

# Looking Critically at Teachers' Attention to Equity in their Classrooms

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Ensuring that all students are afforded high quality education is a task given to teachers under standards documents provided by professional organizations such as the National Council of Teachers of Mathematics and the National Board for Professional Teaching Standards. Falling under the generic title of equity, paying attention to the achievement of minority students—especially those historically underserved by schools—is required for good teaching. However, teachers are often left to define what equity means. In this study, we investigated how two National Board Certified Teachers defined equity and how they attended to it in their classrooms. We further explored how issues of race and socioeconomic status interfered with their attempts at providing equitable classroom experiences for *all* students.

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Beginning in the nineteen eighties, national interest in ensuring the success of all students, with special emphasis on those students who have historically been underrepresented in mathematics, science and technology, prompted national educational organizations to address the issue of achievement disparities. In 1989, the National Council of Teachers of Mathematics (NCTM) published the *Curriculum and Evaluation Standards for School Mathematics*. This document's main goal was to provide standards for improving the mathematics teaching and learning of all students in U.S. schools. Within the document, NCTM made special mention of the need to improve the educational experiences of those groups of students who have been historically underserved and less represented in professional careers in mathematics and science, such as students of color, students of low socioeconomic status, and women.

The extent to which the creation of such standards would actually work to improve the educational conditions of historically underserved students was questioned. Apple (1992) suggested that the writers of the 1989 *Standards* did not go far enough in their attempt to ensure better mathematical learning experiences for underrepresented students. Apple

argued that critical thinking on issues of race, gender and class was needed to ensure that teachers taught for the success of all students. Teacher reflection on the importance of these issues was missing from the documents. Apple said:

Little is said about how we might prepare our future teachers to do this [reflection]. Thinking critically is not necessarily a natural occurrence. It doesn't automatically arise simply because one is told to look for problems. Rather, such an awareness is built through concentrated efforts at a relational understanding of how gender, class, and race power actually work in our daily practice and in the institutional structures we now inhabit. (p. 418)

That is, simply pointing out to teachers that a problem exists with respect to the educational experiences of such students would never be enough to fully solve the problem. To truly enact change, teachers need a deeper understanding of the ways in which race, class, and gender relate to the everyday practices of teaching and to schooling, in general.

In 2000, NCTM updated their standards in the publication *Principles and Standards for School Mathematics*. This time, educational inequities between majority and minority students were discussed in more detail under the *Equity Principle*, and NCTM defined equity more explicitly for the mathematics classroom.

Making the vision of the Principles and Standards for School Mathematics a reality for all students, pre-kindergarten through grade 12, is both an essential goal and a significant challenge.

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Achieving this goal requires raising expectations for students' learning, developing effective methods of supporting the learning of mathematics by all students, and providing students and teachers with resources they need.... The vision of equity in mathematics education challenges a pervasive societal belief in North America that only some students are capable of learning mathematics. This belief...leads to low expectations for too many students. Low expectations are especially problematic because students who live in poverty,... females, and many nonwhite students have traditionally been far more likely than their counterparts in other demographic groups to be the victims of low expectations. (pp. 12–13)

Distinguishing between equity and equality as identical instruction, NCTM suggested that “reasonable and appropriate accommodations be made to promote access and attainment for all students” (p. 12).

Though equity was now a major principle in improving mathematics education, the importance of teacher sensitivity to the roles that race, class, and gender play in education was missing. Similar to Apple's (1992) critique of the earlier document, NCTM still did not address the fact that without teachers' critical reflection on issues of race, social class, or gender, teaching for equity made no sense. As Allestree-Snyder and Hart (2001) said, “Teachers' knowledge of mathematics, their preparation to teach mathematics, and their beliefs about and skills for teaching diverse students are all aspects of equitable instruction” (p. 94). That is, teachers' beliefs and understanding of the historical and social context surrounding the education of students from minority populations must also be part of the equation.

Similar to NCTM, the National Board for Professional Teaching Standards (NBPTS) created a comparable set of standards defining those teacher qualities and qualities of teaching that define “accomplished” mathematics teaching (2001). These standards were developed both to reward teachers who exhibit accomplished teaching, as well as to improve teaching and consequently student learning. In the NBPTS standards for Adolescence and Young Adulthood/Mathematics, commitment to equity and attention to diversity were integral parts of the definition of accomplished teaching of mathematics. In the second of twelve standards of accomplished teaching, under *Equity, Diversity, and Fairness*, NBPTS defined what they meant by equity. They said:

Accomplished mathematics teachers are dedicated to meeting the needs of an increasingly diverse student population. They confront issues of

diversity proactively to promote academic and social equity. They actively and positively challenge sexist, racist, and other biased behaviors and stereotypical perspectives, including those directed toward various ethnic groups, regardless of the source. They are keenly aware of the historical perspectives and biases that have created social and academic barriers for students, and they work to remove these obstacles. They maintain high expectations for all learners regardless of gender, race, socioeconomic class, or previous experience. They ensure that their students receive equal opportunities to learn and advance in mathematics, and they act to dispel the notion that not all students are capable of learning mathematics. They consistently communicate their respect for all students and their belief that all students can learn. By example and guidance, they help students learn to treat one another as valued members of the learning community. (p. 11)

In the NBPTS document, equity includes the necessity of teachers' awareness of race, class, gender and how these social stratifications have historically had implications for student academic success. NBPTS went a step further than NCTM's suggestion that teachers be aware of issues of equity. Through their certification process, NBPTS asks teachers to reflect on what this equity-focus standard means and what it implies for their teaching. Candidates for National Board certification must demonstrate through their portfolio entries how they attend to issues of equity and diversity in their classrooms. While incorporating reflection on race, class, and gender as part of the certification process for teachers, the question still remains, do the NBPTS standards and process go far enough in their commitment to equity to actually ensure the improvement of teaching and learning of historically underserved students? Though National Board Certified teachers may be aware of the need for equitable teaching and have reflected on such awareness, have they done so in the critical way that Apple (1992) has called for? Do they truly have a “relational understanding of how gender, class, and race power actually work in our daily practice and in the institutional structures we now inhabit” (p. 418) that Apple says is needed for true critical awareness? In this study, we investigated the ways in which teachers' lack of awareness about the relevance of race and class to their teaching contributes to teaching practice that falls short of being equitable as described by NBPTS. Through interviews with two National Board Certified teachers, we explored the ways their own ideas about race and class allowed them to

comfortably draw deterministic conclusions about what their students can and cannot do.

This study is set against an understanding that teaching is a complex job. During any given segment of the school day, teachers must decide what pedagogical actions must be taken to ensure that their students are successful in learning. Given the broad nature of the language used to point teachers' attention to the idea of equity, teachers are left to make decisions about what that means for their classroom. Complications arise especially when teachers hold views that are culturally biased. These views often counteract their attempts at truly creating an equitable learning environment (King, 1991). Secada (1989) suggested that "systematic inquiry into how teachers of mathematics interpret their practices as linked to notions of equity is needed" (p. 51). To make this point, Secada gave the plausible example of teachers who can justify giving more attention to higher-tracked students based on notions of fairness. He summarizes these teachers rationale, "Why waste scarce resources on students who will not profit from them when there are others who need the help and will, in fact, make good use of the resources?" (p. 51). Secada's example suggests that while teachers may be seeing their teaching as equitable, their actions might not be what the writers of the standards documents had intended.

To truly understand at a classroom level how equity in mathematics education is or is not being attained, we decided it was necessary to investigate how teachers interpret the call to ensure mathematics for all, and especially for students who have historically been underserved by schools. Keeping in mind Apple's (1992) urging that teachers need an awareness of the ways in which race, class, and gender play a major role in daily life, the purpose of this study was to explore how teachers' attention or lack of attention to issues of race and class influence their daily practice of teaching as well as their ability to be equitable. Prior to reporting directly on the study, we will clarify our working definition of equity and the notion of equality in the socio-cultural context.

### **What Do We Mean by Teaching for Equity?**

Equity has many different meanings for different people. In the research literature on equity in mathematics education, we can find several different approaches to defining the term. To describe the concept of gender equity, Streitmatter (1994) distinguished between two ways of thinking about equity—equality versus equitable. Equity as equality is about a concern with assuring that all students (in this

case, both boys and girls) receive equal opportunities from the start. That is, equal access to instruction, curriculum materials, and opportunities to share in class. Equity in terms of equality is focused primarily on the starting point of education for students. Once students have an equal educational beginning, this position argues that the outcomes—be it scores on achievement tests, courses taken, or college majors—will be based on student individual differences. The key for the equality approach to equity is to level the playing field from the outset for students.

Streitmatter contrasted this idea of equity based on equality with an equitable-based notion of equity. The foundation for this second approach to equity lies in the belief that some groups of students have been continuously disadvantaged in the educational system. Final outcomes are the primary issue for this type of equity. Fully aware that certain groups of students do not achieve at the same level as others, teachers in this framework might recognize that ensuring equal opportunities for all students might not ensure equal outcomes for marginalized students. Teachers might provide more for these students to ensure that they have opportunities for success. Student differences and motivation still play a role in the equity-as-equitable framework; however, the main idea behind such an approach is that the teacher should try to compensate for societal biases by providing minority students with additional needed resources.

Streitmatter (1994) suggested inherent danger in both approaches. Equality-based equity does not take into consideration the larger social biases that exist. However, approaching equity in the second manner by trying to make things equitable might result in reverse discrimination, especially if teachers over exaggerate the relevance of societal biases to the classroom. Streitmatter found that in her study of seven teachers concerned with gender equity, six of the teachers held a concept of equity based on the first definition, equity-as-equality.

This two-way approach to gender equity mirrors a similar discussion about defining equity that takes place within the larger context of the identification of standards. While different definitions of equity are offered, the approach described by both NCTM (2000) and NBPTS (2001) is based on an equitable notion of equity—the second definition. That is, both groups differentiate between the equity-as-equality and equity-as-equitable notions of equity, and both call for a greater concern with outcomes in order to ensure the success of all students, aligning themselves with the equitable notion. Both standards documents suggest

that equity does not necessarily mean equality and urge teachers to provide appropriate resources and support for students based on need.

However, while both documents, NCTM (2000) and NBPTS (2001) took a definite stand on what they meant by equity, neither suggested a need for teachers to look critically at the larger historical and social context of race, class, and gender. Secada's (1995) critique of the research community for the merely symbolic meaning that the word equity has come to take on applies here as well. He described how the term equity is often used to represent all issues related to the education of diverse groups of students. Secada said that in the research community the term equity "signals the belief that there is one single, monolithic issue to be addressed, and that what applies to one equity group can transfer to other groups..." (p. 149). He argues that the complexity of what it means to equitably provide education for minority groups of students is lost in a general discussion of issues of diversity and equity. Most good teachers would probably say that they are supportive of all students being successful and that they work hard to provide students with what they need for success; however, the complexity of such a task is glossed over by suggesting that equity is only about good teaching and good intentions. Streitmatter (1994) articulated this point, saying:

Gender equity and related goals can be thought of as working to enhance the aspirations, achievements, talents, and interests of all students independent of their gender (New Pioneers, 1975). If asked, most teachers would report that they do their best to meet this general goal. However, approaching gender equity with such a broad, vague statement may result in business as usual, that is with gender issues not being addressed critically by the teacher. In order to understand how gender equity might work for you in your classroom, it is important to think through the broader concept of equity first, then carefully examine how it can be implemented through your teaching. (p. 7)

While Streitmatter focused explicitly on gender equity, the same claim can be made for the need for critical reflection when approaching racial or socioeconomic status (SES) equity as well. In particular, teachers' critical thinking about issues of equity in the larger society is crucial to their truly giving action to the lip service that often surrounds discussions of equity. This critical thinking about issues of equity in a broader sense includes understanding societal messages about race and class and how those messages permeate our

beliefs and consequently our ways of interacting with each other.

### **Societal Messages about Race and Socioeconomic Status**

Teachers are not immune to the societal messages about race and social class that influence most Americans' perceptions of diversity. These messages influence their ways of operating with diverse people. Teachers, who are more and more likely to come into contact with students of races and SES status different from themselves (Howard, 1999), enter their classrooms with preconceived ideas about these differences (Reyes & Stanic, 1988). In the following section, we will discuss literature describing the different societal messages about race and SES. We do not focus on gender equity because both teachers in our study exhibited a critical awareness of the problems associated with females and mathematics. They also worked to ensure that girls succeeded as well as boys. In this respect, we did not see gender equity as problematic for these teachers and so chose to focus our analysis strictly on race and class, as the teachers' demonstrated less critical thinking on these topics.

#### *Colorblindness—The American Way*

Messages about race at work in the larger society influence the attitudes of teachers toward their students. Since the Civil Rights Era, the stance taken by many White Americans is based on the perceived meaning of Martin Luther King's *I Have a Dream* speech—that to see race is to be racist (Bonilla-Silva, 2001). Any admittance to distinguishing with respect to race is to suggest differences among people based on race and thus, racist. However, the reality is that through race, we as Americans, consciously or not, identify ourselves and others (Omi & Winant, 1994). Adhering to a colorblind racial ideology often safeguards peoples' actions and words toward people of color from being considered racist. Bonilla-Silva (2001) offered a framework for what he calls the ideology of "colorblind racism." A racial ideology encompasses more than just beliefs, it "consists of the broad mental and moral frameworks, or 'grids,' that social groups use to make sense of the world, to decide what is right and wrong, true or false, important or unimportant" (p. 62). Crucial to Bonilla-Silva's framework is the rejection of racism being individual and afflicting only a few people here and there. Instead, "racial ideology has a collective nature and thus affects the consciousness of all actors in society" (p. 61). This does not mean that people are passive

actors whose beliefs are held hostage by this racial ideology. Instead, they often adopt and purport such racial ideology as it helps to maintain their status as part of the majority. Bonilla-Silva offered that colorblind racism has been and continues to be the racial ideology that permeates society post-Civil Rights. He argues that colorblind racism “has emerged to support and reproduce the new racial structure of the United States” (p. 137).

Schofield (1986), in her study of colorblindness in an integrated elementary school, provided a description of how colorblindness operated in a school setting to the disadvantage of the students of color. While colorblindness is seen by many as inherent to egalitarianism, Schofield illustrated how this ideology functioned to the detriment of students of color in the school being studied. One way in which colorblindness played out to the detriment of students of color is referred to by Schofield as *increasing teachers’ freedom of action*. She described this as the consequential simplification of life when one takes race out of the picture. In her study, Schofield gave the example of a teacher who rigged a student council election so that a white student, characterized by the teacher as responsible, won the election over a black student who was deemed less responsible. The teacher insisted that the decision to rig the election was based solely on perceived differences in responsibility. Schofield confessed that she felt that the race of the candidates did not consciously enter the mind of the teacher. In the same way, the teacher did not think about the ramifications to the larger school such as how that decision changed the racial makeup of the student council. Schofield said,

The failure to consider such issues clearly simplified the decision-making process because there was one less item, and an affect-laden one at that, to be factored into it. Related to this, such a colorblind approach increased teachers’ freedom of action because actions appeared acceptable if one were to think about them in a colorblind way often appeared much less acceptable from a perspective which is not colorblind. (p. 247)

That is, while the teacher may not have specifically thought about the role that the race of the student played in her decision to rig the election, the notion of colorblindness kept her from having to think critically about both the incident and the ramifications of rigging the election to favor the White student. Colorblindness protects people from having to look at themselves as racist or perpetuating racist ideas. If they adhere to the larger social message, that race no longer has a role in

American society then they are not forced to address their views toward people of color or how those views affect their interactions.

### *Messages about Low Socio-economic Status*

Using SES as a means of categorizing people is often seen to stand in strict opposition to building Nationalism (Mantsios, 2001). However, that class is an invisible distinction is absurd; prejudice toward people of the lowest socioeconomic status is well documented. For example, Cozzarelli, Wilkinson, and Tagler (2001) in their study of attitudes toward the poor found that internal factors such as lack of effort, laziness, drug use, and low intelligence were the most prominent reasons given for why poor people are poor. On the other end, external factors such as discrimination, educational disadvantages, and low wages were rarely seen as reasons for poverty. Crime is associated with poorer neighborhoods in America (Gans, 2001), from which emerges the lampoonish image of the suburban couple rolling up the windows to their car while driving through one of America’s “dangerous” cities. Jobs associated with the lowest socioeconomic status are deemed menial, and thus devalued, despite their contributions to both the community and economy.

Perhaps the most detrimental label attached to poor America is their status as deviant from what is considered normal as defined by middle class America (Gans, 2001). As more and more people, even those who are economically not, think of themselves as middle class (Frankenstein, 1995), the ideology attributed to the middle class has come to, for many Americans, represent the norm. Further, although discussion of class differences is considered gauche, both the media and politicians talk openly about “the middle class” (Mantsios, 2001). Public references to the middle class, “appear to be acceptable precisely because they mute class differences...are designed to encompass and attract the broadest possible constituency...[and] avoid any suggestion of conflict or exploitation” (p. 169). That is, middle class has come to represent average, or the normal American, and those who do not make it into this class are considered outside of the norm. Those who live below the middle-class line are considered, by their social and economic positioning, to not have access through their communities to the esteemed norms of living as defined by middle-class America (Gans, 2001). Gans suggested the dangers in such messages:

The behavioral definition of the underclass, which in essence proposes that some very poor people are

somehow to be selected for separation from the rest of society and henceforth treated as especially undeserving, harbors many dangers—for their civil liberties and ours, for example, for democracy, and for the integration of society. (p. 82)

Marginalizing people with lower SES further stratifies society. Lemieux and Pratto (2003) attributed most existing poverty, and the unwillingness of wealthier people to share resources with those who are living in poverty, to the prejudices that exist toward poorer people. Prejudice “serves as a barrier that helps to prevent powerful people from entering into close relationships with members of the stigmatized groups or needy others” (p. 149). Further, “prejudice against the poor also increases the likelihood that exchanges that do occur will maintain inequalities, because prejudice can reduce the value of both poor people themselves and what they have to offer” (p. 149). Separation from wealthier classes creates disconnects between the poor and the middle and upper classes. This separation on top of the stigmas associated with being poor “help legitimize discrimination against and exploitation of others” (p. 149).

Schools, where mixtures of students of different socioeconomic status must be in class together, work together, and socialize, are not immune to the segregation among classes. NBPTS (2001) suggested that teachers should model behavior that does not perpetuate such segregation. They go on to suggest teachers should treat all students with respect and look for what they have to offer given their cultural and social background. If not, schools act as an agent for rather than against perpetuating the divide between socioeconomic classes that exist in larger society.

While teachers might have a propensity for working for equity in their classrooms, we have demonstrated above that their attempts will be inadequate unless such a focus is accompanied by a critical understanding of the roles race and class play in our society, as well as by reflection on how societal messages about people of color and or low SES influence their approaches to dealing with diversity (Apple, 1992; Reyes & Stanic, 1988; Streitmatter, 1994). In what follows of this paper, we describe how two teachers who, given their National Board status, have reflected on and successfully articulated to the NBPTS their concept of equity for their classrooms. Through our interviews with these teachers, we gained insight into how, even with a good grasp on what equity means as defined by NCTM (2000) and NBPTS (2001), these teachers still fell short of actually being equitable toward all of their students. In the following

section, we describe how we designed and conducted our study.

## Research Design

The purpose of this study was to understand how two National Board Certified mathematics teachers defined equity, and to understand how their understanding of equity influenced their ability to create equitable learning experiences for their diverse student population. We do not intend to generalize from these two cases. It was our purpose to investigate the extent to which our participants being able to articulate their beliefs about equity actually resulted in equitable classroom experiences for all students. We adopted a method described by Schofield (1986) in her study of a colorblind ideology in a school setting. She said:

In choosing a site for the research, I adopted a strategy that Cook and Campbell (1976) have called generalization to target instances. The aim was not to study what happens in a typical desegregated school, if such an entity can even be said to exist. Rather, it was to explore peer relations under conditions that theory suggests should be relatively conducive to positive relations between blacks and whites. (p. 233)

Similarly, our goal was to explore a situation where two teachers with seemingly reflective definitions of equity still have trouble with respect to holding high expectations for all students. We did this by first describing their espoused definitions of equity. We then used instances from their practice to support the consistency between their teaching and their proclaimed definition. Finally by describing critical incidents in their practice, we illustrated our conclusion that their teaching fell short of being truly equitable with respect to their minority students.

We are not interested in generalizing toward all teachers; rather, we offer these cases as examples of how knowing and being able to articulate what equity should be does not necessarily result in equity. In doing such we hope to point attention to the inadequacies in merely providing teachers with documents that suggest the importance of equity with the end goal of improving education for minority students.

The specific research questions investigated were:

1. How do National Board Certified Teachers (NBCTs) define equity?
2. How do NBCTs attend to equity in their classrooms?

## *The Participants*

In this presentation of our research, we focus specifically on the data collected about Annette and Tammie, two high school mathematics teachers who were both part of a larger study on NBCTs done at a large southeastern university. These two teachers were chosen because in interviews with them, we felt that both seemed reflective on and committed to equity. They were also chosen for this study because of the diversity in their schools. We felt that choosing teachers who taught a diverse group of students would offer insight into not only how they were thinking about equity in terms of teaching students from different races and socioeconomic backgrounds, but also what they were actually doing in their classrooms with these students. Further, as both teachers were mathematics teachers, we felt that given the extreme attention surrounding the achievement gap between Black students and White students in mathematics, these teachers might have had more experience with achievement disparities and other matters of equity.

*Annette's school.* Annette is a National Board Certified middle school mathematics teacher in an "urban fringe" (US Census Bureau, 1997) school in the southeastern U.S. Throughout her teaching career, Annette has received accolades for teaching besides her National Board Certification. Annette described the school in which she is teaching as changing demographically. She says of her school:

Our school has gone under major changes since even from 2002. Right now our minority students are the majority. We're probably at 32 percent Caucasian, 16 percent Hispanic, 3 percent Asian and then the rest of the children are either African-American or mixed race.

In her school district, where *Algebra for All* is the mantra, Annette teaches both algebra and pre-algebra courses to eighth graders. Annette discussed her feelings that not all of her eighth-grade students taking Algebra were placed appropriately and that they would most likely have to retake the course in ninth grade. The eighth-grade students in her pre-algebra classes had failed the required exam and were taking seventh-grade mathematics classes as eighth graders. Annette described the demographics of her classes as fairly representative of the school as a whole, although she admitted that the eighth grade pre-algebra classes were only about 12% White even though the whole school was about 33% White. Annette also mentioned that these same eighth-grade pre-algebra classes were dominated heavily by male students.

*Tammie's school.* Tammie is a NBCT in mathematics at the high school level. She describes her high school as mainly White, middle to upper middle class, and serving a fairly well-educated community. She does acknowledge that there is some diversity with respect to socioeconomic status.

Our county I would say is very middle class, upper middle class, predominantly White. But it still has a rural flavor to it. So we still have – I call them kind of my country kids. So it's – there's a diversity in that you have a lot of kids who both parents have gone to college, both parents have college degrees and they're professionals. You also have kids whose parents possibly haven't graduated, but they've grown up on a farm setting. So it's a very different kind of feel. So you have those two very distinct groups that are different.

Tammie's school, like most American high schools, proclaims to track according to ability. Tammie teaches classes on both the honors and the regular tracks. While the minority population is small, she acknowledges that the rural students and students of color are often overly-represented in the lower track classes.

## *Methods*

The data sets include surveys and a one-hour interview with each teacher. Both the survey and interview protocol (see appendix) asked questions specifically about defining equity and how the teachers attended to equity in their classrooms. A team of professors and doctoral students collected and analyzed the data. We devised a coding system through a process of open coding, based on the grounded theory method of constant comparison (Patton, 2002). Once the team established and agreed upon a basic set of codes, each interview transcript was coded by two members of the research team, using the qualitative analysis software Atlas.ti (Muhr, 2002) as an aid. As research partners, the authors achieved consensus for how to code each quotation (Atlas.ti's term for a segment of text) as a collaborative effort. The two authors of this paper used the team-developed codes in addition to their own to code the set of data. After each transcript was coded, the pair summarized the highlights in a separate document for the larger team's review.

## **Analysis**

We have organized our analysis of the data into three sections. We begin with a description about Annette and Tammie's definitions of equity and a discussion of how these definitions fit in well with



NCTM's and NBPTS' standards. In the second section, we attempt to show how each of the two teachers describe teaching practice consistent with their ideas about equity. Finally, using their own descriptions of incidents in their classrooms, we illustrate how their lack of critical reflection on race and SES contribute to their maintaining low expectations for minority students and keep their teaching from being equitable. In the first two sections, we attempt to make the case that both Annette and Tammie are both aware and reflective about equity in their classrooms and schools. In pairing their definitions of equity with their actual practice, we hope to illustrate the consistency between what they claim to think about equity and what they actually do. The last section contains data to suggest that regardless of how dedicated they are to providing high quality education for *all* of their students, lack of critical reflection on race and SES allow for inequity to take place.

#### *Annette and Tammie's Definitions of Equity*

In line with both NCTM (2000) and NBPTS (2001), Annette and Tammie described a concept of equity resembling Streitmatter's (1994) framework of equity based on outcomes (equity-as-equitable) as opposed to just providing equal opportunities (equity-as-equality). They each made similar comments about understanding that equity might not imply giving equal resources or time to students, but to provide students with the appropriate amount of resources to ensure their success. Annette, who has a background in special education, says that she sees the academic strengths and weaknesses in each of her students. Annette approaches this diversity by making accommodations for students who might require more of her attention or resources. Annette's definition of equity can be summed up as "giving each child the opportunity to succeed as best they can with what they have to work with and making sure that they have everything that I can possibly give them to make sure they do it right." Annette's definition of equity would seemingly fit in well in either a NCTM or NBPTS standards document, an equity-as-equitable position.

Similarly, Tammie's definition of equity is also equitable-based; however, she also demonstrates concern about students having equal access and opportunities. She describes how theoretically all students should have equal access to honors mathematics courses; however, as in many tracked schools, once a student is placed on one track, upward mobility is almost impossible. The process begins in eighth-grade at Tammie's school. Tammie recognizes

how some students will have an advantage when it comes to being placed in the higher track especially if their parents have college degrees or higher. To make the situation more equitable, Tammie says that teachers may have to give some students extra support and guidance when it comes to helping them pick courses and move from one track to the other. In this respect, equity is not about giving each student the same amount of support and guidance. Tammie recognizes that the students who do not receive academic support and guidance at home require more from their teachers than those whose parents take an active part in their schooling. This support does not stop once the students gain access to the higher track courses. She says that she continues to provide them with support all the way through graduation. Tammie's approach to equity can be summed up as helping students reach their educational goals, and supporting them through every step of this process.

Tammie and Annette, seemingly right on target with what NCTM and NBPTS require of teachers, see the diversity in their students and both see equity as their efforts to provide students with what they need to be successful. In the next section we describe how they incorporate their definitions of equity into their teaching practice. Through these examples, we hope to show that these two teachers are consistent with what they say equity means to them and what they actually do in their classrooms. In this regard, we feel that they are reflective about issues of equity and about how to incorporate their thinking into their work as teachers.

#### *Equity in Practice*

For both Annette and Tammie, giving students what they need for success is the key to equity. For Annette, success is not just a matter of grades but in a feeling of accomplishment. Concerned about some students being intimidated by mathematics, it is important to her that her students feel confident in their mathematical ability. Her concern for student sense of efficacy and her outcome-based approach to equity is illustrated in this excerpt from her interview where she describes her selection process for deciding which students will present work at the board.

Today, before you came in, we were working on absolute value inequalities.... There are some children that still aren't even understanding inequality.... So the kids did their homework last night, and today what I decided to do is I decided to put a lot of the problems up on the board and then just randomly – well, supposedly randomly call up kids to the board to have them do it. One of the things I tried to make sure I did was those kids



that I knew didn't get it to start the first couple of problems, I didn't call them to the board. I called those students that I knew from yesterday's instruction had a handle on it.... Well, then by the time I got to the fifth or sixth problem, I started calling on those people that I felt I kind of saw the light go on in their head so that they could go up there and they could show a little bit of confidence and show that they could do it and be able explain to the class. And so I – to me, that's what the equity of the situation is, not so much does everybody get a chance to go to the board, but to make sure that those that can go to the board get up there and feel confident about doing it and able to show off.... And so I think that's the type of equity that I look for and that I think is good for the students, not so much that everybody gets a chance to go up to the board. Because there are some kids that if you put them up at the board, they are going to melt down. And I don't think it's fair.

In this example, the outcome is students feeling successful. To ensure that all students feel confident, instead of calling on every student to go the board, she only picks those that have demonstrated mastery. Annette provided similar examples that illustrate the thoughtful way in which her practice incorporates her definition of equity.

Tammie thinks of outcome in terms of students reaching their educational goals. Equity for Tammie is doing whatever she can do as a teacher to ensure students reach their full mathematical potential. The majority of students in Tammie's high school have college-educated parents. She is aware of the consequences of such diversity; namely that while some students might be getting academic support and encouragement at home, others may not. The following excerpt describes the influence of this awareness on her practice.

And so I think that's what I see as an equity issue, is that some kids have that at home. Some kids are pushed into that from home, and some kids don't have that support at home. And so, you know, I've got a couple of kids in my concepts class – we have one student in particular and he's an athlete and has a very, very rough home life. And I feel like we're all behind him kind of going you can do this. And he's resisting it right now...and I had to pull him out in the hallway and it's like, you know, you can do this and I know you can, and you're so close to that passing failure mark, you need to be doing this work.... It's an issue of where you need to be and where you're going to go. And knowing that you can do it, we're not going to let you just sit back and not do it.

Tammie goes on to describe that she pushes these students who she feels require more from her. Getting students to where they need to be is the final outcome for Tammie, whether it be onto a higher track mathematics course or graduation.

For both Tammie and Annette, equity is not something they just talk about, rather it seems that they are both reflective about what it means and actively pursue it in their daily work of teaching. Their actions described in the two excerpts suggest that they both understand that equity is not about equality but about providing students with what they need to be successful. Like most teachers, they are concerned about their students' feelings of success, their being challenged adequately, and providing them with enough support so that they will achieve academically. Both teachers are committed to their students and ensuring that they all succeed. They embrace the diversity of their classrooms and incorporate student differences in their teaching practice. However, in the same way that race and SES and the associated societal messages exist outside of the classroom, we found that no matter how blind to race or class and how fair to their students both tried to be, these messages found their way into their classrooms, as well.

#### *Race and SES Interfere with Attempts at Equitable Teaching*

In this section we discuss incidents in Tammie and Annette's practice that illustrate that although these two teachers seem reflective about equity and their practice, they fall short of being what NCTM and NBPTS might consider equitable. These descriptions of practice are in the words of the teachers and illustrate how societal messages about race and class seep in to undermine attempts to provide high quality educational experiences for all students.

*Basketball and colorblindness.* Annette volunteered early on that she is colorblind and that she does not see her students in terms of their race or ethnicity, but only in terms of ability. The ability, she says, is not attached to race. She says, "I really don't look at okay, if you're a black student, you can do this. If you're a white student, you can do this. For goodness sake, I have a little girl from China right now. I don't look at her and go oh, thank God, I got an Asian kid who's going to be great at math." Instead of using race as a signifier, Annette distinguished students in terms of their mathematical ability, a point she repeated several times through the interview. She used the following story to illustrate the magnitude of her colorblindness:

One of the kids said something about – at the start of the year and this is a horrible story to tell on myself, but I’ll tell it anyway. And they said do you remember the black Ashley that you had last year? And for the life of me I’m thinking that it’s this kid’s last name.... I didn’t teach anybody by that name. Well, yeah, you did. She was in your first period class. And I said oh, the girl who couldn’t multiply polynomials. And they go yeah. And I said well, her name wasn’t Ashley Black. It was Ashley and I said the last name. And the kids are cracking up because they know that this kid is asking me about a black student named Ashley. And I’m like clueless. And I’m not a stupid woman – I’m – you know, I mean I am – without breaking my back, I am pretty smart. And they said no, you know, black. And I said I’m going to tell you something and they all laughed. I said when I think of a student years later, I don’t really see the color. I see this one struggled with this. This one struggled with that.

Annette attributed her colorblind approach to race to growing up during the Civil Rights movement. She expressed that she tried to maintain a race-neutral and class-neutral classroom, as well. She gave the example of squelching a group of students’ name-calling of another group of students as “rich white girls” saying that that sort of talk had no place in her classroom.

As discussed earlier, for many White Americans, seeing race is often aligned with being racist. For White Americans, the vocalization to not see race is a way of establishing a social assurance that one is not racist (Bonilla-Silva, 2001), especially when racism is strictly associated with imposed segregation. Annette was a child of the Civil Rights era, an experience to which she attributes most of her colorblind mentality. The danger in colorblindness is the *freedom to act* one gains from admittance (Streitmatter, 1994). That is, with a pledge to colorblindness, people are free to act without thinking about both the racist implications and motivations that surround the act. Next, we will analyze one such act that Annette described as having taken place in one of her pre-algebra classes. The pre-algebra classes, as described by Annette, are majority minority with the largest percentage students being Black.

In Annette’s pre-algebra and some regular algebra classes, she has students who she describes as having no motivation or not really seeing mathematics as relating to their lives. To motivate these students, Annette tries to appeal to their future aspirations. She says:

Because I always tell them, I say I can’t choose what you’re going to be when you grow up. And if you’re telling me right now that you’re going to drop out of school the minute you turn 16 in ninth grade, that’s fine. I’m not going to argue with you. I’m not going to disagree with you.... I want to make sure you know how to balance a checkbook. I want to make sure that when you sign your NBA contract and the guy says ten percent or ten thousand dollars and you say oh, ten percent sounds really good and you have a million dollar contract, you know, you’ve just thrown away \$100,000.

This deterministic comment suggests that Annette knows that her students do not have very bright mathematical futures, yet she wants them to try and to be successful while in her classroom. We might argue that Annette’s low expectations for her students’ mathematical futures, that is, that they will only use math for figuring out personal finances, are a result of her really being in touch with her students’ goals. However, we offer another hypothesis. We argue that Annette’s colorblindness allows her to be untroubled by the low future expectations she has for her students, a great many of whom are of color and male. In believing herself as a colorblind individual, one for whom race is never a conscious identifier, Annette is safe from critically thinking about why she would choose the career of a professional basketball player to appeal to her students, a majority of which are Black. Perhaps she said this to appeal to what she believed her students might want for themselves as a future, but behind a veil of colorblindness, she does not have to think of how such statements are based on and reiterate a taken-for-granted assumption that Black people and athleticism are naturally linked (Harrison & Lawrence, 2004). Within a colorblind framework, Annette can use a lucrative NBA career as a way to motivate her students to work hard in her mathematics class. She does not have to think about the role that race plays in choosing such an example, nor, is she compelled to think about the message she is sending out to the Black males in her class who probably already see athletics as the most viable option for a successful future (Harrison Jr., Harrison, & Moore, 2002).

Motivating students to learn is a component of both the NCTM and NBPTS standards documents. However, motivating students through methods based on low expectations for their futures is most likely not the intention. Annette has a priority of providing students with what they need to be successful, such that in this case her desire to motivate her students and maybe to connect with perceived student-interest takes

priority in how the enactment of motivating students takes place. Similarly to the teacher in Schofield's (1986) study, holding on to colorblindness allows Annette to attribute the action to knowing her students and not to any preconceived ideas she might have about race. Further, if she is colorblind, she is not forced to think about the ramifications of sending such a message to her students.

In her mathematics classroom, Annette tries to create this utopia where race and class have no place. However, no matter how much she tries to keep race outside of her classroom, it seeps in. Not addressing the role that race plays in her practice can lead to a dangerous sequence of events that undermine any attempts she might make to ensure high quality mathematics instruction based on high expectations for her minority students.

*The country kid.* Tammie offers a troubling classroom incident related to a student from the rural part of her county. She refers to him as her "country kid." In this section, we analyze the incident drawing on the literature discussed earlier about societal messages about low SES. While it cannot always be assumed that there is a rigid distinction in economic status between rural students and students from the suburbs, Tammie in her interview suggested a class distinction between the two groups of students. Therefore, we assume that her distinction between the "country kid" and the middle-class students in her mathematics class is more than just one of geography, but one of class as well.

Tammie, like Annette has an equitable, that is outcome-oriented, concept of equity. In an earlier section of this paper we gave evidence to suggest that Tammie recognized the diversity in her students and saw the need to provide those with less parental academic support at home with extra encouragement in school. However, Tammie was not always an advocate for students who did not come from middle-class homes. Tammie, who adopts a more NCTM reform-based approach to teaching mathematics, uses group work extensively in her classrooms. She describes the process of assigning groups as a key part of equity. She wants all students to both feel comfortable and to have equal opportunity in their groups to discuss their solutions. Tammie takes great caution in creating groups that will work well together. She describes a situation in which she had only one rural student in a class with the remainder of the students being from middle and upper middle class families. In trying to place this student for a group project, Tammie

discusses her dilemma of finding the right group for this student.

I have a class right now that's very small. It's only 12 kids and I have one country child and it's hard sometimes when I pair them to do an activity because there are a lot of natural pairs in the class, but there's no natural pairing with him.

Finding the right partner for this student was fueled by her concern for her marginalized students.

I feel very protective. I think of the kids who would tend to be ostracized by the other kids. And I think I always make sure they're okay. You know, the other kids I feel like that they're going to get along and they'll be fine. But it's those kids that I really want to make sure that they're okay.

Worried about the "country kid" being ostracized for being different, Tammie paired him with a student she perceived as being kind.

And so the project that we just finished was a container project. They had to construct a container and they had two days in class to do it and they can't do it at home. So it has to be a paired situation. And so, you know, one of the girls ended up getting paired with him for that activity. And, you know, she was very sweet about it. You know, she was like hey, I can do this.

Tammie, concerned that her students' learning could be affected by their comfort in their groups, took caution to create what she felt would be productive groups. This in itself is unproblematic and just suggests that Tammie is very thoughtful about the collaboration that takes place in her classroom. However, what is troubling is her assumption that the "country kid" poses a problem for the other students in her class and in particular for that poor sole who must work with him. The sympathy she feels for his partner is clearly visible in the next passage.

And so, you know, one of the things I do is I just praised her for it. You know, you're doing a great job. You know, you're doing a great job working with him and y'all are doing a good job as a group. And I think sometimes it helps them for you to acknowledge that I know you're working with someone who's hard to work with, but you're persevering and you're doing it anyway. And I think that's just a life lesson. And that's what I tell them. You know, because I teach at this school doesn't mean that I enjoy working with every other teacher who's in this school. But they're a colleague and I treat them professionally and if I do need to work with them, I'll do that. And that's what you have to do in life.

Tammie describes being concerned that the rural student will be ostracized and so she assigns a partner who she thinks will be tolerant of his differences. In protecting the marginalized student, making every group comfortable, and praising the partner for working with him, Tammie is perpetuating the message that because this student is a “country kid” he somehow does not possess those skills and ways of interacting that are the norm in this school. To punctuate the severity of the incident, assume instead that the “country kid” was instead female and Tammie praised a male student for taking on the hardship of working with a girl who, given her gender, would not be an easy partner with which to work. We would be appalled in the 21<sup>st</sup> century that someone still held the belief that somehow women are less mathematically capable or more difficult to work with. The message that goes out to at least the “country kid” and his partner, if not the entire class, is that because of his different class status, his behavior is somehow deviant from what is considered normal for the rest of the class, therefore making him difficult to work with.

Teaching students to work with different people is a valuable lesson in our more and more diverse society; however, Tammie seems to be teaching the lesson of *dealing* with diversity as opposed to embracing it, honoring it, or welcoming what others might offer. The NBPTS standards document says that teachers should exhibit behavior befitting for living in a diverse society by being respectful as well as appreciative of all students (NBPTS, 2001). By finding a partner who can tolerate this student from a perceived different social environment from his peers, Tammie is not demonstrating the appreciation for diversity that NBPTS calls for. This is especially crucial given the divide between different social classes that exists outside of school (Gans, 2001; Lemieux & Pratto, 2003). Instead of working against class-based segregation, Tammie in praising the *normal* student paired with the “country kid,” is sustaining the idea that separation among classes is justified given that students from a lower socioeconomic status are more difficult to work with.

### **Conclusion**

Annette and Tammie were chosen to participate in this study because of their commitment and attention to equity as well as their status as accomplished teachers as defined by their National Board certification. Both readily described their attention to issues of gender, race, and class. They both said as well as illustrated with examples from their teaching a commitment to

ensuring that all students had equal opportunities for success, while understanding that the diversity of their students called for equitable but not equal time, support, and resources. Both teachers probably would describe themselves as equitable. However, while Annette and Tammie both described equity in a way consistent with standards documents, some of the teaching actions they described in their interviews, particularly with both Black students and students of low socioeconomic status, suggested a need for critical reflection on their part about how they are both being influenced by as well as perpetuating social inequities.

As illustrated with the cases of Annette and Tammie, no matter how much as a society we try to ignore how race and class help us to organize our world, both constructs still exist and influence our ways of dealing with diversity. Even though Annette talked about colorblindness and creating a neutral classroom for her students, in the end race played a complex role in her use of an athletic career to motivate her students. While she might not have consciously made the connection between Black students and professional basketball players, avoiding race as a relevant construct in society kept her from being sensitive to the message that she was sending to her students about what they might strive to be. Similarly, Tammie, who was extremely caring and supportive of her students and who saw herself as an advocate for her minority students did not recognize the class stratification she perpetuated by suggesting to her students that a “country kid” was too deviant from middle class norms to function sufficiently in a mainstream classroom with his peers. In the end, those high expectations for all students required by NCTM under the *Equity Principle* (NCTM, 2000), though maybe a goal for these two teachers, were repressed by issues of race and SES.

As a society, we must both recognize that race and class are not illusions and recognize the role they have in our world. As teacher educators, we must work with teachers in ways to help them become aware of their vulnerability to such messages and how their biases might influence their teaching. Of equal importance is helping teachers to understand the messages that they send out to their students either about themselves or others. Without addressing how both race, class, and though not discussed in this paper but of equal importance, gender, influence all Americans, solving the problems of achievement disparities between racial and class groups is just an illusion, especially as beliefs associated with these identifiers interfere with

teachers' abilities to set and maintain high expectations for all students.

Some teacher educators have begun to discuss how we might incorporate a component into teacher education so that preservice teachers begin to deconstruct their own views about race, class, and gender and to think critically about educating minority students (Tate & Rousseau, 2003). Marx (2001) worked with White preservice teachers to uncover their racist beliefs toward students of color as part of a Second Language Acquisition teacher education course. She found that most of the teachers were unaware of the prejudices they held toward people of color, as well as unaware of their own white privilege. The teachers in the course engaged in tutoring sessions with students of color. These sessions provided a starting point for conversations between Marx and the preservice teachers about race, racism and white privilege. Marx reported that many of her participants progressed successfully toward understanding their own racism and how that racism intervened with their ability to be good teachers to students of color. More of this work with preservice teachers needs to be done. Also, work with inservice teachers needs to increase, as well. Providing these teachers, long out of a teacher education programs, with a standards document suggesting what equity in teaching should look like, is not enough. Teachers need to trouble their own ideas around race, gender, and class before being able to reflect critically on their teaching of diverse student populations.

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## Appendix

### Interview Questions

1. Describe the racial make up of a typical class you teach.
2. How do you define equity in the context of your classroom?
3. Describe the role of equity and diversity in the NBPTS.
4. Explain how through your practice you have addressed the Equity, Diversity and Fairness standard.
5. Describe any difficulty you have had in addressing this standard.
6. How did you provide evidence in your NBC portfolio of attending to the diversity of your classroom? Equity?
7. Why do you think this standard was included in the NBPTS?
8. How has NB contributed to your thinking about diversity and equity?
9. How has NB contributed to your attention to diversity and equity in your teaching practice?