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# Leadership Practices for Racially Just Ambitious Mathematics Teaching and Learning

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Jessica Rigby & Stephanie Forman

***BE BOUNDLESS***



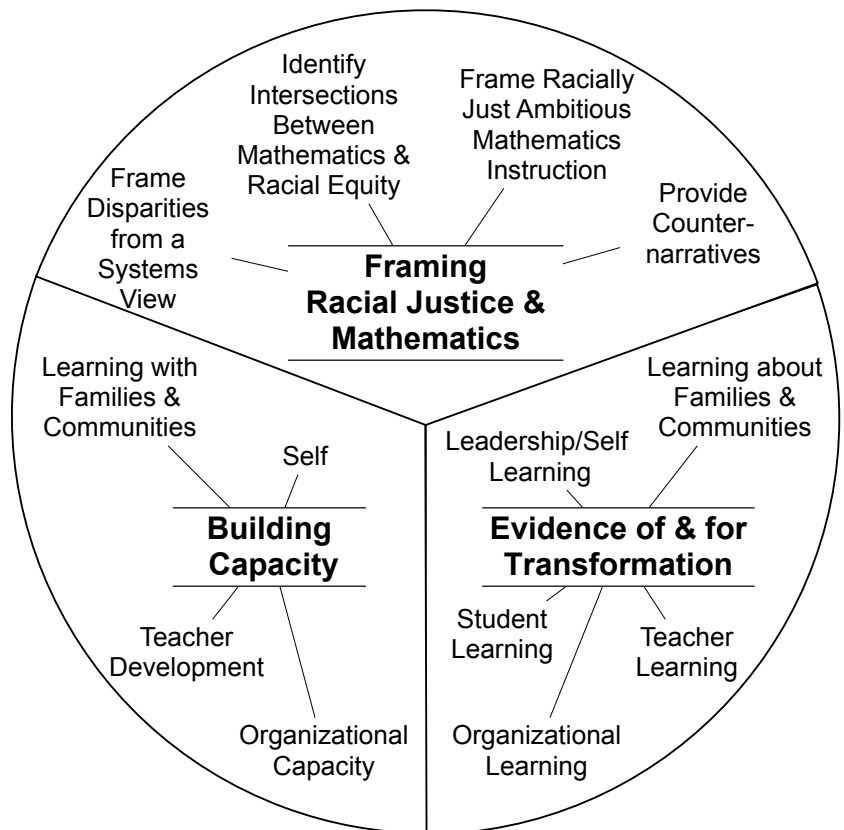
# Leadership Practices for Racially Just Mathematics Teaching and Learning: A Framework

## Framework Development and Purpose

Educational leaders have both the opportunity and the imperative to work towards racially just instruction that improves Black, Indigenous, and Latinx students' learning opportunities in mathematics. But how? We created this Framework by synthesizing rich research about justice-focused leadership and racially just mathematics. We revised and refined the Framework by testing it with our school and district partners. We intend for the Framework to be precise without being prescriptive. The Framework aims to provide sufficient details for leaders (and future leaders) to envision and enact practices and for researchers to identify these practices, while also acknowledging that leadership actions must account for context. We envision this Framework as a starting point that leaders and scholars might build upon.

## Using the Framework

This Framework describes three overlapping and mutually reinforcing sets of leadership practices in the context of mathematics: *framing racial justice & mathematics*, *building capacity*, and *evidence of & for transformation*. Within the Framework document, the first rows name and define the dimension. Subsequent bullet points and descriptors elaborate and provide examples of practices in each sub-dimension. The Framework describes a broad landscape of possible leadership practices to foster racially just ambitious mathematics teaching and learning. We would not expect individual leaders or leadership teams to enact all these practices all the time. The Framework divides these practices into separate dimensions for clarity, but some practices appear in multiple dimensions and sub-dimensions.



## Framing Racial Justice and Mathematics

### Leadership constructs the meaning of racially just mathematics teaching and learning and puts forth an interpretation of these practices<sup>1</sup>

- Anti-racist framing is an essential foundation for antiracist practices.<sup>2</sup>
- Consistent framing and frame transformation supports ongoing development of critical consciousness.
- Structures, policies, and practices must align with racial justice framing.
- Processes must be framed around racial equity to lead to a just ends.
- Framing is strongest when it is coherent across an organizational context.

Framing racial justice and mathematics means rejecting “achievement gap” language, questioning how educators present math, highlighting the humanity and uncertainty of mathematics, acknowledging students’ ownership of their mathematical ideas, and challenging deficit perspectives about students from historically marginalized communities.<sup>3</sup>

Sub-Dimension	Descriptions and Examples
<b>Identifies the Intersection between Racial Justice and Mathematics</b>	<p>Leadership explicitly addresses the relationship between racial justice and math teaching and learning.</p> <ul style="list-style-type: none"> <li>● Describes the dynamic political, historical, relational, and cultural interplay of math and math education<sup>4</sup></li> <li>● Describes the role math teaching and learning can play in promoting racial justice<sup>5</sup></li> </ul>
<b>Frames Disparity from a Systems View</b>	<p>Leadership rejects attributing differences in outcomes to students’ and families’ cultures, instead representing disparities as the result of <i>systems, structures, and historical experiences</i>.<sup>6</sup></p> <p>Leadership adopts an <i>asset perspective</i> and describes student performance as a relationship between students and opportunities.<sup>7</sup></p> <p>Leadership reorients conversations towards disparities in <i>opportunity, representation, and resources</i> accessible to communities made up of Black, Indigenous, Latinx, and other people of color.</p> <ul style="list-style-type: none"> <li>● Highlights that families and communities should identify disparities that matter<sup>8</sup></li> </ul>

<sup>1</sup> Benford & Snow, 2000

<sup>2</sup> Ishimaru & Galloway, 2014; Rigby & Tredway, 2014; Rigby et al., 2019

<sup>3</sup> Gutiérrez, 2016

<sup>4</sup> Martin, 2009; Shah, 2017

<sup>5</sup> TODOS, 2020; Kokka, 2019

<sup>6</sup> Galloway & Ishimaru, 2020; Ishimaru & Galloway, 2014

<sup>7</sup> Jackson & Gibbons, 2014

<sup>8</sup> Washington, Torres, Gholson, & Martin, 2012

<p><b>Frames Racially Just Mathematics Instruction</b></p>	<p>Leadership describes racially just ambitious mathematics instruction.</p> <ul style="list-style-type: none"> <li>● Defines mathematics learning as changes in conceptual thinking, not just computational fluency<sup>9</sup></li> <li>● Recognizes issues of power and status within math classrooms, acknowledging that students have racialized mathematical identities that influence how they engage with each other and with their teachers<sup>10</sup></li> <li>● Describes mathematics as shaped by culture. <ul style="list-style-type: none"> <li>○ Describes families and communities as important sources of mathematical knowledge and practice, essential partners in teaching and learning mathematics<sup>11</sup></li> <li>○ Describes parents as education leaders with resources<sup>12</sup></li> <li>○ Seeks to understand the values, norms, and beliefs of the communities, families, and students served by the school<sup>13</sup></li> </ul> </li> </ul>
<p><b>Provides Counter-Narratives</b></p>	<p>Leadership challenges dominant racial narratives about who is smart and what it means to be good at mathematics.<sup>14</sup></p> <p>Leaders who identify as Black, Indigenous, Latinx, and other people of color draw on their own experiences.</p> <ul style="list-style-type: none"> <li>● Use personal stories and those of other leaders who identify as Black, Indigenous, Latinx, and other people of color to affirm leadership approaches that center their experiences and expand what counts as leadership<sup>15</sup></li> <li>● Purposefully validate and lift voices of leaders from historically marginalized communities in reflection process</li> </ul>

<sup>9</sup> Fenneman, Carpenter & Franke, 1996

<sup>10</sup> Martin, 2009; Shah, 2017

<sup>11</sup> Barajas-Lopez & Larnell, 2019; Gutiérrez 2012, 2016, 2018; Gutstein, 2003; TODOS, 2021

<sup>12</sup> Green, 2017; Ishimaru, 2019

<sup>13</sup> Madhlangobe & Gordon, 2012

<sup>14</sup> Shah, 2017

<sup>15</sup> Gooden, 2012; Rodela & Rodriguez-Mojica, 2019; Santamaria, 2014

## Practices for Building Capacity towards Racially Just Ambitious Mathematics

### Leadership fosters structures, policies, and practices that develop individual, collective, and organizational capacity towards racially just mathematics teaching and learning

- Capacity building is facilitating learning, and requires leaders to provide ongoing opportunities built into educators' daily work to engage, try out, refine, and try again.<sup>16</sup>
- Current school practices assume that behaviors and social rules that are considered normal for White people are universal. This stance communicates to Black, Indigenous, Latinx, and other people of color children and communities that their ways of being are invalid or unacceptable and is a form of oppression.<sup>17</sup>
- Policy changes are necessary to support changes to individual practice.<sup>18</sup>

Sub-Dimension	Descriptions and Examples
<p style="text-align: center;"><b>Self</b></p>	<p>Leadership engages in continual praxis: learning, reflecting, action.<sup>19</sup></p> <ul style="list-style-type: none"> <li>• Builds own critical consciousness by (re)examining their power, relationships with others, and personal biases, and takes responsibility for disrupting current systems<sup>20</sup></li> <li>• Develops political and historical knowledge<sup>21</sup></li> <li>• Builds an understanding of community languages, values, and cultures<sup>22</sup></li> <li>• Develops awareness of how deficit notions about racialized students and racial hierarchies play out in math classroom<sup>23</sup></li> </ul>
<p><b>Learning from and Partnering with Families and Communities</b></p>	<p>Leadership cultivates meaningful, two-way relationships with historically marginalized families and communities to engage in just <i>processes</i> toward equitable outcomes.<sup>24</sup></p> <ul style="list-style-type: none"> <li>• Puts students and families in positions to identify school/district problems and generate solutions<sup>25</sup></li> <li>• Purposefully supports caregivers who identify as Black, Indigenous, Latinx, and other people of color to lead and fully participate in decision-making</li> <li>• Fosters joy by celebrating student and/or community progress, success, or growth</li> <li>• Creates processes that provide families with meaningful access, such as providing childcare and accessible meeting times and</li> </ul>

<sup>16</sup> Borko, 2004

<sup>17</sup> Leonardo, 2009

<sup>18</sup> Ishimaru & Galloway, 2019

<sup>19</sup> Bogotch, 2002; Brown, 2004; Furman, 2012; McCray & Beachum, 2014

<sup>20</sup> Brown, 2004; Horsford, 2014; Khalifa, Gooden, & Davis, 2016

<sup>21</sup> Horsford, Grosland, & Gunn, 2011

<sup>22</sup> Juettner, 2003

<sup>23</sup> Shah, 2017

<sup>24</sup> DeMatthews & Brown, 2019; Ishimaru, 2018

<sup>25</sup> Bertrand & Rodela, 2017

<p><b>Learning from and Partnering with Families and Communities (continued)</b></p>	<p>locations and ensuring processes take place in communities' home languages</p> <p>Leadership supports teachers to connect student math knowledge with knowledge from community sources<sup>26</sup></p> <ul style="list-style-type: none"> <li>● Engages parents and families as partners in designing, developing, teaching, and learning math<sup>27</sup></li> <li>● Provides opportunities for teachers to learn about math practices used in local communities by visiting community sites<sup>28</sup></li> <li>● Supports partnerships between teachers and parents to connect math happening at home with math learned in class<sup>29</sup></li> </ul>
<p><b>Teacher Development</b></p>	<p>Leadership promotes a vision of ambitious teaching and learning and provides sustained support to make it a reality.</p> <ul style="list-style-type: none"> <li>● Engage in reflection with teachers <ul style="list-style-type: none"> <li>○ Considers how race shapes students' experience in mathematics classrooms and provides opportunities to develop awareness</li> <li>○ Sets the norm of addressing race explicitly and enables students to challenge racialized narratives<sup>30</sup></li> <li>○ Supports teachers to confront deficit-based theories<sup>31</sup></li> <li>○ Addresses White teachers' emotional responses to discussions about race<sup>32</sup></li> <li>○ Engages teachers in conversations about how racism shows up in classrooms<sup>33</sup></li> <li>○ Supports teachers to notice and avoid equity traps in their thinking and talk<sup>34</sup></li> </ul> </li> <li>● Promote critical inquiry into students' identities and the social dynamics of the classroom <ul style="list-style-type: none"> <li>○ Encourages teachers to be curious about students and to investigate students' thinking, their intersectional identities, and their communities</li> <li>○ Works with teachers to explore issues of status and develop empowering narratives about who can do math<sup>35</sup></li> </ul> </li> </ul>

<sup>26</sup> Aguirre et al., 2013; Nasir, 2002; Gresafi & Cobb, 2006

<sup>27</sup> Barajas-Lopez & Larnell, 2019

<sup>28</sup> Aguirre et al., 2013

<sup>29</sup> Jay, Rose, & Simmons, 2017; Williams, Tunks, Gonzalez-Carriedo, Faulkenberry & Middlemiss, 2020

<sup>30</sup> Battey & Leyva, 2016

<sup>31</sup> Gholson & Martin, 2012

<sup>32</sup> Forman, Foster, & Rigby, 2021; Matias & Grosland, 2016

<sup>33</sup> Diem & Welton, 2021; Stinson, 2008

<sup>34</sup> McKenzie & Scheurich, 2004

<sup>35</sup> Esmonde & Langer-Osuna, 2013; Gholson & Martin, 2014; Shah, 2017

**Teacher Development  
(continued)**

- Disrupts teachers' deficit notions about what students of color are capable of through conversational moves such as redirecting data discussions toward equity goals and highlighting student and community assets<sup>36</sup>

Leads teachers towards racially just mathematics instruction:

- Within curriculum development and implementation
  - Provides opportunities for teachers to collaborate and develop critical, problem-based, action-oriented, social-justice tasks<sup>37</sup>
  - Demands that all students have access to rigorous tasks and tasks that require a range of skills, thus broadening how teachers' view student competence<sup>38</sup>
  - Promotes inclusion of international algorithms and approaches<sup>39</sup>
- By valuing family and community culture:
  - Supports teachers to connect classroom tasks and strategies with family and community knowledge and math practices<sup>40</sup>
  - Fosters an expanded view of how students productively engage in math discussion to include drawing on shared histories, identities and funds of knowledge<sup>41</sup>
  - Views students' home language(s) as assets<sup>42</sup>
  - Highlights mathematics within family cultural practices to build positive mathematical identities in harmony with students' racial and cultural identities<sup>43</sup>
- Through (re)imagining students' roles:
  - Attends to students' racialized mathematical identities<sup>44</sup>
  - Recognizes and validates students' ownership of ideas within the classroom community<sup>45</sup>
  - Position students as sense makers and problem-solvers
- By modeling just teaching within teachers' learning experiences
  - Positions teachers as learners and doers in support of teachers' positive racialized mathematical identities<sup>46</sup>

<sup>36</sup> Park, 2018

<sup>37</sup> Bartell et al., 2017; Gutiérrez 2012, 2016; Gutstien, 2003; Kokka, 2019; Rubel et al., 2016

<sup>38</sup> Esmonde, 2009, Gutiérrez, 1996; Munter & Haines 2019; Rubel, 2017; Wilson et al., 2019

<sup>39</sup> Gutiérrez, 2018

<sup>40</sup> TODOS, 2021

<sup>41</sup> Agawaral & Sangupta-Irving, 2019; Gutiérrez, 2018

<sup>42</sup> Bartell et al., 2017; Gutstein, 2003; Wilson et al., 2019

<sup>43</sup> Jay, Rose, & Simmons, 2017

<sup>44</sup> Martin, 2009; Shah, 2017

<sup>45</sup> Munter, 2014

<sup>46</sup> Bartell et al., 2017; Wilson et al., 2019

## Organizational Capacity

Leadership promotes identity and power for Black, Indigenous, Latinx and other people of color through systems, policies, and redistributing resources.<sup>47</sup>

- Hiring
  - Hires a diverse staff who are culturally responsive in their teaching, interaction with students, and engagement with the community<sup>48</sup>
  - Use hiring processes that reflect racial justice priorities by embedding particular questions and by including students and families
- Structures for discussion/interaction
  - Provides time for teachers to collaborate on social justice oriented curriculum design<sup>49</sup>
  - Cultivates teacher groups (that use the community's sources of knowledge to build curricula and enhance their pedagogy and lessons<sup>50</sup>
  - Models routines to normalize race-conscious conversations by explicitly addressing issues of racism, power asymmetries, and structural roots of inequities assumes a position of inquiry<sup>51</sup>
- School structures
  - Eliminates tracking, ability-based grouping and pull-out programs: uses temporary and mixed groups to pay attention to status and identities<sup>52</sup>
  - Aims instructional support for struggling students at rigorous learning goals<sup>53</sup>
  - At the secondary level, requires fewer lower-level and more high-level courses for graduation; rotates teachers' courses to engender collective ownership and collaboration<sup>54</sup>
- Designs and implements inclusive decision-making processes
  - Elevates students' voices in decision-making<sup>55</sup>
  - Involves both teachers and parents in interpreting data for decision-making process<sup>56</sup>

<sup>47</sup> Allen & Liou, 2019; Gutiérrez, 2012; Radd & Grosland, 2019

<sup>48</sup> Fraise, & Brooks, 2015

<sup>49</sup> Kokka, 2019; Rubel et al., 2016

<sup>50</sup> Khalifa, 2018

<sup>51</sup> Galloway & Ishimaru, 2020; Salisbury, 2020

<sup>52</sup> Cohen et al., 1999; Esmonde, 2009; Theoharis & O'Toole, 2011

<sup>53</sup> Jackson & Gibbons, 2014

<sup>54</sup> Gutiérrez, 1996

<sup>55</sup> Mansfield, 2014

<sup>56</sup> DeMatthews & Izquierdo, 2018



**Organizational  
Capacity  
(continued)**

- Empowers staff with decision-making and professional development in instructional planning and assessment<sup>57</sup>
- Redistributes resources to provide time and opportunity for teacher learning and curriculum design
  - Seeks out spaces that allow educators to organize and resist injustice<sup>58</sup>
  - Schedules blocks of time for teacher collaboration<sup>59</sup>
  - Allocates time for teachers to develop culturally sustaining tasks and activities that integrate diverse student experiences<sup>60</sup>
- Deals with Resistance
  - Buffers school community from evaluation, testing, pacing, and other pressures that conflict with efforts towards racial justice<sup>61</sup>
  - Supports local groups to press for changes in district policies and practices that conflict with efforts towards racial justice
  - Encourages broad participation from people with diverse perspectives and confronts controversy<sup>62</sup>
  - Uses social and emotional skills to manage discomfort and resistance that emerges when challenging race-evasive practices and facilitating dialogue about racism<sup>63</sup>
  - Recognizes own internal resistance and cultivates a community to support growth and accountability and avoid isolation and burnout<sup>64</sup>

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<sup>57</sup> Juettner, 2003

<sup>58</sup> Moses & Cobb, 2001

<sup>59</sup> Gutiérrez 2012, 2016; Gutstein; Kennedy, 2019

<sup>60</sup> Kokka, 2019; Magno & Schiff, 2010

<sup>61</sup> Gutiérrez, 2016

<sup>62</sup> Solomon, 2002

<sup>63</sup> Swanson & Welton, 2019

<sup>64</sup> Irby, Drame, Clough, & Croom, 2019; Picower, 2009; Rigby & Tredway, 2014

## Evidence of and for Transformation

### Leadership examines artifacts of practice as part of ongoing, collective reflection and improvement processes

- The goal of collecting evidence is to use that evidence for deep reflection on the nature of the problem, the context in which the problem resides, and to rethink approaches to pursuing racial justice<sup>65</sup>
- Standardized test scores do not adequately measure racially just ambitious mathematics teaching and learning that is key to mitigate injustices experienced by Black, Indigenous, Latinx, and other youth of color in schools<sup>66</sup>
- Single experiences can serve as evidence shedding light on the broader system<sup>67</sup>

Sub-Dimension	Descriptions and Examples
<b>Leadership/Self Learning</b>	<p>Leadership engages in praxis: cycles of learning, reflection, and action.<sup>68</sup></p> <ul style="list-style-type: none"> <li>● Writes racial mathematical autobiography as an ongoing reflective practice and record of growth<sup>69</sup></li> <li>● Assesses knowledge of community, community language(s), political, and historical context<sup>70</sup></li> </ul>
<b>Family/Community Learning</b>	<p>Leadership uses multiple measures to assess the organization's and leaders' learning about the brilliance of the school's community.</p> <ul style="list-style-type: none"> <li>● Examines evidence from and improvement on community-based equity audits<sup>71</sup></li> <li>● Assesses the quality of family and community partnerships with tools such as Ishimaru's <i>Initial Partnership Assessment Tool</i></li> <li>● Collaborates with teachers to track the influence of family partnerships on mathematics instruction across the school and over time</li> </ul>
<b>Teacher Learning</b>	<p>Leadership uses multiple measures to assess teachers' engagement, understanding, and enactment of racially just instructional practices.</p> <ul style="list-style-type: none"> <li>● Collects data on the quality and nature of teachers' discussions               <ul style="list-style-type: none"> <li>○ Grounding conversation in artifacts that show student thinking</li> <li>○ Curiosity about students' ideas and how to learn more about students as thinkers and people</li> <li>○ Explicitly discussing race and asking questions about how race and racism shape students' experiences</li> </ul> </li> </ul>

<sup>65</sup> Argyris & Schon, 1974

<sup>66</sup> Gutiérrez, 2008; Martin, 2009

<sup>67</sup> Vaughn, 1997

<sup>68</sup> Bogotch, 2002; Brown, 2004; Furman, 2012; McCray & Beachum, 2014

<sup>69</sup> Dunleavy, Marzocchi, & Gholson, 2021; Gooden, 2021; Radd et al., 2021

<sup>70</sup> Horsford, Grosland, & Gunn, 2011

<sup>71</sup> Green, 2017

<p><b>Teacher Learning (continued)</b></p>	<ul style="list-style-type: none"> <li>○ Surfacing assumptions about students’ capabilities</li> <li>● Creates or modifies existing observation tools to track teachers’ enactment of racially just ambitious mathematics</li> <li>● Examines teaching artifacts to analyze racial justice-focused instructional practices</li> <li>● Works with teachers’ unions to include elements of racially just instruction in evaluation processes</li> </ul>
<p><b>Organizational Learning</b></p>	<p>Leadership uses multiple measures to assess the uptake of racially just ambitious mathematics teaching and learning across the organization.</p> <ul style="list-style-type: none"> <li>● Uses equity audits across contexts<sup>72</sup></li> <li>● Uses student stories as data demonstrating growth</li> <li>● Tracks learning opportunities afforded to Black, Indigenous, Latinx, and other students of color across classrooms and over time as data demonstrating growth</li> <li>● Uses a protocol such as the Antiracist Tools and Routines Protocol<sup>73</sup> to evaluate and reflect on antiracist practices embedded in school tools and routines</li> </ul>
<p><b>Student Learning</b></p>	<p>Leadership uses multiple measures to assess students’ experiences in mathematics classes.</p> <ul style="list-style-type: none"> <li>● Uses observations, interviews, and other artifacts to understand students’ experiences with mathematics instruction <ul style="list-style-type: none"> <li>○ How instruction connects to students and community knowledge</li> <li>○ How instruction builds their positive mathematics and racial identities</li> <li>○ How instruction connects to their ideas and experiences</li> <li>○ How instruction empowers them to understand and act in their communities</li> </ul> </li> <li>● Includes students’ social and emotional needs<sup>74</sup></li> <li>● Includes feedback from families about students’ home expertise in mathematics<sup>75</sup></li> </ul>

<sup>72</sup> General equity audits: Khalifa, 2018 and Skrla, Scheurich, Garcia, & Nolly, 2004; Community equity audits: Green, 2017

<sup>73</sup> Rigby, Forman, Jeannot, Pointer, & Emerick, 2021

<sup>74</sup> TODOS, 2020

<sup>75</sup> TODOS, 2020