

RISKY BUSINESS: MATHEMATICS TEACHERS USING CREATIVE INSUBORDINATION

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In an era of high stakes education and the persistence of racism, classism, and the politics of language, there is evidence that teachers may benefit from learning creative insubordination, the bending of rules in order to advocate for all students to learn mathematics. Even so, we know little about how or why teachers decide to take risks when stakes are high. This study examines the experiences of secondary mathematics teachers moving from pre-service to full-time teaching and their choices of whether or not to use creative insubordination in their working contexts. It highlights three rationales that justify taking risks: 1) Changing the minds/practices of others, 2) Projecting an identity one can be proud of, and 3) Modeling advocacy behavior for bystanders. Implications for future research and teacher education are offered.

Keywords: Equity and Diversity; Teacher Knowledge; Teacher Beliefs, Teacher Education- Preservice

In an era of high stakes education and the persistence of racism, classism, and the politics of language in society, professional development for mathematics teachers has started to expand beyond developing forms of pedagogical content knowledge that draws upon deep understanding of mathematics (Ma, 1999; Hill, et al., 2005) and students' funds of knowledge (Civil, 2002; Turner et al., 2012; Aguire & Zavala, 2013) to include an understanding of privilege, oppression, and political knowledge (Willey & Drake, 2013; Bartell, 2011; Gutiérrez, 2012, 2013a, b, in press). The importance of political knowledge and creative insubordination is underscored by the derailing of successful mathematics departments such as Railside High and Union High (Boaler & Staples, 2008; Nasir et al., 2014; Gutiérrez, 2013a; Gutiérrez & Morales, 2002). That is, these mathematics departments had long histories of success with low income Latin@ students who normally do not have positive experiences or reach advanced levels of mathematics while in high school. Yet, the politics of their districts kept teachers from either maintaining the practices they had developed or eventually pushed teachers out who were beaten down by a climate of alienation and deprofessionalism. The stories of these departments indicate that professional development around issues of pedagogical content knowledge and commitment of teachers to all learners may not be enough to sustain success in student learning when larger political debates about public schooling and testing arise. As such, some teacher education programs have adopted a broader lens of equity, including actively providing opportunities for teachers to not only deconstruct the deficit narratives that circulate in schools, but also speak back to those narratives through direct actions. One of those forms of speaking back through actions is creative insubordination, the bending of rules in order to advocate for one's students.

Creative Insubordination in Mathematics Teaching

Our project began using the term "creative insubordination," having heard it first in activist circles in the late 1970s and early 1980s and growing up. Later, we learned that in their ethnographic work conducted in Chicago Public Schools, Crowson & Morris (1985) found "widespread rules and directives violations among site-level administrators" that they labeled partly as "creative insubordination" because these violations were benign and counter-bureaucratic and substituted the

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principal's values for those implicit in organizational policies directed from above. Summarizing various studies, Roche noted:

Creative insubordination has two main purposes: to ensure that the system directives do not impinge unfairly or inappropriately on teachers and students and to avoid the possible backlash that outright defiance might incur. Crowson (1989) and Haynes and Licata (1995) argue that when principals use creative insubordination, the counterbureaucratic behaviors they adopt often contain a moral element designed to balance antieducational consequences.” (Roche, 1999, 257-8)

Our work (Gutiérrez et al., 2013; Gutiérrez & Gregson, 2013) builds upon and extends the early research on creative insubordination by connecting it with teachers and showing its usefulness within the context of secondary mathematics. With respect to mathematics teaching, creative insubordination includes the following acts: creating a counter-narrative to the achievement gap; questioning the forms of mathematics presented in school; highlighting the humanity and uncertainty of mathematics; positioning students as authors of mathematics; challenging deficit narratives of students of color; renaming a course to reflect the fact that it only covers Western, Euclidian geometry, not all geometries that are practiced in the world; refusing to go along with procedures at a workshop that asked teachers to publicly endorse the Common Core State Standards in mathematics; and convincing a co-teacher that the mathematics being taught needed to reflect a more rigorous curriculum so that students understood why procedures worked.

Elsewhere, I have described the concept of *political conocimiento for teaching mathematics* (Gutiérrez, 2012; 2013a) that connects mathematical content knowledge, pedagogical knowledge, knowledge with communities, and political knowledge within a community of like-minded individuals. This concept of political conocimiento for teaching mathematics takes into consideration the history of mathematics teaching and learning in a global society. In addition, I have articulated both a model of teacher education that supports the development of political knowledge, as well as taxonomy of strategies for creative insubordination and language practices that keep teachers from being dismissed in political situations (Gutiérrez, 2014). This study seeks to extend that knowledge by asking: What compels mathematics teachers to take risks in their working contexts to advocate for historically marginalized students and their learning when the stakes are high and the benefits of taking risks are not always clear?

Risk taking is normally viewed as a process whereby an individual weighs the costs and benefits of an action and finds the benefits outweigh the costs. The majority of the research conducted on individuals taking risks falls within the area of risky sexual behaviors, risky business ventures, or risk taking in health. Within education, there is some evidence that both support from leadership (Blase, 2000) and strong internal feelings of power and a sense of responsibility (Anderson & Galinsky, 2006) can encourage individuals to take more risks. Moreover, some researchers have suggested that risk taking may be a sign of great teachers (Brazeau, 2005). However, outside of the context of innovating their pedagogy to align with reform-based mathematics, we know very little about the risk taking behaviors of mathematics teachers in a context of political situations.

All of the participants in this study acknowledged the utility of creative insubordination (which requires taking risks) in their student teaching and current working contexts as well as expressed a desire to use it. However, not all of them did so. As such, this study sought to understand the phenomenon of risk taking for mathematics teachers, how they interpreted risks and how they decided whether or not to take a stand in a political situation that involved power dynamics.

Methodology

This study is part of an ongoing, NSF-funded, longitudinal investigation of secondary mathematics teachers who have been provided with an alternative teacher education program that foregrounded issues of equity, social justice, creative and rigorous mathematics, and political knowledge. Over a period of 2 years each, four cohorts of teachers (n=19) participated in a 3-hour bi-weekly seminar, a partnership with a Chicago public high school teacher, several professional development sessions including an annual summer boot camp and conference attendances, a weekly after-school mathematics club, and biweekly individual mentoring sessions. These structural aspects of the teacher education model supported several conceptual goals, including broadening and challenging knowledge, noticing multiple interpretations, developing an advocacy stance, and rehearsing creative insubordination (Gutiérrez, 2013a). Rather than offering a set of “effective practices” to follow (Bartolomé, 1994), one guiding principle of this teacher education model was “The Mirror Test:” the ability to look oneself in the mirror everyday and say, “I’m doing what I said I was going to do when I entered the profession of mathematics teaching.” This notion of a mirror test underscored the idea that being a great teacher for students who have historically been marginalized (e.g., students who are black, Latin@, low income, English learners, and/or immigrants) means carrying out one’s practice in a way that is consistent with one’s philosophy and ethical stance.

The data for this study draw from transcripts of 78 seminars and selected mentoring sessions between 2009 and 2014. Transcripts were coded (Lincoln & Guba, 1985) to identify major themes around the interpretation and use of creative insubordination, including types of political situations in which teachers find themselves (e.g., battles over curriculum, use of technology, high stakes testing), types of power dynamics involved (e.g., teacher-student, teacher-parent, student-student, teacher-administrator), underlying issues (stereotypes of who is good at math, deficit views of students of color, watering down of curriculum, lack of low income students in advanced courses or higher tracks), types of creative insubordination strategies teachers used under different contexts (e.g., seek allies, challenge with evidence, turn a rational issue into a moral one). Because I was interested in the phenomenon of risk taking as it related to creative insubordination, I began analyzing data by first sorting participants into categories of high and low use of creative insubordination. I identified five teachers who consistently reported using creative insubordination in their student teaching and full-time teaching, three who never or very rarely used creative insubordination in either context, and the rest who sometimes used creative insubordination. Focusing on the high users of creative insubordination, I turned to their rationales for why they did so in any given situation as well as the questions they raised to others who chose not to use creative insubordination. I was most interested in how these high users justified taking a stand on an issue when others in the group might not have done so if faced with the same scenario. From there, I looked at the infrequent users of creative insubordination to understand better what challenges they saw that seemed insurmountable or that did not seem worth risking their status or relationship with colleagues, students, or administration. I used member checking (Lincoln & Guba, 1985) to corroborate findings. I report on the trends here.

Findings

A review of the transcripts indicated that teachers are often willing to take risks when they immediately benefit from doing so. For example, one teacher in our work group didn’t pause before defending herself when a student of hers was leaving her classroom and made a disparaging remark about whites. However, teachers are more cautious when they are risking their status or credibility with colleagues to defend students or a more rigorous form of mathematics.

Changing the Minds of Others

Teachers in this study tended to be most likely to take risks in their teaching practices with students and their interactions with others when they were optimistic that their actions would have some positive effect on the decision-making process of others. In particular, when faced with political situations, ones involving power dynamics, they tended to gauge whether they could diplomatically disagree with someone and get an alternate view onto the table in a way that would not be dismissed. They considered the language they would use and the contexts in which they found themselves so that they were the most effective.

One high user of creative insubordination was faced with a cooperating teacher who had low expectations for students in an Algebra II course populated by older students. He laid out an argument to the cooperating teacher about the internal consistency of mathematics presented in class (how students needed to relate polynomials with integers) because he knew that an argument based solely on what students were capable of was not going to sway him.

He showed me the curriculum, topics that I needed to cover. There's like synthetic division, but there's nothing else like...And, synthetic division is basically just an algorithm. And, I'm gonna have to just say, "it works." ...I don't want to argue against him because I don't want to step on his toes. I need to be wise in what I say so I don't sever that relationship with my coop. I just think about it in my head, then I try to think about how he would take it. From there, I try to compromise my own words. I was going to say this, but I try to come up with a better wording. I try not to say things right away. I know that the issue is very fresh and he may think I am acting on impulse. I try to make sure there is no room for my statement to be misconstrued as I'm just challenging him. Trying to be wise in my timing on things. I know he feels pretty strongly about things and I try to my best of ability, weighing the risk and reward. Is this going to be something worth fighting over? A lot of times, I'll say, "Let's wait a bit and see what happens."

This teacher, a high user, talks about his process for weighing the risks, and sometimes choosing not to fight a particular battle. In doing so, he suggests that he considers who he is talking with and in what context to help him choose his words wisely so that he is not simply dismissed. In this sense, his focus is partly on changing the mind of the person he faces.

Projecting an Identity that One Can be Proud Of

Another rationale that arose for the high users that did not arise for the infrequent or rare users of creative insubordination was the idea that risk taking is worthwhile even if one is not sure of the outcome for others because it reflects who you are. When faced with a school meeting where the school administrator suggested that the achievement gap was due to black student culture, one teacher clarifies that she was not sure how the administrator would respond to her correcting his statement publicly, but she was also projecting a particular identity that she could be proud of. She says,

Okay, this is also the boss and I've only taught one year. I don't know how I'm going to say what I want to say without sounding like, "I straight out disagree with you" in a respectful way...[I was] Just feeling, a lot of fear...But, I have to let myself be known to people. This is the kind of person I am, this is what I believe in, and if you wanted to talk about something that is important with respect to race, I'm the kind of person to talk to.

Her rationale highlights the fact that she was willing to risk her status with a superior not just because she thought she might change his mind about black students and the achievement gap, but because her actions were signaling something about herself to others. She counsels others in the teacher

group who are less inclined to take risks when they feel uncomfortable to consider how they'll feel about themselves in the end.

It's about changing our behaviors not our ideals. It's about not saying you stand for problem solving and then not doing any problem solving in your class.

This same teacher faced a black student who when she passed him over to help another student when he raised his hand, publicly called her out as racist. She felt the need to stand up to him in a similar way, less because she thought he was serious about thinking she was racist or because she was trying to change his mind, but because she wanted other students in the class to know what kind of a teacher she was, someone who was comfortable talking about race.

Returning to the case of the high user who faced a cooperating teacher with low expectations who did not want to increase the rigor of mathematics in his class, the high user explains that he wanted to change his mind, but that was not his only goal.

That's just not how I do things. I didn't know if I was going to change his mind. But, I just needed him to let me do what I wanted. I couldn't be him.

This high user of creative insubordination expressed a similar rationale for standing up to a student who made a stereotypical comment about certain people being good at mathematics. He witnessed a student who was struggling with a problem turn to another and exclaim, "Put on your Asian hat and help me do this problem." He explained,

I don't know if he really thinks that or they're just joking, but I couldn't just stand there and, I don't want to signal that that's okay in my class. Maybe that's okay in other classes, but not for me.

Again, we hear the rationale less about weighing the benefits and risks for impacting the student who made the stereotypical comment and more about what it signals to his class about the kind of teacher he is and what is allowable in his class.

Modeling Advocacy Behavior for Bystanders.

Mentioned less often than changing the minds of others or projecting a particular identity was the idea that even if one's actions didn't convince others to change policy or their beliefs about which students were capable of advanced mathematics, using creative insubordination had the possibility of influencing others who were bystanders to stand up in similar ways to such comments. Again, this rationale was more present among the comments made by high users of creative insubordination than those who were infrequent or rare users.

One teacher (a less frequent user) was faced with a superior in the mailroom and wasn't sure how to respond to his stereotypic comment about Asians being good in math.

He said it in an offhand way. There was a student who was Asian and was not good in math. He said, "She's Asian and you wouldn't expect that." He said it so quickly and kept moving on with the story... I work there, so I can't have him mad at me. I don't want him to say something to my boss... being the younger person talking to an older person, is it my place to be saying something? What are the consequences of speaking up? I know him well enough to know that had I said something, he wouldn't have any respect for what I said. So, is it even worth mentioning?

Three fellow teachers, high users, counsel her,

T1: I think so,

T2: I think so too. One thing, it's easy to make assumptions about people that protect us from putting ourselves out there. I'm not saying that you did... It's really easy to assume something about someone to keep me from getting out of my comfort zone. You could say how he would have responded, but to say something, even if you are casual about it, he is probably going to reflect on his comments regardless of how you think of what he is thinking. I think it's important for us to get out of our comfort zones because it is how we are going to grow and how we are going to make a difference...

T1: ... the first step is by putting yourself out there; you are making a change within yourself. Then, you can help others make the same change. How can I help others in my classroom take that risk to see others differently if I cannot do that? How can I start to live more like what I believe in? The little things are what matter.

T3: I really like what was just said. I think it is really good that a lot of us are feeling this discomfort. I don't know if I would have acted. I think if I hadn't, I think I would have looked back and said, "Shoot, why didn't I? It's good that we are even feeling that drive and that tension. It's there because you are taking a real risk when you are doing that. Especially as a white person, that risk doesn't benefit us. We can, it benefits us by not taking the risk. Maybe the person you are talking to might not get the message. But, you may become a role model for the observer. That other person will see you taking that risk. Especially as a white person. That is really strong and a way to start making change too.

Another high user gives a similar explanation for standing up for students even when it doesn't benefit her as a white person. A rare user of creative insubordination asked her how she gets the guts to do what she does. She responds that when faced with racist comments about her students of color, she does not naturally know what to say or how to say it, but she takes the risk because of what it says to other white people.

I'm white and it is really hard to get your privileges pointed out to you, and you know you didn't earn them and you... One privilege is to be able to walk around this discomfort and to be able to walk away from it... I feel really nervous right now, that fear, feeling uncomfortable. Because we are in the majority, we can just choose to leave the conversation. It's extra important for us to get into these uncomfortable situations. We need to commit ourselves to not taking it and not walking away from it because we can signal to others what is possible.

She recognizes that standing up to racist comments by individuals one faces is not always for the benefit of that person changing, but for other bystanders to witness what it looks like for a white person to stand up for the rights of others.

Conclusions

Teachers in this study were provided with professional development that supported their understanding of and inclination to use creative insubordination, to not simply go along with the status quo but to stand up to racist comments, deficit-based perspectives on students, mathematical practices that emphasized procedures and memory over conceptualization, and/or stereotypes of who is good at mathematics. However, some teachers were more likely to stand up for their students, even if it meant risking their status or relationships with others.

There was a greater propensity for high users of creative insubordination to rely on a rationale that extended beyond the likelihood that their actions would be met by a change in belief or action by the person with whom they were facing in a political situation. These individuals tended to consider what kind of identity they were projecting to others, as well as whether their actions might provide an incentive for others to also speak up or advocate for historically marginalized youth and their rights to learn rigorous mathematics. That is, they were often willing to take a stand even if they knew their

arguments or suggestions for alternate policies or actions were likely to fall on deaf ears. They did so knowing that their choice not to go along with the status quo was a means by which they could look themselves in the mirror each day.

Understanding the rationales of high users of creative insubordination can help teacher educators and professional developers to emphasize the importance of looking beyond the immediate gain of winning an argument with a colleague or changing a policy. The choice to focus on the projection of one's identity and the possibility of influencing bystanders suggests a longer term approach being used by teachers who seem more willing to take risks to advocate for all students to learn meaningful mathematics.

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