

MOVING BEYOND LAND ACKNOWLEDGEMENTS TO DECOLONIZING MATHEMATICS EDUCATION RESEARCH

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Our aim is to shed light on the impact that Eurocentric ideas and practices of dominant social groups have on mathematics education research. We suggest that the unintentional advancement of scholarly work that centers colonization and whiteness requires intentional intervention to disrupt. We identify rationales that mathematics education scholars give for not attending to equity in their work and provide actionable steps that can be taken to promote the practice of explicitly attending to issues of equity and justice in mathematics education research. We conclude with a metaphor and an invitation for our international colleagues to join us in decolonizing mathematics education research.

Our current system of preparing scholars to engage in research on social and political dimensions of mathematics education is uneven, at best, and many experienced researchers have had no formal preparation for engaging in research that explicitly takes into account issues of equity and justice. We have argued before (e.g., Goffney & Van Zoest, 2023) that lack of explicit attention to equity runs the risk of mathematics education research being used in ways that “systematically exclude the oppressed in the teaching and learning of mathematics” (TSG 5.5, 2023). Paying explicit attention to equity and justice requires a critical consciousness (e.g., Friere, 1970) to be able to name the issues contributing to the injustice. Yet could our naming get in the way? For example, land or territorial acknowledgments have become ubiquitous (see, for example, <https://wmich.edu/about> and <https://icme15.org/first-nations-australians/>), yet “[e]xisting literature, especially critiques by Indigenous scholars, unequivocally assert that settler land acknowledgments are problematic in their favoring of rhetoric over action” (Stewart-Ambo & Yang, 2021, p. 21). We draw on our research to (1) identify rationales mathematics education scholars give for not attending to equity in their work that become obstacles to decolonizing mathematics education research, and (2) provide actionable steps to move beyond words and avoid “contribut[ing] unwittingly to injustice” (TSG 5.5, 2023).

POSITIONALITY

Imani Goffney brings lived experiences (as a US-born Black teacher and family member) and professional experiences (as a math coach, consultant, and researcher) focused on equity. She orients her work in solidarity with other minoritized and oppressed groups, including Latine, Indigenous, and multilingual people, working collaboratively to decolonize research in mathematics education and advance justice in ways that are humanizing and promote access. Laura Van Zoest brings lived experiences as a US-born white woman who has had to be intentional about learning how to address issues of equity and justice. She comes to the work with a stance of curiosity, seeking to learn from the perspectives of others. Laura also plays multiple roles in the work, thinking carefully about when it is important to lead (as a senior researcher) and when to step back and learn and allow space for others to lead. Shekira Edgar brings lived experiences as an African-Caribbean who grew up on the Islands and attended higher education in the US. Drawing from her lived experiences, she brings an

understanding of the lasting impact of colonization in the Caribbean region. She emphasizes the importance of naming historical injustices while empowering those stripped of their cultures and identities and restoring agency to these marginalized communities. All three authors are part of Empowerment in Equity (E²), a diverse team of mathematics education scholars representing various intersectionalities who share a commitment to address issues of equity and justice, including colonization and discrimination. Although our work is situated in the United States, colonization, anti-Black racism, and classism are global issues that result in harm and violence across the world.

METHODOLOGICAL APPROACH

Theoretical approach

We approach our work through a critical race theory perspective. Drawing on the work of education scholars (e.g., Davis & Jett, 2019; Ladson-Billings & Tate, 1995), we acknowledge the following: racism exists; there is intersectionality among race, gender, class, and other identities; and claims of neutrality, objectivity, color-unaware, and meritocracy must be challenged. Thus, we assume that mathematics education research will perpetuate or protect the patterns of participation and differential opportunities for learning and doing mathematics that currently exist without intentional and specific efforts to the contrary.

Scholars, especially scholars of color, over the last three decades have worked to design and conduct rigorous research using new perspectives and exploring new approaches in an effort to better understand and solve many of the most intractable issues in mathematics education focusing on equity and justice (e.g. Aguirre, et al., 2013; Goffney & Gutiérrez, 2018; Gutiérrez, 2008; Leonard, et al., 2010; Louie et al., 2021; Martin, 2019; Milner, et al., 2019; Nasir, et al., 2020). Some work focuses on producing better quality research connected to authentic depictions of the cultural and linguistic resources students bring to mathematics learning, while others unpacked critical issues with problematic framing of issues in education that protect whiteness and white supremacy structures in schools and educational systems under the guise of “improving schools/teaching/learning.” Yet, the impact of this body of research has been limited and constrained by the resistance of white scholars to use this work to expand their own understanding, to improve the quality of the research that they design and conduct, and to inform policy decisions.

Context for theorizing

We draw on two aspects of our ongoing work. The first focuses on better understanding how research projects might be in a situation where they had not explicitly addressed issues of equity and justice despite the longstanding and ongoing calls by the profession to do so (e.g., Aguirre et al., 2017; Gutstein, et al., 2005; Crespo et al., 2022). We started by collecting comments that we heard US mathematics education researchers say in both small and large group interactions that gave insight into why their work was not explicitly attending to equity. We unpacked these comments to identify categories of phrases that reflect perspectives that might contribute to developing a research product that did not explicitly attend to equity. We then compared these comments to six position statements from seminal organizations in the field of mathematics education (National Council of Supervisors of Mathematics [NCSM], 2008, 2014; National Council of Teachers of Mathematics, 2017; Association of Mathematics Teacher Educators 2015, 2022; and NCSM and TODOS, 2016).

The second aspect focuses on systematically examining the tools produced by one such project for authentic ways those tools could be retroactively modified to explicitly address concerns for equity and justice. The focal project met several key criteria: (1) it was anchored in student thinking—an important site for equity; (2) it was not designed to attend to issues of equity; and (3) it was producing tools for use in classrooms. In addition, Imani served as an Equity-in-Action Consultant on the focal project and Laura was one of the focal project’s four principal investigators. Our analysis involved the E² team reviewing key focus project products against a frame for the tasks of equitably taking up students’ mathematical contributions and the mathematical demands of those tasks (Goffney & Hoover, 2023) to look for opportunities to be explicit about equity issues.

OBSTACLES TO DECOLONIZATION

Here we share some of the phrases that mathematics education scholars use to excuse their inaction with regard to issues of equity and justice. Table 1 uses those phrases to illustrate categories of rationales for not explicitly considering equity in one’s research that we identified, and the implied assumptions that we inferred from those phrases. We identified five distinct, though sometimes overlapping, categories: Not my job; Not for me; Implicit in my work; Can’t afford to, and Not my fault. An important distinction between the first two rows of the table is that row one, *Not my job*, focuses on a misunderstanding of the professional obligation to attend to concerns for equity and justice, while row two, *Not for me*, focuses on a personal refusal to take responsibility for attending to concerns for equity and justice. An example of overlap between the first two rows is the comment, “I cannot (or should not) do equity work because I do not identify as a person of color, and therefore I am not in a position to do the work.” Depending on the tone and context, this focus on not being qualified to do the work because of who they are not could be an example of *Not my job* or *Not for me*. An example that overlaps three rows is, “Everybody can’t think about everything, and since we focus on student thinking and center students, we don’t think it’s necessary to complicate the research by focusing on equity or identity.” We see here aspects of *Not my job*—“everyone can’t think about everything,” *Implicit in my work*—“we focus on student thinking and center students,” and *Not for me*—“not necessary to complicate the research by focusing on equity or identity.”

Not only are each of the rationales in Table 1 inconsistent with the standards for the profession of mathematics education, they actively perpetuate an “us versus them” mentality. We relate this to the phenomenon of *othering* (Krumer-Nevo & Sidi, 2012), where the lived experiences and perspectives of “others” are dismissed, considered less valuable or relevant, or deemed less important than research produced by Eurocentric (white) scholars. Instead, mathematics education scholars have professional and ethical obligations to fully engage with scholars of color and their work. Failure to do so limits the quality and usefulness of the research that is being produced and risks perpetuating the colonization of mathematics education research. Furthermore, experienced researchers also design and deliver instruction to beginning researchers. A scholar operating from the “not for me” or “not my fault” perspective will likely fail to adequately prepare developing scholars for skillful work in a diverse, multilingual society as they are refusing to take on the responsibility of advancing equity and justice. Thus the consequences of their (in)action may not only impact their own work, but may compromise the ability of the developing scholars they educate to obtain and maintain gainful employment.

Rationales	Phrasing used by scholars	Implied Assumptions	Alignment with Professional Obligations
Not my job	“It’s not my job.” “I don’t think I need to.” “I have other priorities.” “I am not an equity researcher.”	- Individual researchers/scholars have no professional or ethical obligations for addressing concerns for equity. - A scholar can be absolved of considering student or teacher identities and/or considering the impact of one’s research on students of color or marginalized students. - Equity is a narrow research focus, not an aspect of all research.	<i>Not aligned.</i> Each of the six position statements reviewed offer clear and compelling arguments about WHY and HOW each mathematics educator is professionally and ethically obligated to engage in work promoting equity and social justice. As an example, AMTE’s 2015 statement clearly articulates that mathematics teacher educators have the ethical and professional obligation to advocate for equity in all aspects of their professional work.
Not for me	“I don’t want to do equity work.” “I am not interested.” “I don’t think this is a good fit for me right now.” “I’m not going to be forced into addressing concerns for equity.”	- Addressing concerns for equity is simply a matter of personal preference, unconnected to any ethical or professional obligations. - Considering if one’s research might produce or reproduce inequities is more of a personal matter, or a personal choice, not an ethical or professional obligation.	<i>Not aligned.</i> The position statements make it clear that attention to equity is a required part of being a mathematics education professional. Said another way, one cannot identify oneself as a highly trained professional in the field of mathematics education WITHOUT attending to concerns for equity. Thus attending to equity is not a personal matter, it is a professional obligation and responsibility.
Implicit in my work	“I focus on student thinking so my work is automatically about equity.” “I think about equity all the time so my work is infused with it.” “I see people, not color.” “I’m not racist so neither is my work.”	- A focus on students or student thinking with no explicit connections to equity is sufficient for addressing concerns for equity. - I don’t think about who I am when I do this work, so I am not going to think about who you are either. - Not noticing and not responding to differences in students’ cultural, ethnic, and racial backgrounds is the best way to achieve equity.	<i>Not aligned.</i> The position statements make it clear that attention to equity needs to be intentional and explicit. Color-unaware and color-silence perspectives and orientations are inherently harmful as in practice they either pretend that students do not have cultural identities (that shape how they navigate the world and learning) or they simply pretend that all students are white, thus ignoring not only who the students are, but also falsely negating the role systemic racism plays in school and classroom settings. In this way, color-unaware and color-silence approaches in mathematics education research undermine the goals of our professional organizations.
Can’t afford to	“I’d like to, but it won’t count for tenure & promotion.” “I don’t want to get it wrong.” “My institution doesn’t value this work, so I can’t make it a priority.”	- If something was really valued by the field, there would be accountability mechanisms. - It’s too risky to attend to issues of equity and there’s no real professional cost for not addressing concerns for equity.	<i>Not aligned.</i> The organizations use their position statements to set forth the criteria that should guide the work of the field and the prioritizing of equity and justice is clear. Thus, we are professionally and ethically obligated to reject efforts to ignore or silence concerns for equity in mathematics education research and to more urgently shift to be responsive in ways that prioritize equity and justice.
Not my fault	“[There isn’t/I don’t know] any work by scholars of color in my area.” “How was I supposed to know about [scholar’s of color]’s work?” “It’s too hard to figure this ‘stuff’ out.” “Nothing I could do would ever be enough to make ‘them’ [scholars of color] happy.”	- I only reference “highly cited” work and if scholars of color are not frequently cited is because their work is poor quality. - It isn’t worth the effort to combat systemic issues that may limit scholars’ engagement with equity. - There is a moving target (for addressing concerns for equity) and “people” keep changing their minds about what “they” want so it’s not worth the effort.	<i>Not aligned.</i> The position statements make it clear that producing relevant, high-quality scholarship requires that individuals fulfill their ethical responsibility to seek out diverse perspectives and scholarly work. Thus the willful ignorance expressed in “Not my fault” does not relieve scholars of this responsibility; we remain under a professional obligation to be aware of researchers working in our field and the research that is produced. Furthermore, we have a professional responsibility to continue to learn and put effort into understanding things that do not yet make sense to us.

Table 1: Rationales given for not addressing equity issues in research, implied assumptions, and alignment with professional obligations (adapted from Goffney & Van Zoest, 2023)

ACTIONABLE STEPS

In this section we share effective actions of the focal project that we theorize may be beneficial to any scholars who are ready to move beyond words to actions.

Diversify research teams

Diversifying the research team was at the core of effective actions to decolonize the focal project's research. Although graduate students and teacher-researchers of color had participated in the focal project before, at any point in time they had made up only a tiny percentage of the focal project research team. In contrast, Laura was the only white member of E² and she positioned herself as being there to learn from the others. As a result, although the conversations were about focal project products, their nature was quite different from conversations about the same products with other compositions of the focal project research team.

Diversifying research teams helps produce the highest quality research, identify and address areas of implicit bias, and produce research usable to the field. In diversifying research teams, it is important to seek to authentically collaborate with scholars of color and make space for them to bring multiple aspects of their brilliance to the work. This may include cultural and linguistic lenses and perspectives from their lived experiences, and connections they have with local communities. They may also bring methodological expertise or highly refined analytical skills. We want to note here that diversifying the team means deliberately including those often excluded in privileged academic spaces, and also not limiting their contributions to only those regarding concerns for equity, identity, or race. For example, most mathematics education scholars of color have highly refined research skills in a range of areas (e.g., quantitative methodology, psychometrics, mixed-methods approaches). Limiting their contributions to the work negatively affects the research, the field, and the impact on society.

Read and cite diverse scholars

Reading work published by diverse researchers and scholars who engage in humanizing, equity and justice-oriented work expands our perspectives and creates an awareness of concerns for equity. The focal project initially did not cite any scholars of color in their publications. When it was recommended that they do so, the white researchers were not aware of any publications by scholars of color that were relevant to their work. Taking the suggestions Imani provided to them and using Google Scholar and ResearchGate to “follow” these scholars’ work introduced the experienced researchers to work and journals that were new to them, though not to the field. Not only does considering the full body of literature relevant to one’s work enhance one’s research, not doing so falls short of the professional expectations for doing high quality research.

Retrofit existing research products

As we examined the different products of the focus project with respect to the guidance offered by the position statements mentioned earlier and the specific tasks of equitably taking up students’ mathematical contributions and their mathematical demands (Goffney & Hoover, 2023), we identified the following actions that might need to be applied to existing research products for the project to explicitly address concerns for equity and justice: annotate, revise, modify, and eliminate. To *annotate* is to provide an explanation of how the product is intended to be used in ways that directly address

concerns for equity. One way to annotate is to clearly state expectations for the circumstances under which products should be used; another is to add an explanation of what is needed for the successful use of a product. To *revise* is to address problematic aspects or to enhance attention to equity. Often this means looking at the products to make explicit things that were assumed. To *modify* is to substantially change or add aspects to better attend to issues of equity. Examples include adding a slide to a presentation titled “Research on [our topic] to Support Equitable Mathematics Teaching” that specifically addresses concerns for equity or adding features to a book (e.g., “Focus on Equity”) to highlight issues related to equity in clearly identifiable boxes throughout the chapters. To *eliminate* is to remove aspects (or the entire product) from use because they cannot be reasonably annotated, revised, or modified in a way that aligns with the equity guidance. For example, it would be imperative to remove from circulation an assessment tool based on a narrow definition of mathematics that research has shown to be biased to avoid it being used to label students and keep them from participating in rich mathematical opportunities. (See Goffney & Van Zoest, 2023, for more details.)

A METAPHOR AND AN INVITATION

Living in a culture that protects and supports Eurocentrism or other dominant worldviews can contribute to a type of vision impairment. Vision impairment typically refers to “any visual condition that impacts an individual’s ability to successfully complete the activities of everyday life” (IDEAL, n.d.). If one’s vision is impaired, the signals sent to the brain are skewed and as a result, the images recognized and processed by the brain are faulty and inaccurate. In this way, maintaining a focus on Eurocentrism and protecting whiteness within the academy and in our schools/systems contributes to a type of “professional” vision impairment, where the images and perceptions of Black, Latine, and Indigenous students and scholars are distorted and inaccurate. To be explicit, there is nothing wrong with Black, Latine, and Indigenous students—they bring layers of resources and perspectives that are incredibly valuable to mathematics classrooms. Similarly, the work produced by scholars of color is not “less rigorous” or lower quality, instead much of this work is nuanced and complex and offers valuable contributions to the field. Scholars who identify with the rationales described in Table 1 for not including equity in their work may be suffering from impaired vision that causes them to see things inaccurately. The remedy for vision impairment is vision rehabilitation.

To begin this rehabilitation, scholars must engage in honest, reflective thought that allows them to acknowledge the effects of accepting these rationales and denying opportunities for change. We have professional and ethical obligations to expand our own lenses, using tools to both identify and correct our “professional” vision impairment. We should all seek to authentically include diverse scholars in multiple aspects of our work. Doing so provides one strategy for moving beyond simply using rhetoric, such as land acknowledgments, as a verbal message to meet our obligations, to engaging in work that better fulfills the *intentions* of the rhetoric. For example, the University of Maryland-College Park states that their land acknowledgments are designed to “...acknowledge the role our university has played throughout its history in denying access and full participation. An important part of that work is recognizing and respecting that the Piscataway People are the traditional stewards of the lands where we work, live and learn” (<https://diversity.umd.edu/resources/land-acknowledgement>). If we recognize that each of us works, lives, and learns on stolen land, how should that shift the way we think and collaborate with diverse scholars? If we authentically respect that we are only able to engage

in research because of the sacrifices of those before us who paid the highest price for progress and stability (e.g., Indigenous peoples, formerly enslaved peoples), what are our professional obligations to their descendants? Simply acknowledging that their descendants continue to be denied personal rights and full access to learning and higher education must be the minimum threshold. We should each expand our understanding about the purposes and intent of land acknowledgements in the different places we live and work (e.g., <https://americanindian.si.edu/nk360/informational/land-acknowledgment>; <https://native-land.ca/>), and engage in work that more authentically meets the *intended impact* of land acknowledgments instead of merely reading or citing a statement.

We invite our international colleagues to join us in our ongoing journey of continually learning how to expand our own perspectives and rehabilitate our vision as we seek to find more and new ways of (a) centering students and their identities, (b) critically examining ways inequities and colonialization might unintentionally arise in our own scholarship, and (c) creating and using more inclusive methodological approaches and holding space for those excluded. Doing so invests in the development of a more inclusive and robust future for the field of mathematics education and spurs the innovation newly made possible by centering diverse perspectives authentically in the work.

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