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"Don't Just Talk About It; Be About It": Doing Equity Work in Mathematics Education

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During the last few decades, equity concerns have become a priority for some researchers and mathematics (education) organizations. Scholars have begun to address issues of equity through a critical lens (e.g., Boaler, 2007; Darling-Hammond, 2005; Martin, 2003) in their work and scholarship. In this article, the author seeks to add to the equity discourse by examining equity research pertinent to mathematics education. He encourages scholars to continue the critical dialogue concerning crafting fruitful equity research agendas, initiatives, etc. that will yield more equitable mathematics educational experiences, especially for students of color. The author concludes the article by challenging readers to move from scholar to activist as it relates to working on the frontlines in their respective spaces to produce equitable mathematics outcomes.

Keywords: equity, mathematics education

Why Equity?

Why is it that folks are always talking about equity? Currently, we have the Common Core State Standards for Mathematics[1] being implemented in several states, so things are now equitable in mathematics education. As a matter of fact, why is it that scholars, researchers, and mathematics educators of color seem to bring salience to issues of equity in their work more than White folks? What is equity anyway? Also, given that equity concerns are so complicated, why even bother getting involved with equity in the first place? What's all the fuss about equity?

Interestingly, the sentiments expressed in the above paragraph might represent a few of the many lingering thoughts and questions enshrined by those who reside on the opposite end of the equity continuum than me. In addition, other scholars, researchers, and mathematics teacher educators have addressed issues of equity through a critical lens (see e.g, Boaler, 2007; Darling-Hammond, 2005; Martin, 2003). Scholars have also addressed equity as it relates to gender disparities (e.g., Boaler, 2007), socioeconomic status (e.g., Lubienski, 2002), and ethnicity (e.g., Martin, 2003).

As an African American male mathematics educator, my epistemological stance is that equity in mathematics education and rigorous, culturally specific mathematics (Leonard, 2008) should be accessible to all students. With regards to teaching, I work in a Department of Mathematics teaching mathematics content courses to prospective teachers. In my research, I seek to underscore the complexities of race in the mathematical experiences of African American male students at the undergraduate level (see e.g., Jett, 2009, 2012). Hence, my work as a teacher and researcher are interrelated and compounded by equity affairs.

Many research studies examining the experiences of under-served students and students of color barely (if at all) delve into issues related to equity (Martin, 2003). Oftentimes academic jargon utilizing words such as "common" and "all" present the false idea that things are equitable. Placing students in constructs and gap-gazing[2] (Gutiérrez, 2008) are common practices enacted in mathematics contexts as opposed to dismantling equity issues. Additionally, issues of equity are evidenced through the mathematics curriculum, pedagogy, and assessment among other facets. There are scholars, however, who have brought issues of equity to the fore in their work (see e.g., Darling-Hammond, 2005; Gutiérrez 2007; Martin, 2003; Rousseau & Tate, 2003). Darling-Hammond has focused on access to knowledge and resources and has advocated for structural conditions of school to improve for students. With regards to mathematics, inequities as it pertains to high-quality curricula, qualified mathematics teachers, access to advanced mathematics courses, etc. continue to confront students of color (Darling-Hammond, 2005; Oakes, 1990). Undoubtedly though, because of the manner in which inequities are imbedded within schooling practices in general and mathematics practices in particular, discussions concerning equity are paramount to the sustainment of the mathematical enterprise.

[1] Please note that I am not suggesting that the Common Core State Standards for Mathematics were specifically designed to quell equity concerns.

[2] Gutiérrez (2008) problematizes research on the achievement gap, proposed that we move beyond discussions about the achievement gap, and discusses the dangerous effects of gap gazing in mathematics education (research).

Historically, equity has been an issue concerning the education of African Americans. In *The Mis-Education of the Negro*, Woodson (1933/2000) brought issues of equity to the forefront. He discussed various inequities in his text (i.e., the small number, if any, of African Americans on school boards, lack of qualified teachers for African American students, the unfair resource distribution, the controlled nature of the curriculum, and the thinking and implications that are made manifest as a result of such education). Interestingly, a lot of the systemic issues concerning equity that were evident in Woodson's work are still made manifest in mathematics classrooms today. Therefore, if we are to truly achieve "mathematics for all," then equity-oriented discourse and work must remain a priority for us all.

Defining Equity

The National Council of Teachers of Mathematics' (NCTM) (2000) equity definition is the prevailing definition in the mathematics education community. Even though NCTM has offered their definition of equity, several scholars have critiqued NCTM's definition and highlighted other areas under the umbrella of equity that the NCTM has failed to address (Allexsaht-Snider & Hart, 2001; Gutiérrez, 2007; Hart, 2003; Martin, 2003). Allexsaht-Snider and Hart (2001) define equity as:

> Equity in mathematics education requires: (a) equitable distribution of resources to schools, students, and teachers, (b) equitable quality of instruction, and (c) equitable outcomes for students. Equity is achieved when differences among subgroups of students in these three areas are decreasing or disappearing. (p. 93)

They highlight structural aspects of school districts (e.g., competitive salaries, resources for smaller class sizes and collaborative planning, and funds for high quality supplies), beliefs (e.g., beliefs about the nature of intelligence, beliefs about how students learn mathematics, etc.), and classroom processes and teaching practices (e.g., belongingness and engagement) as elements that are missing from NCTM's definition of equity.

Later, Hart (2003) defines equity as meaning justice. While Hart mentions other scholars' definitions of equity, she does not adequately articulate her own definition of equity. Just to express that she uses equity to mean justice leaves many questions unanswered and causes the reader to make various assumptions about equity. In both Allexsaht-Snider and Hart (2001) and Hart (2003), however, the equity frameworks and definitions presented do not include a critical analysis of race and/or racism.

Martin (2003), on the other hand, does include a critical analysis of race in his research on equity and poses some thought-provoking questions concerning the notion of equity in the context of African American children. He asks: "Do our definitions of equity gloss over the deeply embedded structures that produce inequities?...Do theoretical perspectives and equity-oriented rhetoric take into account the collective histories of the groups for whom equity is desired?" (p. 13). In addition to teaching mathematics for social justice, Martin suggests that "students also develop sociopolitical consciousness, develop sense of agency, and develop positive social/cultural identities" (p. 14). This rationale aligns with my area of research in this domain, and the definition provided by Martin infusing race substantiates the claim that equity issues are compounded by constructs such as race and/or racism (see, Martin, 2009 for a more extensive discussion about race in mathematics education).

Gutiérrez (2007) contributes to this discussion by pointing out that "equity is threatened by the underlying belief that not *all* students can learn" (p. 37). She also argues that another obstacle is the deficit theory that seems to be attached to students who have not been in the mainstream mathematics population (i.e., those who are not White male students). Additionally, she stresses that mathematics educators are operating under a poorly defined definition of equity and a poorly articulated agenda surrounding issues of equity. Gutiérrez's working definition of equity encompasses three tenets: (a) the inability to predict students' mathematics achievement levels based solely on their "race, class, ethnicity, gender, beliefs, and proficiency in the dominant language" (p. 41); (b) the inability to predict students' analytical abilities, reasoning skills, and critical skills based on the characteristics listed in the first tenet; and (c) erasing inequities between people from all over the world and mathematics. Her tenets, I believe, are some starting points for mathematics educators to think critically about, engage in dialogue, and act upon concerning articulating equity approaches and agendas.

As it stands, many competing definitions of equity exist in the mathematics education research literature (Allexsaht-Snider & Hart, 2001; Gutiérrez, 2007; Martin, 2003). In terms of defining as well as achieving equity, I embrace aspects of Martin's and Gutiérrez's definitions of equity. With regards to Martin's definition, research could be done to understand how structures that produce inequities develop and sustain themselves. Moreover, theoretical equitable perspectives should take into account the culture of marginalized groups. Drawing from Gutiérrez, I posit that we must move away from deficit theories and discourse regarding mathematics achievement and examine more closely issues related to equity. In addition, equity agendas should begird erasing inequities in mathematics contexts. Moody (2001) suggests that instead of saying that the current equity agenda proposes mathematics for all, we might as well call it what it actually is "equality for some" and "mathematics literacy for a few" (p. 272). By using critical research methodologies and findings such as the ones cited above, educators and researchers might move one step closer to making "mathematics for all" a reality.

Equity Research in Mathematics Education

A few decades ago, the existing mathematics education research literature that examined equity was limited (Lubienski, 2002; Rousseau & Tate, 2003). Moreover, issues surrounding equity intertwined with mathematics education literature regarding African American students were scarce in the literature as well (Martin, 2003; Rousseau & Tate, 2003). This phenomenon suggests that equity was not a main priority for most researchers whose work was accessible in the mainstream research literature (Martin, 2003; Rousseau & Tate, 2003).

Within the last 20 or so years, however, there has been an increase in the attention given to the construct of equity from researchers, educators, policy-makers, and the general public (Gutstein, Middleton, Fey, Larson, Heid, Dougherty, DeLoach-Johnson, & Tunis, 2005; Nasir & Cobb, 2007; Oakes, 1990; Tate, 1995). Scholars have examined equity issues for African American students through the lens of teacher quality, accessible resources, and access to advanced mathematics curricula (Darling-Hammond, 2000, 2005; Hilliard, 2003; Moses & Cobb, 2001). In my own work, I explored these aspects of equity and sought to understand how African American male students navigated through these inequities to gain access and be academically successful with college mathematics (Jett, 2009).

Within the last decade, there has been a paradigm shift in mathematics education in terms of achieving equity for all students. Out of the six unifying principles outlined in the NCTM's *Principles and Standards for School Mathematics* (NCTM, 2000) document, equity is mentioned first. According to the *Principles and Standards for School Mathematics*, "excellence in mathematics education requires equity—high expectations and strong support for all students" (p. 12). Furthermore, the document calls for an equal distribution of resources and professional talent among all students, along with the incorporation of accommodations when needed.

In undergraduate mathematics, *Beyond Crossroads*, a document published by the American Mathematical Association of Two-Year Colleges (AMATYC) that addresses mathematics standards for the first 2 years of college, lists equity and access as one of its basic principles (AMATYC, 2006). The document states: "All students should have equitable access to high-quality, challenging, effective mathematics instruction and support services" (p. 10). The *Principles and Standards for School Mathematics* and *Beyond Crossroads* documents, however, fail to provide suggestions on how to achieve equitable outcomes for students, particularly African American students. These documents also fail to thoroughly discuss how these inequities contribute to students' inability to have access to advanced mathematics. Additionally, while NCTM's document calls for meaningful experiences for all students, it does not mention taking into consideration students' cultures (Martin, 2003).

My argument is that discussions and research agendas concerning equity are needed because there are many conflicting definitions of equity in the research literature. Added to that, there are poorly defined equity agendas in mathematics education (research) (Gutiérrez, 2007). I have found that words and phrases such as social justice mathematics and mathematics for all are often used as scapegoats for equity. More comprehensive research studies examining diverse researchers, mathematics teacher educators', etc. views concerning equity would be an invaluable contribution to the academic community regarding equity matters.

"Doing" Equity

Discussions, actions, policies, and initiatives concerning achieving equity are critically important at this time. With the implementation of the Common Core State Standards for Mathematics, the wavering political landscape, and the recent downward spiral of our economy, equity in mathematics education has severe implications both in the mathematics classroom and beyond the mathematics classroom. Moreover, given that African Americans and other ethnic groups have a history of being excluded from these discourses, people of colors' voices are primarily absent from the conversations that are used to frame equity agendas and work.[3] As such, contexts where equity-related ideas can flourish and be put into practice are necessary and should be ongoing and inclusive of the diverse perspectives of mathematics scholars from around the country and the world (Gutiérrez, 2007; Joseph, 1990).

Additionally, discussions concerning equity are critical because the time is now for us all either to get involved on some level and/or to do more in terms of achieving equity in our local, national, and international spaces. In other words, now is the time for us to "do" equity work. This paradigm causes me to recount my past experiences as a mathematics education doctoral student in a sociological-related education course taught by Dr. Joyce E. King some years ago. She opened the course with the words of a Negro spiritual: "Everybody talkin' bout Heaven ain't going there." This spiritual protest was used by slaves as a critical attack on the slave master who attended church regularly on Sunday mornings and talked about Heaven and other spiritual inclinations. When the slave owner was at home at the plantation, however, he subscribed to behaviors that

[3] Please note that organizations such as the Benjamin Banneker Association and projects such as the Algebra Project (Moses & Cobb, 2001) and Project Seed (Hollins, Smiler, & Spencer, 1994) have given voice to equity concerns. However, there is still a need for more collaborative (diverse) work in this domain.

worked in opposition to what people would conceptualize as Heavenly in nature.

If I might borrow from this critical spiritual theory and extend it to my discussions concerning equity in mathematics education, I would offer the following: "Everybody talkin' bout equity ain't doing the work." In other words, there are those who profess to be equity-oriented and equity-minded; sit on equity councils, coalitions, and task forces; and attend and share ideas at equity conference sessions and workshops whose actions are not involved (or even vested for that matter) in equity work. The folks who "ain't doing the work" include both scholars of color and scholars from the "dominant" culture alike. I hope that this issue's focus on equity in mathematics education might produce more of those who are willing to do the work. The time is now for us not to simply engage in dialogue about equity work, but to act conscientiously in our respective spaces to empower others, especially mathematics (teacher) educators, researchers, and policy-makers, to do this work in transformative ways. I challenge us all not to just talk about it, but to also be about it.

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