.

NCTM. (2014). *Principles to Actions: Ensuring Mathematical Success for All*. Reston, VA: NCTM.

NCTM Has Previously Addressed this Issue



- Examined the impact of students' lack of opportunity to reason and make sense of mathematics (access)
- English learners in the mathematics classroom
- Students with disabilities
- Policy issues standing as obstacles to access & equitable outcomes
- Effective mathematics learning communities

Strutchens, M. E., & Quander, J. R. (2011). NCTM.

Who Teaches Whom What?

The power and status of school mathematics often manifest themselves in decisions about what content gets taught, to which students, and by which teachers ... what gets taught in the mathematics classroom shapes the mathematics identities of both students and teachers.



Aguirre, J. M., Mayfield-Ingram, K., & Martin, D. B. (2013). *The impact of identity in K-8 mathematics learning and teaching: Rethinking equity-based practices*. Reston, VA: NCTM.

Access Remains a Critical Issue

Across OECD countries, more than 70% of students attend schools whose principal reported that students are grouped by ability ["ability"] for math ... reducing ability-grouping can reduce the influence of socio-economic status on students' opportunities to learn.

OECD. (2016). *Equations and inequalities: Making mathematics accessible to all*. Paris: PISA OECD Publishing. Downloaded at <http://dx.doi.org/10.1787/9789264258495-en>.

High-Rigor Course Access is Not a Reality in the United States

- Nationwide 48% of high schools offer calculus.
- Nationwide 78% of high schools offer Algebra II.

U.S. Department of Education, Office for Civil Rights. (June 7, 2016). *2013-14 Civil Rights Data Collection: A First Look*. Accessed at <http://www2.ed.gov/about/offices/list/ocr/docs/crdc-2013-14.html>

High-Rigor Course Access is Not a Reality in the United States

- 33% of high schools with high black and Latina/o student enrollment (greater than 75%) offer calculus, compared to 56% of high schools with low black and Latina/o student enrollment (less than 25%).

U.S. Department of Education, Office for Civil Rights. (June 7, 2016). *2013-14 Civil Rights Data Collection: A First Look*. Accessed at <http://www2.ed.gov/about/offices/list/ocr/docs/crdc-2013-14.html>

High-Rigor Course Access is Not a Reality in the United States

- 71% of high schools with high black and Latino student enrollment offer Algebra II, compared to 84% of high schools with low black and Latina/o enrollment.

U.S. Department of Education, Office for Civil Rights. (June 7, 2016). *2013-14 Civil Rights Data Collection: A First Look*. Accessed at <http://www2.ed.gov/about/offices/list/ocr/docs/crdc-2013-14.html>

Type and Quality of Instruction Matters

While education systems have generally done well in providing equitable access to the *quantity* of mathematics education – in the sense that marginalized students spend about the same time in mathematics classes in school as their non-marginalized peers – the data show large differences in the *quality* of learning experiences.

OECD. (2016). *Equations and inequalities: Making mathematics accessible to all*. Paris: PISA OECD Publishing. Downloaded at <http://dx.doi.org/10.1787/9789264258495-en>.

Type and Quality of Instruction Matters

While marginalized students tend to learn simple facts and figures and are exposed to simple applied problems, their privileged counterparts experience mathematics instruction that help them think like a mathematician, develop deep conceptual understanding and advanced mathematical reasoning skills.

OECD. (2016). *Equations and inequalities: Making mathematics accessible to all*. Paris: PISA OECD Publishing. Downloaded at <http://dx.doi.org/10.1787/9789264258495-en>.

Quality of Instruction Matters Beyond School

Learning environments where students are actively engaged in mathematics, i.e. involved in problem solving, the discussion of ideas, and the application of methods, not only enhance individual understanding but may also be related to positive outcomes later in life including the adaptive expertise and the propensity to engage successfully with and use mathematics in their lives as adults.

Boaler, J., Selling, S. K. (2017). Psychological imprisonment or intellectual freedom? A longitudinal study of contrasting school mathematics approaches and their impact on adults' lives. *Journal for Research in Mathematics Education*, 48(1), 78-105.

Tracking Persists in New Forms

Although many schools have done away with traditional three-track sorting, hidden forms of tracking persist ... For example, an algebra course might sort students into fast and slow speeds of learning, so that by the end of the year students in the same class have not had the same opportunity to learn.

AERA. (2006). Do the math: Cognitive demand makes a difference. *Research Points: Essential Information for Education Policy*, 4(2).

All Too Often the Teachers are Tracked

Teachers themselves are tracked, with those judged to be the most competent, experienced, or high status assigned to the top tracks and those with the least experience and training assigned to the lower tracks.

Darling-Hammond, L. (2007). The flat earth and education: How America's commitment to equity will determine our future. *Educational Researcher*, 36(6), 318-334.

Who is Teaching Whom?

In a study of 29 districts in 16 states, marginalized students in grades 4 through 8 had access to less effective instruction than non-marginalized students, and that lack of access persisted over time.

Isenberg, E., Max, J., Gleason, P., Potamites, L., Santillano, R., Hock, H., & Hansen, M. (2013). *Access to effective teaching for disadvantaged students* (NCEE 2014-4001). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

We expect that the very best doctors will treat the most grievously ill patients.

It should be no different in education. Great teachers have the skills to help the students who struggle the most.

Education Trust. (2005). *Gaining traction, gaining ground: How some high schools accelerate learning for struggling students*. Washington, DC: Education Trust.

Additional NCTM Action Steps

NCTM Action Steps

NCTM joined a number of other mathematics education organizations, including AMTE, NCSM, TODOS, and Benjamin Banneker this year in participating in *A Call for A Collective Action to Develop Awareness: Equity and Social Justice in Education*

NCTM Action Steps

NCTM made a commitment to stop using deficit language.

RC Equity Action Steps

Stop deficit-oriented language in mathematics education work and help educate others about how these perpetuate negative framings of children and communities.

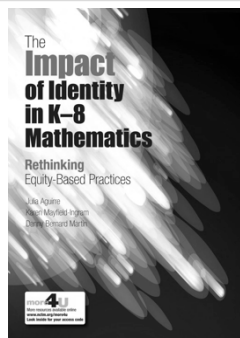
Aguirre, J., Herbel-Eisenmann, B., Celedon-Pattichis, S., Civil, M. Wilkerson, T., Stephan, M., Pape, S., & Clements, D. H. (2017). Equity within mathematics education research as a political act: Moving from choice to intentional collective professional responsibility. *Journal for Research in Mathematics Education*, 48(2), 124-147.

A Work in Progress



NCTM Action Steps

- The NCTM Board and staff are engaging in their own professional learning on issues surrounding access, equity, and empowerment. This includes a common book study devoted to *The Impact of Identity in K-8 Mathematics*.
- The Board and staff also engaged in professional development with the National Alliance for Partnerships in Equity



NCTM Action Steps

- *Equitable Access: A Common Goal of High Quality Learning (high expectations and differentiation)* [PK-2, 3-5, 6-8*, 9-12]
- The Elaboration book addressing the Access and Equity Principle will embrace the additional concept of empowerment by including the topics of student identity, agency, and teaching mathematics for social justice.

NCTM Action Steps

The 2018 *Annual Perspectives in Mathematics Education* will address issues surrounding access, equity, and empowerment. The volume's working title is *Re-humanizing Mathematics Teaching and Learning for Students Who Are Latin@/X and Black*.

Concerns Raised About NCTM's Response to the Martin Critique

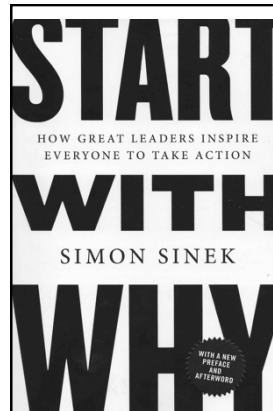
In the opening of PtA, there is a section titled 'Progress and Challenge.' In it progress and challenges are referenced in terms of dominant measures – NAEP scores, PISA scores, ACT/SAT scores, AP course taking patterns, 'college and career readiness,' and 'readiness for college mathematics' ...

Meyer, B. (2016). A critical dialogue: Continuing the conversation about 'the collective Black and *Principles to Actions*. *Journal of Urban Mathematics Education*, 9(2), 29-32.

Concerns Raised About NCTM's Response to the Martin Critique

... Broader, or different, educational aims – perhaps including autonomy, strengthening community, anti-bias education – would likely lead to a different set of measures. What does NCTM take to be the goals of education?

Meyer, B. (2016). A critical dialogue: Continuing the conversation about 'the collective Black and *Principles to Actions*. *Journal of Urban Mathematics Education*, 9(2), 29-32.



Why do we teach mathematics?

Why should students learn mathematics?

The NCTM Vision Statement

We envision a world where everyone is enthused about mathematics, sees the value and beauty of mathematics, and is empowered by the opportunities mathematics affords.

What Does it Mean to be Empowered by Mathematics?

- It is more than college and career preparedness (important)
- It is more than enhancing our country's economic competitiveness & national defense (important)
- It means students are prepared through their mathematics education to investigate and critique injustice, and to challenge, in words and actions, oppressive structures and acts (Gutstein, 2016).

NCTM Action Steps

At its July 2016 meeting, the NCTM Board of Directors unanimously voted to endorse the NCSM/TODOS joint position statement, *Mathematics Education Through the Lens of Social Justice*

We Also Need to Focus on Mathematics For Active Participation in Our Democratic Society

Traditionally, mathematics education has been connected to issues of national economic survival, rather than to the development of democratic citizenship through critical thinking in mathematics.

Tate, W. F. (2013). Race, retrenchment, and the reform of school mathematics. In E. Gutstein & B. Peterson (Eds.), *Rethinking mathematics: Teaching social justice by the numbers, second edition* (pp. 42-51). Milwaukee, WI: Rethinking Schools.

Traditional Goals Remain Important

It is equally important to recognize that improving opportunities for employment is a real expectation that students and parents have of school. But preparation for the job market is indeed preparation for the capability of dealing with new challenges.

D'Ambrosio, U. (2012). A broad concept of social justice. In A. A. Wager & D. W. Stinson (Eds.), *Teaching mathematics for social justice: Conversations with educators* (pp. 201-213). Reston, VA: NCTM.

We Should Learn Math for Multiple Reasons

Students need full opportunities to learn mathematics for many reasons – economic survival for themselves, their families, and their communities; future education and meaningful vocational or career plans; reading and writing the world (use mathematics to comprehend and change the world); and full actualization of their human potential.

Gutstein, E. (2016). "Our issues, our people – math as our weapon: Critical mathematics in a Chicago neighborhood high school. *Journal for Research in Mathematics Education*, 47(5), 454-504.

Never Has Broadening the Goals of Mathematics Learning Been More Important

Today, more than ever, it is insufficient to just teach and learn mathematics in mathematics class ... we live in a time of deep, sustained, global crises – sociopolitical, economic, and ecological ... If young people are to be prepared for the challenges of the future, involving them in reading and writing the world today is essential for tomorrow.

Gutstein, E. (2016). "Our issues, our people – math as our weapon: Critical mathematics in a Chicago neighborhood high school. *Journal for Research in Mathematics Education*, 47(5), 454-504.

Never Has Broadening the Goals of Mathematics Learning Been More Important

Mathematics literacy is essential to informed and active engagement as a member of our society. We live in a world where mathematics is increasingly used to characterize societal problems and formulate solutions.

The 2016 Word of the Year

Post-truth: relating to or denoting circumstances in which facts are less influential than appeal to emotion or belief

Oxford English Dictionary

University Press.



NCTM Action Steps: Why?

High School Mathematics Task Force:

Pathways through High School Mathematics: Building Focus and Coherence (working title).

- Address the purpose of high school mathematics and include guiding principles (non-negotiables) such as access, equity, and empowerment;
- Define math curricular pathways leading to college pathways and career readiness, as well as active participation in our democratic society; and

The goal of high school mathematics education must always be to expand options for students in ways that appropriately accommodate the post-secondary goals of different students.

Why I Believe We Teach Mathematics: Critique and Sense Making

So students are empowered by mathematics to improve their own lives and critically understand the uses (and abuses) of mathematics in society, thereby leading to societal improvement.

Adapted from: Ernest, P. (2010). Why teach mathematics? *Professional Educator*, 9(2). 45-47.

Why I Believe We Teach Mathematics: Critique and Sense Making

Students must be able to identify, interpret, evaluate and critique the mathematics embedded in social, commercial and political systems, as well as claims made in the private and public sector and in interest-group pronouncements.

Adapted from: Ernest, P. (2010). Why teach mathematics? *Professional Educator*, 9(2). 45-47.

Why I Believe We Teach Mathematics: Critique and Sense Making

Every member of our society needs to understand both the power and the limits of mathematics in order to reject spurious or misleading claims and stand up to those in power as necessary.

Adapted from: Ernest, P. (2010). Why teach mathematics? *Professional Educator*, 9(2), 45-47.

The Challenge

We have a long standing, thoroughly documented, and seemingly intractable problem in mathematics education: inequity. Children of certain racial, ethnic, language, gender, ability, and socio-economic backgrounds experience mathematics education in school differently and many are disaffected by their mathematics education experience.

Aguirre, J., Herbel-Eisenmann, B., Celedon-Pattichis, S., Civil, M., Wilkerson, T., Stephan, M., Pape, S., & Clements, D. H. (2017). Equity within mathematics education research as a political act: Moving from choice to intentional collective professional responsibility. *Journal for Research in Mathematics Education*, 48(2), 124-147.

We must, together, find ways to solve this problem with all its facets and employ a more anti-oppressive and human course for mathematics education.

Aguirre, J., Herbel-Eisenmann, B., Celedon-Pattichis, S., Civil, M., Wilkerson, T., Stephan, M., Pape, S., & Clements, D. H. (2017). Equity within mathematics education research as a political act: Moving from choice to intentional collective professional responsibility. *Journal for Research in Mathematics Education*, 48(2), 124-147.

Call to Action

- Work together (or work in parallel). We need to work in an atmosphere of “space and grace.”
- Work to abolish policies and procedures in our schools that don’t advance equitable outcomes.
- Emphasize the multiple reasons for teaching and learning mathematics.