Equity Panel: Nicole M. Joseph

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First, some of the things I say might make you uncomfortable. But, just like we push our students to take risks and to try to think differently, that's my hope for you all today; for all of us to think about some things in different kinds of ways and be open to challenging ourselves as scholars, as math educators, as human beings.

This conversation with the equity panel it also a conversation for all of us. I tried to read everything that I could about MTE-Partnership. One of the things I went to immediately was the mission statement, and it reads "MTE-Partnership aims to build a national dialogue around guiding principles for the preparation of mathematics teachers, promote partnerships among all sectors throughout the teacher development process, with a focus on promoting institutional change." I want the words institutional change to really sink. "Develop and coordinate a network, research, and critical--research and development agenda, serve as a clearinghouse for models, programs, and practices, and advocate for change at the university, state, and national levels." As I thought about that statement and I thought about this idea of transforming, one of the things I'd share with you all, as well as the entire committee here, is this notion of transformation. I'm wondering how we might be able to think about that in a more critical kind of way. Therefore, when I was reading the papers, some of my initial observations that I wanted to make immediately were the following: one, many of the panelists provided positionality statements. Positionality is important when you are doing equity work because it allows the reader or the audience to hear how you show up in the work. It was important to me when I read your statement "I'm a white, cisgender male with friends that are Asian." Positionality is important so that people can understand your assumptions and biases. All of us have them, assumptions and biases, and so I really appreciate that. The second thing was, these folks have done a lot of work in terms of time and labor and trying to create measures to measure equity. Why? Because they are very much aware of the context that we live in, that you have to always measure what it is that you care about if you want funding from the NSF, for example. They want to know: what are the outcomes? How do we know? Therefore, they have done a lot of work around that, which I want to commend them for. Overall, I got the sense that they are very much committed to equity in education and that is positive in my mind. I made a word cloud and I dumped all of their papers and slides into this program, and these words came up. What do you notice?

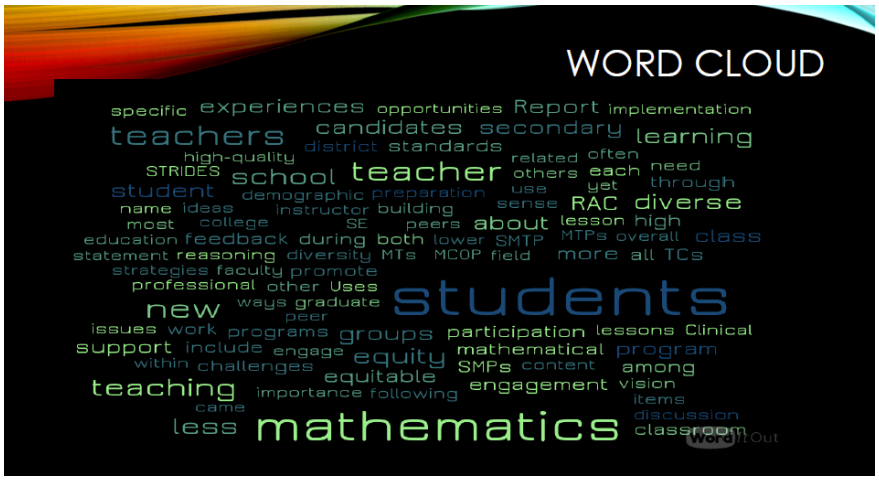

Figure 1. Word cloud from equity panelists.

Students really stands out. What else? Mathematics. Anything surprising?

(audience response) Equity is missing.

Equity's actually there, but it is really small. Any other observations? Well, agency is not necessarily there. Any other observations? Participation is small. Therefore, I just wanted us to see that visual and to think about that as we continue to do our work around math and equity. The charge of the panel is to answer these questions:

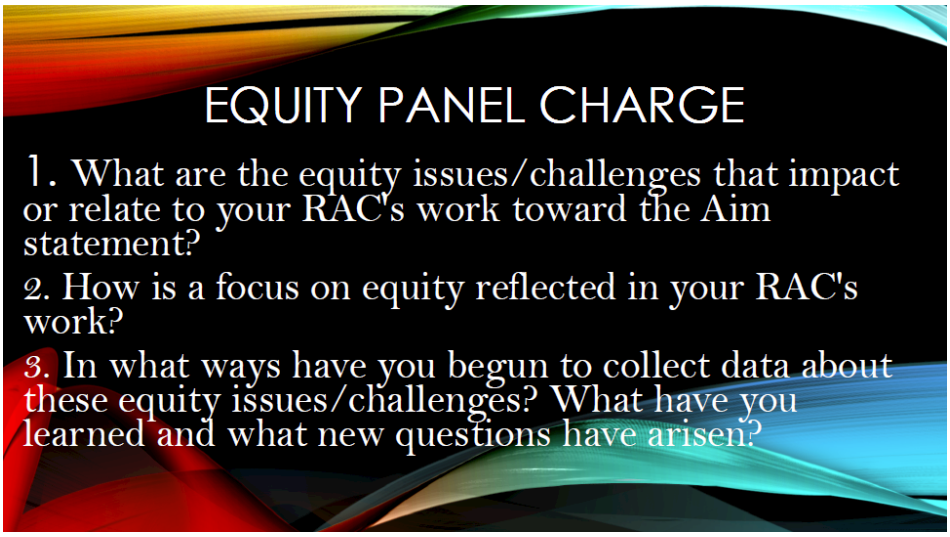

Figure 2. Charge for the Equity Panel.

Overall, what I noticed was that there are some issues. The issues that really showed up are around recruitment and around retention. My observation about question two was that diving deeper into conceptual bases and definitions of equity could really help illuminate more specifically how equity is being reflected in your RAC. My overall observation about question three is that although the authors do have the resources to measure challenges, having a more clear definition of equity, collectively, could lead to more targeted lessons learned.

As for recruitment, prospective teacher candidates don't really have a math identity. And the question is why? These are things that I just kind of want us to think about. They don't have a math identity. Why? Prospective teacher candidates of color are not interested in becoming math teachers. Why? Mathematics is not viewed as an attractive or worthwhile subject to teach. Why?

The next area is retention. Teachers are not staying in the field. We heard from someone earlier that teachers get burnt out, and these are things that we need to think about. New secondary math teachers do not understand equity issues at a deep level. It's just not enough to think "OK, I'm going to know the names of my students," for example. It needs to be at a deep level, and I'll go a little bit further as I get close to the end of my talk, kind of what that might look like. Because our students are tracked, and we have heard this now three or four times, new teachers usually get the low-tracked students, which can be perceived as the bad students. My challenge to us is to follow the path back. You need to know and read Jeannie Oaks' work. She has given us 30 years of empirical research around the challenges of tracking and how it is very negative for all students, even students that are in the advanced tracks. She said it starts at third grade, such as the yellow bird group, the blue canary, etc., and kids are not stupid. They know which track they are in. The other thing is, she problematizes the type of math instruction that happens in those low-level classrooms. You will not see Socratic Method around some deep problem, you will see worksheets. Well, those kinds of experiences can send messages to children or students that they are dumb, that they are not smart, and so I'm challenging us to really problematize this notion

of tracking, and how can we work with our partners and our districts and the teachers to really help them think about: maybe we need to change the type of instruction that is happening in these classrooms.

The final thing is that the goal of schooling is still cultural reproduction. How might a high school math teacher describe a good student? Just call it out. How would a high school student, or high school math teacher, describe a good student in her class? What is she going to say?

(audience response) Smart.

He does the homework, bright, quick, anything else?

(audience response) Pays attention.

Pays attention. Intuitive. That's the language that using. And we understand that this type of reproduction is still embedded with white, middle-class values, as several scholars have shown. Another scholar to read is Zevenburgen. Specifically, she wrote, "Cracking the Code of Mathematics Classrooms: School Success as a Function of Linguistic Social and Cultural Backgrounds." And it was in the multiple perspectives on math teaching and learning book. But her work is very, very powerful. She looks at actual exam questions, like ACT and those kinds of things, and really deconstructs the type of language and the type of capital that a student needs to bring to a math classroom to be successful. She really breaks it down, and it's something I encourage you to read.

Here are some of the tensions that I noticed in the work and the papers. Diversity, equity, and social justice appear to be synonymous and so one thing that you might want to think about is: are they synonymous? And if they are, state that emphatically and be able to explain how they are synonymous. If they are not, then think about maybe deconstructing some of that to really show what are the nuances, what do you actually mean by diversity? Are you talking about racial diversity? Are you talking about religious diversity? What kinds of diversity are you actually talking about? The second thing is the cultural scripts that we have in school, such as testing, procedural, lack of political will, these things that existed in schools for hundreds and hundreds of years. They serve as barriers to the education world. Identifying them and thinking about how you disrupt them or tear them down as you are working together with the district and all of the partnerships, how do you think about that?

The last one is that mathematics teacher educators themselves often have difficulty modeling or demonstrating deep equity issues, because most of them are white, middle-class. When you think about who are the faculty, they're generally not going to be someone in poverty or maybe they never really have experienced it. I want this reality check for us. I want us to think about this. White faculty never really have to think about racial oppression. Racial oppression, in a way that many of our U.S. students in our classrooms have experienced. And don't run away from that or be afraid of that, but really think about that. I mean, even me as a racialized black woman, I still bring a lot of privilege as a university professor, right? I have to think about my privilege and what that looks like, how that's shaping my students' experiences when I am teaching mathematics or math content courses. I don't know if the number has gotten higher or lower, but the last number I looked and checked was about 85% of public school teachers are white women. That's who I see in my methods classes. Who do you guys see in your methods classes? White students, right? So how do we help them understand not just this sort of ubiquitous term "equity" but in-depth understanding of this country's historical atrocities around education and understand how even today, that's impacting their future students that they're going to have in their classroom. I will tell you that it doesn't matter how wonderful the teachers here are and all the tricks that we have, if we don't believe in the student, if we don't build relationships with the student. It's hard when you have 150 students, but it can be done.

Who exactly are the transforming mathematics teacher education preparations for? Who are you doing this for? How might you nuance diversity, equity, and social justice if you state the clarity of your goals with the meaning of equity, which I put in parentheses because it's, again, sort of nebulous. We don't really know what we

mean. And when I say "we," I'm talking about the field, period. How might you support math teacher educators? And I'm talking about the faculty like us, the faculty who teach these courses, around training for things like racial consciousness, understanding oppression, whiteness in mathematics and mathematics education. And this is a shameless ploy, but I have an edited book, "Interrogating Whiteness and Relinquishing Power." The subheading is "white faculty's commitment to racial consciousness in STEM classes." So I set out to find white faculty in STEM, science and math, that were trying to do this work, and to have them respond to what I think were really challenging and hard questions, and they produced beautiful narratives around how it [their racial consciousness] transformed their teaching. We are learning that faculty are using the book to conduct book studies, and that is exciting. If you've never read it or never heard of it, again, I encourage you to think about how you might use it.

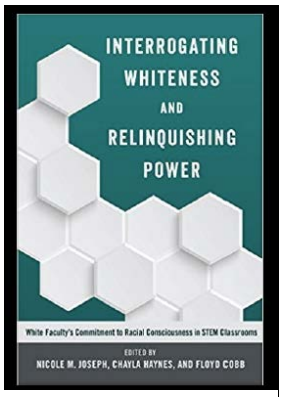

Figure 3. Book cover.

How might we change the nature of mathematics teaching to be one of teaching as a transformative practice rather than the way we teach math, high school math and middle school math? I mean, it's not attractive if you're not learning how to be a teacher to really transform lives. You know, when I taught math, I tried to explain to my students by giving them experiences to show them the utility and the power of mathematics, to really be able to read their world, to change their world, to create models, to ask questions. That was my goal, because, you know, students say, "Why are we doing this? Why is this important?" You want students to understand that math is amazing. It's like the best thing since sliced bread. And I think we have to draw them in, but we have to draw them around what matters to them. Again, something to think about.

The last thing is: how might you promote an active-based policy agenda, because you have an ambitious mission statement. How do you do this with the current administration that really devalues science and intersectionality of students? How do you challenge that? How do you address that? Finally, I want to share some ideas for the equity group. Lesson studies are extremely powerful; I believe in lesson studies. But we might think about beginning with teacher indicator ourselves, so as to actively model for our teacher candidates in our program, trying to really understand what are the interlocking systems that are getting in the way of the advancement of what we are looking for? I mean, we say success but what do we mean? I'm a believer in the Common Core standards. I love the eight Standards for Mathematical Practices. But how do we help kids think about the power of mathematics beyond school, beyond coming to your class, so that they can begin to make connections, deep connections, to see really the power of what math can do? Collaborate with racially diverse thinkers.

If you want to diversify teacher candidates, then let's talk about the work of Toya Jones Frank and Jonee Wilson. Dr. Frank received an amazing NSF award to study black math teachers and to do oral histories of black math teachers that were teaching in the '60s and the '70s, as well as current teachers, and then to think about what might we be able to learn that specifically can help us think about recruitment. What do we need to think about when we're trying to recruit black teachers, for example? Black math teachers? It's an incredible project that I would encourage you to look up or call her, as she's doing some amazing work. Jonee Wilson, she's working on some equity observation protocols. I know she has a paper under review with JRME about some math practices for African-American students. And finally, stay "woke" and push back. Do we all know what I mean by stay woke and push back? That means stay conscious. Like, when you tell your children when they're small and they're walking to school or whatever, "make sure you know your surroundings, be conscious," well it's the same kind of thing. Be conscious and push back. If transforming is what we are going to do as an organization, then we have to be informed. Thank you very much.