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## Practicing the Science of Culturally Relevant Mathematics Pedagogy: Indeed, It Is Just Good Mathematics Teaching!

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David W. Stinson

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### Abstract

In this paper, the author provides counter-narratives of academically and mathematically successful male African Americans as they recount specific pedagogical practices of teachers that were influential to their achievement in mathematics, and to their academic success in general. The author connects the counter-narratives to the propositions of culturally relevant pedagogy to demonstrate that practicing the science of culturally relevant pedagogy is indeed just good mathematics teaching.

### Keywords

Culturally Relevant Pedagogy, Mathematics Education

### INTRODUCTION

The discussion here<sup>1</sup> is part of a larger, ongoing project, which is based in part on my experiences as a high school mathematics teacher and in part on my doctoral dissertation research (see Stinson 2004). Since completing my doctorate, I have, on several occasions, spoken and written about academically and mathematically successful African American male students (see, e.g., Stinson 2006, 2008, 2011, 2013). These presentations and publications are working in concert with a growing number of mathematics education researchers who are laboring to transform the discourse regarding African American children and mathematics from a discourse of deficiency or rejection to a discourse of achievement (see, e.g. the edited volumes Leonard and Martin 2013 and Martin 2009; and the special issue of the *Journal of Urban Mathematics Education*, edited by Bullock, Alexander, and Gholson 2012). My specific contribution to this expanding body of knowledge has been to highlight—from a participative inquiry (Reason 1994), critical postmodern approach (Stinson 2009; Stinson and Bullock 2012)—how academically and mathematically successful African American male students negotiate socio-cultural and -historical discourses that too often construct African American boys and adolescents as problems to be disciplined rather than untapped intellectuals who should be cultivated with

care.

### MATHEMATICALLY SUCCESSFUL AFRICAN AMERICAN MALES

The four young African American men featured in my presentations and publications—Ethan, Keegan, Nathaniel, and Spencer (pseudonyms)—were past high school students of mine during my 5-year tenure as a White mathematics teacher at a Black high school. Although I have discussed the “mathematics identities” (Martin 2000) of these four young men elsewhere, absent from the discussion is an exploration of specific pedagogical experiences of these young African American men. During the extensive data collection of the study, I asked questions regarding the participants’ learning experiences with teachers, and mathematics teachers specifically. In their responses to these questions regarding their schooling experiences, however, I specifically requested that the participants refrain from speaking about being a former student of mine. In so doing, I was attempting to move our conversations away from our collective teacher–student experiences and into each participant’s broader sociocultural lived experiences, including experiences that I suspected might be characterized as racialized mathematics experiences (Martin 2006). In the discussion that follows, I provide examples of “counter-narratives” (Solórzano and Yosso 2002) from the participants regarding specific pedagogical practices of teachers that they highlighted as being influential to their achievement in mathematics, and to their academic success in general. I align the brief narratives with the three key criteria or propositions of culturally relevant pedagogy outlined by Ladson-Billings (see, e.g., 1995a, 1995b, 1995c, 2009). My aim in connecting the propositions of culturally relevant teaching and the participants’ counter-narratives is to demonstrate that practicing the science<sup>2</sup> of culturally relevant pedagogy is indeed just good mathematics teaching.

### CULTURALLY RELEVANT (MATHEMATICS) PEDAGOGY<sup>2</sup>

In her essay “But That’s Just Good Teaching! The Case for Culturally Relevant Pedagogy” Ladson-

<sup>1</sup> This proceedings paper is an abridged version of the keynote address delivered on April 9, 2010; updated references have been added throughout.

<sup>2</sup> I place culturally relevant pedagogy in the “greater than” category of science rather than the “lesser than” category of theory. In other words, culturally relevant pedagogy, I believe, is much more than just a theory.

Billings asks: If culturally relevant pedagogy is just good teaching, why is it that so little good teaching is occurring in classrooms populated by African American students (Ladson-Billings 1995a)? This absence of good teaching for far too many African American children was one of the motivating factors for developing a theory of culturally relevant pedagogy. But in outlining the three broad propositions of culturally relevant pedagogy, Ladson-Billings cautions that her propositions are not intended to essentialize or dichotomize notions of good teaching, but rather to provide a range or continuum of pedagogical practices or behaviors that teachers who practice (the science of) culturally relevant pedagogy exhibit (Ladson-Billings 1995c). She further argues that, although teachers who practice culturally relevant pedagogy “feel no need to name their practice culturally relevant,” she is compelled as a researcher and teacher educator to develop a means of making culturally relevant pedagogy an accessible pedagogy “for those prospective teachers who do not share the cultural knowledge, experiences, and understandings of their students” (Ladson-Billings 1995c, 478). The three propositions of culturally relevant pedagogy are: (a) students must experience academic success, (b) students must develop and/or maintain cultural competence, and (c) students must acquire a critical consciousness (Ladson-Billings 1995c). In short, culturally relevant pedagogy promotes African American students’ success and achievement through cultural competence—when teachers assist students in developing a positive identification with African American culture—and through sociopolitical consciousness—when teachers assist students in developing civic and social awareness to work toward equity and social justice (Ladson Billings 2001). Here, I use the three propositions of culturally relevant pedagogy to provide a natural structure, so to speak, to presenting brief counter-narratives by Ethan, Keegan, Nathaniel, and Spencer. As I do so, I provide details of Ladson-Billings’ propositions, making explicit connections to the lived schooling experiences of academically and mathematically successful African American male students.

### **Students Must Experience Academic Success**

Students’ academic success—no matter the form used to measure it—is not an option for teachers who practice culturally relevant pedagogy. As Ladson-Billings provides this first of her three propositions, she acknowledges the ongoing controversy surrounding student assessment generally and standardized testing

specifically, but she also acknowledges that, despite the controversy, standardized testing serves to rank and characterize both schools and students (Ladson-Billings 1995c). Therefore, she argues: “No matter how good a fit develops between home and school culture, students must achieve. No theory of pedagogy can escape this reality” (Ladson-Billings 1995c, 475). Ladson-Billings reiterates the importance of measurable student academic success, stating, “It is not the teaching method or strategy that should be the criteria for good teaching, but rather the academic accomplishments of students” (Ladson-Billings 1998, 261). Culturally relevant pedagogy is not some “feel good” pedagogy, but rather a pedagogy that requires teachers and students to collectively strive toward measurable academic “levels of excellence” (Hilliard 2003). In other words, according to Ladson-Billings, the trick is getting students to choose academic excellence. Nathaniel provides a counter-narrative that exemplifies the importance of this proposition:

*I had a [mathematics] teacher in eighth grade, an African American male, Mr. Richardson...he seemed really interested in our well being and seeing us [succeed]. He...wouldn't accept us being mediocre, which I think is something really important. He...always wanted [us] to do our best and...to see us strive to succeed. ...When he was at school, he was there for us; that was always the sense we got from him. That is the sense I got from the teachers who really, really seemed interested in being there; it is like, they were there for you and they let you know that too. (Nathaniel)*

### **Students Must Develop Cultural Competence**

Coupled with students’ academic success is Ladson-Billings’s second proposition of culturally relevant pedagogy: Students must develop cultural competence (Ladson-Billings 1995c). Cultural competence, simply defined, is when students develop an appreciation for and understanding of the significant historical and contemporary contributions that African Americans have made to the development and shaping of the United States. Ladson-Billings notes that teachers who practice culturally relevant pedagogy assist students in developing a positive identification with African American culture. Or said more directly, “culturally relevant teachers utilize students’ culture as a vehicle for learning” (Ladson-Billings 1995a, 161). Rather than relying on hypothesized theoretical concepts such as “acting White” or “raceless persona”

(Fordham and Ogbu 1986; Fordham 1988), culturally relevant teachers assist students in “negotiating the academic demands of school while demonstrating cultural competence” (Ladson-Billings 1995c, 476). (For arguments of how academically successful African American male students negotiate sociocultural discourses, see Stinson 2008, 2013.) Ladson-Billings provides several examples of how teachers can bring African American culture into the classroom as a catalyst for learning, such as demonstrating how the lyrics of hip-hop music correlate with the figurative and technical aspects of poetry, inviting African American parents into classroom participation as artists or crafts persons in residence, or using students’ home language as a point of transition to “standard” English (Ladson-Billings 1995a, 1995c). Both Keegan and Ethan provide compelling counter-narratives that demonstrate how teachers, specifically African American teachers, assisted them in understanding that being an African American and an academically successful student were not contradicting identities:

*In order to live in society and to be successful in society you don't have to get rid of your Blackness, but you can be successful by doing this, doing a, doing b, doing c. Teachers would instill that [message] and I would listen. I would say, "You know, that is so true." I think that they taught me...how to [negotiate] into this [dominant] culture, but you don't have to lose your culture. A lot of people think that you have to give up one to gain the other, [but] you don't. (Keegan)*

*[Specifically] my African American teachers, they...aggressively try to employ the mentality that as an African American we did fit in, they aggressively tried to, not necessarily brainwash, but try to help us realize, put into our minds that we do fit in...we can do the same things that [mainstream students] do, or we can be educated, and achieve. (Ethan)*

### **Students Must Acquire a Critical Consciousness**

Ladson-Billings’s final proposition is that students must acquire a critical consciousness. That is to say, teachers must encourage students to develop a sociopolitical consciousness in which students (and teachers) learn “to recognize, understand, and critique current social inequities” (Ladson-Billings 1995c, 476). Ladson-Billings asks, “If school is about preparing students for active citizenship, what better citizenship

tool than the ability to critically analyze the society” (Ladson-Billings 1995a, 162)? Within the context of mathematics teaching and learning, developing a sociopolitical consciousness is exemplified in the extensive scholarship of mathematics educators who practice teaching mathematics for social justice (see, e.g., the edited volumes Gutstein and Peterson 2013, and Wager and Stinson 2012). Spencer demonstrates a critical consciousness in his counter-narrative in which he critiques the injustices of racial stereotypes:

*I am being a realist, noticing that those characterizations [White and Black stereotypes] are definitely a part of our culture and they are definitely a part of society; you can't, realistically speaking, you can't really get away from them because they are out there and they are very prevalent in our society. That is just the pure realist in me. But on the other hand, I also know and understand that generalizations in practice don't really work, and especially when it is so broad as to characterize a whole race of people. (Spencer)*

### **CONCLUSION:**

#### **LEARNING TO LIVE WITH TENSIONS**

To recap, the three propositions of culturally relevant teaching are (a) students must experience academic success, (b) students must develop cultural competence, and (c) students must acquire a critical consciousness (Ladson-Billings 1995c). So, two questions come to mind. First: Is it really just that simple? My answer, paradoxically, is, well... Yes and No. Yes, it is just that simple, because, as noted earlier, Ladson-Billings claims that her three propositions of culturally relevant pedagogy are not intended to essentialize notions of good teaching, but rather to provide a continuum of pedagogical practices that teachers who practice culturally relevant pedagogy might exhibit. That is to say, the three propositions provide a matrix, so to speak, to determine if the multiplicity of pedagogical practices that a mathematics classroom teacher undertakes in the course of her or his day might be mapped on to one or more of the propositions. If a pedagogical practice is not a mapping, she or he might want to rethink the practice. In other words, for a lack of a better description, the three propositions, I believe, provide teachers with an accessible pedagogical “measuring stick,” especially for those teachers who do not share the cultural knowledge, experiences, and understandings of their students.

And no, it is not just that simple. Because I believe to practice the science of culturally relevant pedagogy, a teacher must learn to happily practice her or his profession within a space of pedagogical tensions. Gutiérrez convincingly argues that teaching mathematics is not a neutral activity and that mathematics teachers who wish to teach from an equity stance—which, here, I equate to a culturally relevant stance—need to embrace the tensions inherent in such a pedagogical philosophy (Gutiérrez 2009). In short, Gutiérrez suggests that teachers need to learn how to happily live with the tensions of (a) knowing your students, and not knowing your students; (b) being in charge of your classroom, and not being in charge of your classroom; and (c) teaching mathematics, and not teaching mathematics. Gutiérrez’s suggestions clearly resonate with my critical postmodern sensibilities, given that I believe that teaching is a continual journey in which “effective teachers” do not master teaching, but rather find themselves in a continuous state of growth and change (Mewborn 2003). Or said in another way, effective teachers—or, in this case, effective culturally relevant pedagogues—find themselves in a continuous state of becoming. Becoming a teacher is a process that is never finalized or fixed, but rather a fluid process of continuous critical examination of self, students, and curriculum in which old ways of thinking and acting are disrupted and transformed into new (more ethical and just) ways of thinking and acting (Gomez, Black, and Allen 2007).

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