

## CHAPTER 16

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# HOW DO I LEARN TO LIKE THIS CHILD SO I CAN TEACH HIM MATHEMATICS

## The Case of Rebecca

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### INTRODUCTION—CONTEXT

Over a span of several years and as part of a university-school district collaborative project in a moderately sized city in the Midwest (approximately 230,000 residents and approximately 24,000 students in grades K–12) teachers participated in professional development (PD) focused on mathematics and equity. One of these PDs was a semester-long teacher study group comprised of six elementary school teachers from the same school. This particular school is a large one for the district with more than 650 students and 42 classrooms in grades K–5. Similarly to the year of the PD, during the 2014–2015 school year, 73% of students were eligible for free or reduced-priced lunch, 40.3% received English-as-a-second-language services, and 12.9% special-education services. The composition of the student body was 37.1% Hispanic/

Latino, 30% Black or African American, 23.2% White, 7% Multiracial, and 2.7% Asian. (All statistics from school district website, purposefully not cited for anonymity.) A district class-reduction initiative meant that in 22 of the 32 district elementary schools (including the one in this study), the number of students in classrooms in grades K–3 was reduced to 15.

I facilitated the PD being reported on in this case, which was also a research site. The purpose of the study group was for teachers to examine how learning about a student's mathematical thinking and their in- and out-of-school competencies as well as how examining cultural differences between them and their students might support their teaching of students who were different from themselves. To accomplish this, each teacher conducted a case study of a student from her classroom who struggled with mathematics. In order to minimize issues of essentializing based on comparisons across cultural groups of students, the teachers were all asked to choose an African American learner. The teachers and I were all White.

The activities of the PD included teachers observing and interacting with the case-study student during the course of their teaching, shadowing the student for one day during the semester, and meeting with parents, which in all cases was the mother. These activities were discussed in weekly PD sessions. Each teacher was asked to have informal discussions with their case-study student in order to learn from them about activities outside of school that they participated in and enjoyed. They were also asked to notice, within the classroom setting, the activities that the student chose to participate in when given a choice. The shadowing provided the opportunity for the teacher to observe the child in situations to which a teacher does not usually have access such as lunch and recess, pull-out programs, and special classes such as art and gym, as well as to observe the child in the classroom itself, but from the position of an observer rather than a participant in the activity of the classroom. The meetings with the mother supported the teachers to learn more about the student's out-of-school interests, competencies, and funds of knowledge (their cultural, linguistic, home, and community knowledge) by reviewing photos that the mother had taken of her child. The mothers had been asked to photograph their child when they were (a) engaged in an activity that was particularly interesting to them, (b) engaged in an activity at which they were particularly competent, (c) engaged in a household routine such as cooking or grocery shopping, and (d) engaged in an activity that involved mathematics or attention to number. In order to take field notes for research purposes, I accompanied the teachers to the meetings with the mothers. Along with work around the PD just described, I also spent one or more periods per week in the classrooms of the teachers in the study group in order to support them in their teaching. Due to this, I also had many casual conversations with them about their teaching and their case-study student.

## CASE DESCRIPTION

The case that follows is that of Rebecca (a pseudonym), one of the teachers in the study group. She taught a combined 2nd/3rd-grade class of 15 students and had 9 years of teaching experience. Rebecca began and ended the PD struggling to understand the mathematical thinking of her case-study student, an eight year old in the third grade whom I will call Robert, although she spoke on several occasions about the need to find and work within children's "zones of proximal development." In an early session, Rebecca reported that she found Robert easily distractible in the classroom setting, somewhat unmotivated, a bit uncoordinated, and immature socially. Robert did present as an immature third grader, playful, and distractible. Robert was a child who was tall for his age; since taller children are sometimes expected by the teacher to be more mature than their shorter classmates are, this may have influenced Rebecca's opinion of his level of maturity. She found his behavior to be more like the second graders in her 2nd/3rd-grade class than the third graders. For example, Rebecca felt that Robert was more interested in using base-ten blocks to build with than using them as a problem-solving tool. She did, however, recognize that this interest in manipulating three-dimensional objects extended to making symmetrical designs with pattern blocks, an activity he completed successfully; yet this interest and show of competence in this area of mathematics was not built on by Rebecca. She also seemed at the beginning of the year to have some understanding of his mathematical thinking and performance in the area of number and operations. She reported in an early PD session that he relied on direct-modeling strategies when the problems contained larger numbers (numbers between 20 and 100), and she recognized that his explanations of his solutions didn't always match the problem. For example, when he solved a problem in which someone had 22 cats and was given 8 more, he arrived at a correct solution of 30 but then explained his thinking by saying that  $5 \times 6 = 30$ . Her initial concern was to support him in representing his thinking on paper and verbalizing that thinking. In terms of knowing about the student's interests outside of school, even at an early point in the year, she recognized that Robert had an interest in video games because he talked about them frequently. So we see that Rebecca did have some early knowledge of Robert's mathematical thinking and his interests and competencies. Yet her understanding of his abilities progressed little throughout the course of the PD.

Later in the semester, Rebecca, referring to her understanding of where Robert was functioning in mathematics, said, "I'm still figuring out the puzzle. I don't think he's progressing because I still haven't found out what his zone of proximal development is." By this, Rebecca led me to believe that she meant that she hadn't done well in finding that line between what

Robert could do mathematically and what appropriate next steps to take with him would be. As a nascent researcher, I perhaps did less than I might have to provide feedback to teachers about their interactions with students so as not influence the data. And yet, I did provide feedback to Rebecca following visits I made to her classroom. She was fairly resistant to my suggestions. She was frustrated by Robert and resisted taking responsibility for her continuing inability to “like” the child.

In the meeting with Robert’s mother to discuss the photographs that she had been taken, three major interests that emerged were video games, sports, and cooking. Robert’s interest in cooking was confirmed by his mother, who reported he enjoyed both real and pretend cooking and owned an extensive set of play dishes and pretend food. None of these three interests of Robert’s, all of which might conceivably have led to rich mathematical discussions or activities within the classroom, were taken up by Rebecca. These were missed opportunities for connecting out-of-school knowledge to in-school mathematics. Furthermore, during the conversation with Robert’s mother at the meeting, Rebecca was very negative about his involvement with video games, telling the mother that she (Rebecca) was not going to allow her young child the same access to video games when he was older. In our conversation after the meeting, Rebecca also expressed negativity about Robert’s interest in pretend cooking. She indicated to me that she thought it was a babyish pursuit for a child his age. Her difficulty in connecting to any of Robert’s interests continued throughout the semester. In her reflective writing after the penultimate PD session, Rebecca asked, “How can I incorporate his love for video games and sports, even though I have no interest in either?” The question points to Rebecca’s struggle to try to connect with the student’s interests. This problem of not being interested in activities that interest a particular child is undoubtedly a problem not unique to Rebecca but rather one that may easily be shared by many teachers. In this case, however, no resolution was reached to this question. No inroad was found.

In the later part of the semester, Rebecca noted, “I think that in some ways he and I have a personality conflict. I just haven’t figured out how to reach him with my own personality. . . . The more I push him the more he’s going to lapse into his imaginative world, and not have a true sense of wanting to learn.” She struggled to build a relationship with the child that for a variety of reasons did not come easily. She found it difficult to contend with what she saw as Robert’s lack of commitment to his own learning. She also was frustrated by his tendency to give any answer, to guess wildly in order to present an answer to a question. In the middle of the semester, Rebecca explained it this way, “He’s so concerned about getting it wrong. . . . He’s just waiting for someone else to tell him it’s right or wrong. There’s no internal motivation to feel good about problem solving.” Rebecca seemed

to base her analysis of the child having no internal motivation on her view of his mother as overly dominating, as someone who provided Robert with external motivation in many cases. As the study group progressed, Rebecca grew to understand that her demeanor toward the child might be feeding into this dynamic and damaging the learning environment. She made small steps toward taking responsibility for her part in squelching Robert's ability to explain his thinking and problem-solving strategies. At the final session of the study group, in her brief update to the group about Robert she said, "In math I've been more patient with him . . . instead of being so authoritarian." She was hoping that with other tactics he might be less anxious and more able to express his thinking so that she could better understand his mathematical thinking and problem solving.

### THE DILEMMA

Rebecca was one of the two teachers in the PD who struggled with making a connection to and building a relationship with both her case-study student and the student's mother. She found both of them difficult and frustrating to work with, and this impacted her willingness or ability to focus on the student's strengths and interests, leading to lost opportunities both for making potentially fruitful connections to meaningful contexts for mathematical problem solving and to building a solid working relationship with the child. Furthermore, Rebecca often voiced negative perceptions about the mother (such as the comment that she [Rebecca] did not approve of video games) that, although not explicitly racist, seemed not to take into account parenting practices that might not align with her own middle-class, White parenting practices. Comments by Rebecca to the mother that she (Rebecca) did not approve of the child's engagement with video games or her comments to me that she thought of Robert's interest in pretend cooking as babyish were not respectful of decisions that Robert's mother had made about his out-of-school activities. She was quick to judge the situation instead of trying to find a way into understanding why things transpired the way they did in this household.

What was difficult for me was the extent to which Rebecca appeared to dislike and be dismissive of the child and his mother. I could see that there was a sort of clash of personalities between the mother and Rebecca, at least from Rebecca's perspective. Rebecca wished it were otherwise but seemed to indicate that it was outside of her ability to make connections with either mother or child. Furthermore, she was resistant to comments and suggestions from other teachers in the PD and myself as to steps she might take to reorient her perspective toward the case-study student and his mother so as to support the student in his learning of mathematics.

For example, although Rebecca knew that her target student had an avid interest in cooking that had begun at an early age as well as an interest in sports and video games, she never discussed the idea of building on her student's competency in cooking, even when other participants and I probed the issue during study-group sessions. In one dramatic instance, Rebecca turned her chair around and sat so that her back was facing into the circle at the study group, cutting off eye contact between her and the rest of the group. She struggled with the fact that she personally had no interest in either sports or video games, and she said she believed this made it difficult for her to connect with those interests of the child. In addition to the formal PD meetings, Rebecca and I had opportunities when I was visiting her classroom over the course of this semester to talk about the situation with this student. She most often presented any thinking around the student and his mother in a negative light. Rebecca had grave difficulty relating to and even liking the student and yet was resistant to suggestions as to how to ameliorate the situation. I was frustrated by the way she related to the child and his mother. This was the core of the dilemma for me. Unlike Rebecca, I had considerable sympathy for Robert's mother. Robert's mother seemed to me to be actively and assertively trying to support her young Black male child's academic success; and yet this went unappreciated by Rebecca, who read the mother's actions as pushy.

### REFLECTION ON THE DILEMMA

I understand that teachers' receptivity to learning can be constrained by many factors. Personal situations can leave them less available for examining their practice or their relationships with students. Whatever the reason, it was very difficult for Rebecca to reorient herself toward the student. I was uncomfortable pushing her further during PD sessions or in personal communications because of a fear of alienating her. It's a delicate balance to walk with a teacher. My frustration with Rebecca could conceivably be read as a situation parallel to her frustration with Robert and his mother. Do I need to accept some responsibility for Rebecca's inability to connect with this student and his mother? Did I in some way not meet her where she was, not attend to her needs? If I had had the opportunity to re-engage with this situation, I might have tried to find a time to interact with Rebecca more informally or perhaps to meet with her and a teacher friend she worked closely with. This teacher had a classroom next door to Rebecca and knew Robert well. It might have been the case that the teacher friend would have had some positive insights into Robert and that Rebecca might have been more receptive to hearing from her.

Rebecca began to take a few steps toward the end of the semester, realizing that there was something in the way SHE was interacting with the student that may have been contributing to his anxiety around mathematics and his behavior in the classroom more generally. Perhaps this indicates that she needed more time to process the situation and to be able to accept responsibility for her own complicity in the way the relationship with the student had developed. Maybe it was unrealistic of me to have been disappointed that Rebecca was not able to reflect and reorient toward this child on a schedule that coincided with our work in PD.





## COMMENTARY 1

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# EXAMINING INTEREST CONVERGENCE AND IDENTITY

## A Commentary on Foote's Case

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### MY POSITIONALITY

My roles as a researcher, a mathematics teacher educator, and a former elementary and middle-grades teacher of mathematics are the impetus for me to provide perspectives on how Robert and his mother are positioned by Rebecca. As a mathematics teacher educator, I have asked teachers to engage in activities requiring them to know and understand the experiential, familial, cultural, and communal resources students bring to classrooms to understand the strengths and motivations of students. My experiences as a teacher and teacher educator influence how I frame Rebecca's teaching and interactions with others throughout the professional development. I cannot discount the fact that being a Black man influences ways in which I make sense of the complexities of negotiating identities. I have

done research and developed academic and summer programs focused on the schooling and mathematical experiences of Black boys. This work has allowed me to position myself as close as possible to understanding the perspectives of Black boys who are developmentally evolving and in need to support and mentorship. Rather than minimize my roles and identities, I use these to provide a perspective for framing this case around the constructs of interest convergence and identity.

### INTERPRETING THE DILEMMA

The activities described in the professional development provide a context in which teachers can learn and develop an understanding of the resources that students bring with them to classrooms. Students' out-of-school interests, competencies, and funds of knowledge represent the kinds of resources students bring to classrooms and in many cases represent students' motivations. Rebecca engaged in activities, such as observations, shadowing, and meeting with Robert's mother, that provided her with opportunities to learn about Robert's resources and motivations. These activities provided Rebecca the context for understanding and interpreting who Robert is, how Robert and his mother see him, how other teachers and students see him, and how Robert acts as a result of these understandings and interpretations. Rebecca's observations and comments suggest that she did not understand that her interactions and dispositions towards Robert had a tremendous effect on the ways she accessed his knowledge and understandings, and the ways Robert participated in class. She appeared to be egocentric and focused on interest convergence as evidenced by asking, "How can I incorporate his love for video games and sports, even though I have no interest in either?" and stating, "I think in some ways he and I have a personality conflict. I just haven't figured out how to reach him with my own personality." These statements suggest that Rebecca is less interested in knowing and understanding Robert's motivations and more interested in how Robert's interests do not converge with her interests, values, and personality. Because of the incongruence, she positions Robert and his mother as deficit by ignoring Robert's interests and admonishing Robert's mother for allowing him access to video games. Further, she positioned pretend cooking as "babyish," which contributed to her view of Robert as being immature.

It is not clear whether Rebecca had an opportunity to reflect on shadowing Robert in a way that would allow her to see how or whether Robert used his resources and interests in other school settings. I wonder if other educators in the school had an appreciation for knowing what it is like being a third-grade Black boy who is tall for his age having interest in video games, sports, and cooking. Because of Robert's size, I am concerned that

Rebecca did not see his interests as age-appropriate and developmentally evolving. Seeing Robert as a young Black boy who is developmentally evolving and in need of support provides a perspective of his vulnerability. Imagine, Robert going through the school day where there are no opportunities to connect to his interests and resources. I would wonder how Robert would participate in school and what would motivate Robert to participate given that there are few connections to who he is and how he sees the world. Now, imagine a school day in which Robert's interests and resources are used to motivate his participation in mathematics. Again, I would wonder how Robert would participate in school. But, I can see a student who might be highly engaged, one who has a connection to the learning, and one who uses his connections to deepen his understanding of mathematics. I wonder if this thought process would appeal to Rebecca in ways that would allow her to see the extremes in the range of experiences Robert could be receiving in school. Reflecting on the shadowing experience by considering the range of Robert's experiences may be beneficial for Rebecca. The challenge with Rebecca is to help her see that Robert's interests can be leveraged to support positive teaching and learning and not position Robert's resources as deficits that teaching and learning must overcome.

### **RESPONDING TO THE DILEMMA**

Understanding the strengths and motivations that serve to develop students' identities and sense of agency should be embedded in the daily work of all teachers (Aguirre, Mayfield-Ingram, & Martin, 2013). Agency is students' identity in action and their presentation of their identity to the world (Murrell, 2007). Mathematical agency is about participating in mathematics in personally and socially meaningful ways (Aguirre et al., 2013). As a mathematics teacher educator, one goal I have when working with teachers is to help them understand that making connections to students' identities impacts their sense of agency. That is, mathematics teaching involves more than helping students develop mathematical skills and mathematical understanding but also empowering students to seeing themselves as capable of participating in and being doers of mathematics. This understanding of identity and agency gives teachers insights to how and why some students might make positive connections with mathematics and others do not (Aguirre et al., 2013).

Because it appears that Rebecca is egocentric or unable to connect with Robert, it may be helpful to have her reflect on positive mathematics teaching (or another subject if mathematics is not positive) and learning from her own K–12 experiences as a student that connected with her resources and interests. I would ask her to reflect on one or two experiences to

remember how she participated in mathematics and the ways she was motivated to do well or persevere with tasks or problems. My hopes are that her reflections would provide a context focusing on active participation, asking questions, reasoning, and motivation. During the reflection, I would ask Rebecca to consider the actions of teachers that supported questioning, reasoning, and motivation. The kind of teaching that supports questioning, reasoning, and motivation values students' thinking and uses pedagogical practices, such as differentiated tasks and publicly praising contributions and perseverance, to cultivate and affirm participation and behaviors (National Council of Teachers of Mathematics, 2014). After this reflection, I would ask Rebecca to consider how Rebecca as learner would participate and learn in her classroom. I would push her to consider how her teaching, actions, and decisions would support Rebecca as a learner of mathematics. By asking Rebecca to reflect on herself as a learner in her own classroom, my goal is to bring forward the role of leveraging students' interests and identities as motivating factors for participation and learning. Finally, I would ask Rebecca to transfer her reflections as a learner in her own classroom to contrast it with Robert's experiences as a learner in her class. My hope is that the contrast in reflections would highlight that teachers who engage in activities that affirm students' identities impact the ways students participate and learn in mathematics. I may receive "push back" from Rebecca because she may focus on interest convergence as a factor that supports positive teaching and learning. In my work with teachers common push backs are often stated as not having common interests, backgrounds, or connections. These push backs often situate students and families in a deficit position because some teachers perceive the lack of convergence as a problem for the student and families. If interest convergence is a factor, I would ask Rebecca to consider who should make alterations in their interests: third-grade students or the teacher. I would challenge Rebecca on the role of the teacher to adjust and meet the needs of students and to embed some parts of Robert's resources and interests to see if it had any impact on his motivation and participation.

One major lesson mathematics teacher educators can take from this case is working with teachers like Rebecca should focus on helping teachers develop entry points for examining the relationship between students' resources, identities, and supporting students' sense of agency. One way to do this is to have teachers examine their own stories and experiences then contrast them with the experiences they are providing for their students. For teachers like Rebecca, this can provide her with an experience that may be highly personal and may need to be unpacked personally prior to engaging in a larger group. It is hard to imagine that teachers do not want to provide the best opportunities for their students to learn mathematics. For teachers like Rebecca, the challenge is to help her understand that her

actions, motives, and decisions impact students' identities, sense of agency, and ability to learn mathematics.

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## COMMENTARY 2

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# **SUPPORTING A TEACHER'S SHIFT FROM DEFICITS TO FUNDS OF KNOWLEDGE**

## **A Commentary on Foote's Case**

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### **MY POSITIONALITY**

I read this case with my role as a teacher educator in the forefront of my mind. In my day to day as the Director of Teaching and Learning at an elementary school in Washington, DC, I spend time thinking about how to best support teachers so that they can spend their time creating learning environments that will best support children. In addition, I think about ways to support teachers in their learning. Whenever I plan for professional development, coach teachers, or make decisions about curriculum, teacher change and support are squarely at the center of my mind.

In addition to my current role as a teacher educator, I have multiple identities (bilingual, White, middle-class, and female, I grew up outside of

the United States) that work together with the critical and feminist lenses I bring to my work and, therefore, to my reading of this case. I am undoubtedly an outsider to the communities in which I often live and work, which are predominantly comprised of low-income, marginalized people of color. My childhood living overseas and my study of critical and feminist theories have shaped the way I view situations, relationships, and society. I think often about how power relations operate and how the dominant narrative works to impose upon and color my perspective.

### INTERPRETING THE DILEMMA

While reading this case, my interpretation of the dilemma shifted. Is the dilemma how a teacher should manage a student she does not “click with,” as the title of the case suggests? Or is the dilemma about how to best prepare teachers to facilitate learning considering the lives of their students? Having made a few missteps myself in terms of how I have prepared (or underprepared) teachers for change, I would argue that the dilemma lies in how to best facilitate teacher change and handle resistance, which in this case is toward seeing and maximizing the strengths of a particular student, Robert. Rebecca seems to be struggling, not with a particular student, but perhaps with what the child represents: a child from a background that is different than her own and who values things that she does not. If a teacher comes to work with biases, preconceived notions, and judgments about a child (and do we not all bring these to our work?), how do we best support that teacher to understand that child (and others that will come after him) in a different way?

In reflecting on the case, I noticed the same parallel that Foote describes in her own reflection on the dilemma: “My frustration with Rebecca could conceivably be read as a situation parallel to her frustration with Robert and his mother. Do I need to accept some responsibility for Rebecca’s inability to connect with this student and his mother? Did I in some way not meet her where she was, not attend to her needs?” The intention of the professional development was “for teachers to examine how learning about a student’s mathematical thinking and their in- and out-of-school competencies as well as how examining cultural differences between them and their student might support their teaching of students who were different from themselves.” Given this, it seems that the notion of the author not having met her student’s (Rebecca’s) needs is central.

Teachers deserve the same approach to learning that we ask them to bring to their students. The central activities of the professional development (meeting with Robert’s mother, getting to know Robert’s interests, and shadowing the student) are all powerful activities capable of shifting a teacher’s perspective and enriching their practice. However, they can also



serve to reinforce preconceived beliefs. Having prepared teachers to conduct home visits for the past 5 years, I have learned that if you do not set teachers up to look for assets and opportunities within a home, they may just see deficits. For example, one time a teacher returned from a home visit, and their description of the environment was that a television was taking up the main living area, always on, and that there was no quiet, separate space for the student to do homework. She had overlooked what could have been potential assets or funds of knowledge (González, Moll, & Amanti, 2005) from which to build upon in the classroom. The framing and structure of these interactions is as important as the activities themselves. If we set up a student to do a mathematical task without activating prior knowledge, ensuring they understand the goals and outcome of the activity, and adjusting course during the activity if that student is struggling, we will not maximize learning. In addition, we do not expect our students to develop at the same rate, which also holds true for teachers as learners.

### **RESPONDING TO THE DILEMMA**

Having spent the last 4 years improving my practice as an advocate and supporter of teachers, I have learned about ways to best support teacher change that shape how I would approach the dilemma in this case. If I were the teacher educator in this case, I would first focus on my relationship with the teacher. Are there ways I can engage her in reflecting on her practice so that she will be open to my suggestions or even come to some of the conclusions on her own? What kinds of experiences could facilitate her learning about utilizing student strengths as a tool for their learning? I do not think there is one “correct” way to do this with a teacher, but a trusting relationship is essential. Perhaps Rebecca needed some modeling on how to engage Robert’s strengths in her classroom. What if Foote had volunteered to model mathematical interviews or engaged Robert in problem posing within the classroom? Perhaps Rebecca needed more guidance on what to discuss with Robert’s mom and how to interpret her findings.

I can turn to family engagement work that I do at my school to think about another way to approach the family component of the professional-development experience of this case. At the school in which I work, teachers go on home visits with their students’ families. Did Rebecca meet Robert’s mom at school? How would that activity have been different if Rebecca had been to Robert’s home? It is entirely different for a teacher to enter the space of her student than it is for a parent to meet with them at school, which is really the teacher’s space. Perhaps Rebecca would have been more open to learn from Robert’s mom. Relationships between parents and teachers are fraught with power, entangled with issues of race, class, status,

parents' own schooling experiences, and so forth (Valencia & Black, 2002). Schools often make this even more pronounced. Perhaps she needed to step out of the school in order to approach the learning experience in a different way.

Rather than being disappointed with the impasse that Rebecca seemed to have with Robert, I would focus on the possibilities that remain and the small steps that Rebecca did make. Foote ended the case by saying, "Rebecca began to take a few steps toward the end of the semester, realizing that there was something in the way SHE was interacting with the student that may have been contributing to his anxiety around mathematics and his behavior." Rebecca *did* recognize that her relationship with Robert played a role, possibly hindering his mathematical learning. Coming to this conclusion is a first step in wanting to make a change. This seems like the ideal time to engage Rebecca in moves that would begin to break down that wall. One example would be to conduct a home visit as described, prefaced by a discussion of funds of knowledge. A further example would be a mathematics interview. I find that having teachers conduct mathematics interviews in order to determine a student's level of *understanding* of a concept (emphasizing understanding in order to counter the notion of a student "not knowing" a concept) often opens a teacher to the learning possibilities of a student, versus their deficits. It appears that Rebecca, like many students, needed more time. Where has Rebecca taken this now that the professional development is over?

As educators, we have at least two ideas to reflect upon from this case: (1) Just as in our teaching of children, we need to value relationships as essential to learning, and (2) students grow at different rates and we need to meet them where they are. A final question remains, which I continuously consider in my work: How do we create learning environments and experiences that address power relations, whether between a teacher and student, teacher educator and teacher, or between families and schools?

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## COMMENTARY 3

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# A COMMENTARY ON FOOTE'S CASE

**Nora G. Ramírez**  
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### MY POSITIONALITY

I currently work as a mathematics professional-development consultant with school districts or schools that have large numbers of students who are traditionally underserved in mathematics. My work often involves a district-wide approach to professional development in mathematics for teachers, coaches, and administrators. In this work I focus primarily on mathematics content and standards implementation—intertwining equity into that content. I also work with grade-level teams on an ongoing basis focusing on in-depth understanding of the mathematics standards, effective instructional strategies, teaching English language learners (ELLs), understanding student thinking, and planning and modeling lessons. We engage in difficult conversations about important issues such as low expectations and deficit views often held about their student population.

Although I am not an ELL, I am particularly interested in fostering high-quality mathematics instruction for English language learners and students with disabilities. More than 15 years ago, I was fortunate to have participated

in the Equity and Mathematics Education Leadership Institute (EMELI). Through the Institute's activities, I increased my commitment to equity in mathematics education. I cried when I heard about the young child who tried to wash the brown color off his skin. I reflected on my own teaching when I read a story from Maryann Wickett, a teacher who believed in equity but through her own research found "unexpected patterns of bias" in her facilitation of classroom discussions. I now use stories to give educators opportunities to begin to understand the experiences and emotions of Black, Latina/o, and low-SES students.

While attending EMELI, I realized that all individuals have biases. Professional development should provide educators with opportunities to identify and reflect on their biases. I learned that the work is not easy but necessary.

### INTERPRETING THE DILEMMA

Several issues surfaced as I read *The Case of Rebecca*. These concerns relate to Rebecca's mathematical content and pedagogical knowledge, her possible biases and deficit approach to teaching and learning including her relationships with Robert and his mother, and the role of the facilitator in preparing and supporting Rebecca through this process

#### **Rebecca's Mathematical Content Knowledge**

I am aware that a lack of mathematics content knowledge can result in teachers raising barriers because they feel mathematically inadequate. I noted that the author mentioned that Rebecca was "resistant to my suggestions." Making connections between mathematics, cooking, sports, and video games should not be a difficult task for a teacher whether she was interested in these activities or not. Rebecca also did not build on Robert's interest in pattern blocks, which again makes me wonder about her facility with mathematical concepts and connections.

#### **Rebecca's Mathematical Pedagogical Knowledge**

I wonder if Rebecca has the instructional skills to create a positive classroom culture in which students are not concerned about being wrong, where they use manipulatives as tools and not toys, and they understand what is expected of them. These things often need to be explicitly taught and practiced in classrooms. I have no evidence that Rebecca is aware of and able to ask appropriate questions and facilitate activities and experiences

that will move students from direct modeling to using more sophisticated mathematical strategies and tools.

### **Rebecca's Relationships**

Being aware of the cultures of the students in your school is a first step in developing a respectful attitude and a classroom culture that celebrates differences rather than sees them as inferiorities. I wonder if Rebecca were more aware of her Black students' culture would she would have been able to build a better relationship with Robert's mother.

Because the school composition is 30% Black, I am assuming that there are other Black students in the class. I am very interested in Rebecca's relationship with her students—in particular other Black students. Observing Rebecca's class might give insight as to whether Rebecca "liked" other non-Black students with or without behaviors similar to those of Robert. It is difficult to totally understand without observation.

### **The Role of the Facilitator**

I do not know what kind of commitment Rebecca made before she began participating in this project, but I know that clear commitments and defined expectations are imperative for a successful project. I also am aware that when working with issues of equity one needs to begin with thoughtful experiences, discussions, and reflections; this is foundational in developing a culture of open and honest discussion. Because having discussions related to equity can be emotional, facilitators need to set an appropriate tone in the beginning, recognize and respond when teacher-participants are struggling, and ask questions that may raise disturbing feelings.

## **RESPONDING TO THE DILEMMA**

If I had been working with Rebecca, I would have had some of the same concerns as the facilitator. I might have tried to support her in attempting to understand Robert's mathematical thinking. Rebecca expressed that she wanted to figure out the puzzle of where Robert was functioning in mathematics. She wanted to do something about his learning of mathematics. Working on the mathematics issue should not be as emotionally charged for Rebecca as working on the cultural and acceptance issues. I might have coached Rebecca in selecting strategies and tools that could help Robert explain his thinking and enable him to transition from a direct-modeling

approach to more abstract thinking. For example, asking Robert to use base-10 blocks to explain his answer for  $22 + 8$ , then helping him record his thinking with numerals to move him to an abstract model of the situation. If Rebecca could find some success with Robert in mathematics, she may become more open to him and his mother, and may begin to like him. As a teacher, Rebecca knows that she is responsible for Robert's learning but might not be as committed to understanding his culture or knowing about his interests. I feel that having a positive experience with Robert in mathematics first would open the doors to address Rebecca's dislike for Robert and her unacceptance of Robert's mother.

Rebecca may need support to continue taking steps in "taking responsibility for her part in squelching Robert's ability to explain his thinking and problem-solving strategies." I might coach Rebecca to identify the steps she has taken and their effect on Robert and also begin to think of additional steps she should take with Robert. I would also celebrate these small steps with Rebecca, taking the time to connect this success to Robert's motivation and the role that Rebecca has in motivating students.

I wonder if I might have had to work hard at liking Rebecca. I do know that just as one cannot accept Rebecca putting all the blame on Robert for his current situation, one cannot put all the blame on Rebecca for her current situation. So, prior to giving the assignment of investigating cultural differences, I might have had the teachers read and discuss classroom-related cases that focus on this topic. I suggest cases because the dilemmas and discussions are not as personal to the reader, thus leading to more open dialogue. I would use the case discussions to establish open relationships and develop a risk-free environment. I would use structures for discussion and reflection that I learned in EMELI, such as a dyad. A dyad consists of two people who take turns talking, then listening attentively to each other for a specific period of time allowing each to explore their thoughts and feelings.

In mathematics classrooms, we attempt to have risk-free environments. Risk-free environments are also important in professional-development settings, where participants are engaged in often difficult dialogue about racial and cultural differences. From experience, I know that neglecting to develop a supportive environment can result in feelings of personal attack and defensiveness as was exhibited when Rebecca turned her chair away from the group.

In addition to those professional dialogue tools mentioned earlier, I have found position statements from the National Council of Teachers of Mathematics (NCTM) and the National Council of Supervisors of Mathematics (NCSM) to be useful. I also have used *Classroom Practices That Support Equity Based Mathematics Teaching* (Chao, Murray, & Gutiérrez, 2014) and rely on articles and the accompanying reflection questions in the journal articles such as Gutiérrez's (2009) article, "Framing Equity: Helping Students 'Play

the Game' and 'Change the Game.'" Having discussed and reflected on equity may have been helpful in addressing Rebecca's deficit thinking. I truly believe that educators need to examine and reflect on our own biases if we are to make a difference in the lives of all students.

## REFERENCES

- Chao, T., Murray, E., & Gutiérrez, R. (2014). *NCTM equity pedagogy research clip: What are classroom practices that support equity-based mathematics teaching? A research brief*. Reston, VA: National Council of Teachers of Mathematics.
- Gutierrez, R. (2009). Framing equity: Helping students "play the game" and "change the game." *Teaching for Excellence and Equity in Mathematics*, 1(1), 4–8.

