CALIFORNIA MTSS Research Consortium

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Using Equity Data from Classrooms to Support Teacher Learning for Racial Equity

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SUMMARY

Teachers are key agents for racial equity in school systems. As the MTSS framework shows, what happens in classrooms connects to high-stakes policies and practices at higher levels in the educational system. However, teachers—especially White teachers—rarely have opportunities to learn how to teach for racial equity. This study explored a teacher professional development model organized around EQUIP (https://www.equip.ninja/), a research-based classroom observation tool that generates quantitative data on equity patterns in students' classroom participation. In analyzing the impact of a yearlong EQUIP-based professional development, we found that teachers were more likely to engage in social marker talk (i.e., talk about race, gender, and other social markers) when engaging with EQUIP data, as opposed to only watching and discussing video of lessons they had taught. This is significant because if teachers are not comfortable with naming how race matters in their classrooms, they will be unlikely to change how they teach to address racial inequity. We conclude with recommendations for policymakers and professional developers.

PROBLEM STATEMENT

Inequities in P-12 schools operate at multiple levels. For teachers and site leaders, *a key place to redress inequity is at the classroom level*—what happens in the everyday moments of teaching and learning.

Racial disparities in test scores, for example, are a symptom of patterns that start in the classroom. Across the state of California, there is broad recognition that racially minoritized students must have fair opportunities to learn. However, teachers can inadvertently perpetuate longstanding racial inequities without explicit attention to racial equity.

One way that racial inequity persists at the classroom level is through teachers' in-the-moment decision making about how to fairly distribute opportunities to participate in the learning process. This matters because when students participate, they are more engaged; and when they are more engaged in the learning process, they are more likely to learn and show progress on high-stakes performance indicators like standardized tests. Research also shows that student engagement is linked to student behavior: In other words, fewer opportunities to learn can lead to more "oppositional" behavior and the excessive discipline that racially minoritized students often face.[1] In short, when racially minoritized students have access to learning opportunities and quality instruction, we can predict higher engagement and fewer discipline issues.

1 Hand, V. M. (2010). The co-construction of opposition in a low-track mathematics classroom. *American Educational Research Journal, 47*(1), 97-132.

Teachers *can* learn to teach for racial equity, but they need support. Decades of research show that racial inequity is a difficult topic for many teachers—especially White teachers—to act on, and that race is a topic that they actively try to avoid.[2] However, teachers cannot redress racial inequity in their teaching practice if they feel uncomfortable even talking about race. In other words, rather than talking in generic terms about "equity," teachers need to talk in specific terms about *racial* equity.

How can we support teachers to learn to teach for racial equity in classrooms?

This research brief summarizes a study of a data-driven model of teacher professional development designed to support teacher learning for racial equity. The model uses an equity-focused, research-based classroom observation tool called EQUIP (Equity QUantified In Participation).[3] EQUIP is a free web app (https://www.equip.ninja/) that generates data on how teachers distribute participation opportunities in classrooms. The EQUIP approach aligns with the MTSS framework's centering of "data-based decision making" as a driver of systems-level change. In the study we report here, we found that **when teachers used EQUIP, they were more likely to talk about race, gender, and other social markers when discussing their teaching and their students.** We conclude this brief by offering recommendations for policymakers and practitioners.

2 Shah, N. (2021). Racial Equity and Justice in Teaching and Teacher Education: Progress, Tensions, and Open Questions. Spencer Foundation. Retrieved from https://www.spencer.org/

3 Reinholz, D. L., & Shah, N. (2018). Equity analytics: A methodological approach for quantifying participation patterns in mathematics classroom discourse. *Journal for Research in Mathematics Education, 49*(2), 140-177.

PROFESSIONAL DEVELOPMENT MODEL

The EQUIP professional development model[4] involves an iterative three-step process (i.e., an "EQUIP cycle," which aligns with the "plan-do-study-act" cycles core to the MTSS approach):

1. Observe and code lessons using EQUIP;
2. Support the teacher in reflecting on equity patterns found in the EQUIP data;
3. Develop a plan for changing teaching practice to redress inequities and repeat cycle.

In Step 1: A coach or colleague (e.g., principal, a friendly teacher colleague) observes multiple lessons using EQUIP. This involves using the EQUIP web app to track students' participation in whole-class discussions or in group work: *which* students participate, *how* they participate, and what the *teacher* does to solicit student participation. An observer can code videotaped lessons with EQUIP or use EQUIP while observing a lesson in real time.

In Step 2: The coach or colleague would then sit with the teacher and debrief on the EQUIP data. EQUIP disaggregates participation data by social marker (e.g., race, disability, race-gender intersections, etc.) and by individual student—this can be customized in the app. For example, EQUIP data might show that Black girls are only getting access to low-level questions or if a teacher never calls on students with disabilities. Data visualizations of the kind shown here become rich material for reflections on bias and teaching practice. **The purpose of this conversation is support, not evaluation.**

Figure 1. The EQUIP interactive view allows for quick comparison of contributions between students by demographic group.

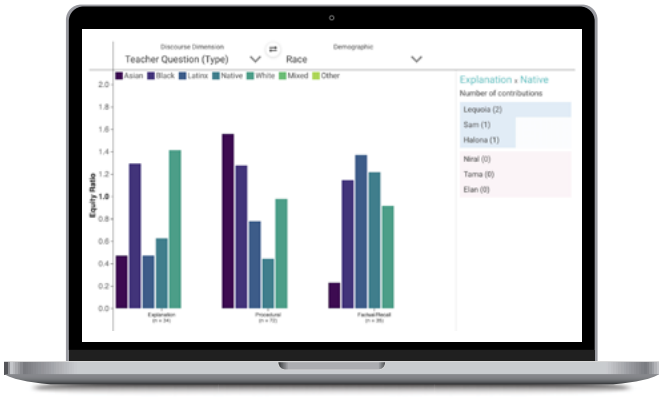
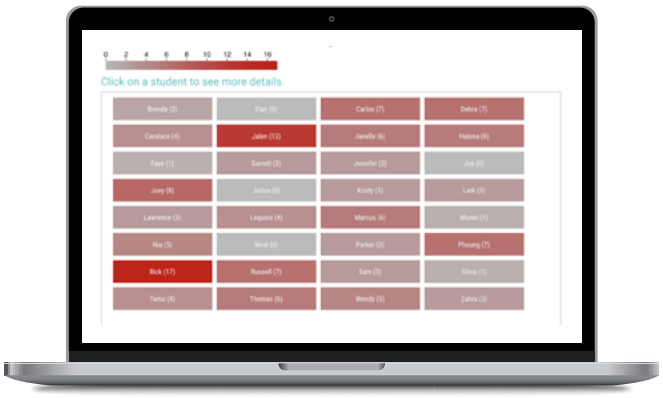


Figure 2. The EQUIP heatmap shows the distribution of participation according to the seating chart.



In Step 3: The teacher and coach/colleague work together to devise an action plan for addressing inequities noticed in the EQUIP data. For example, a teacher might actively build into their lesson plan a way to encourage participation from certain minoritized students, or they might change their seating chart to make it more likely for minoritized students to engage and feel part of the class. After formulating a plan, the teacher would implement those changes and then iterate back through the EQUIP cycle to see what impact the changes had on equity and inequity.

4 Shah, N., Ortiz, N. A., Christensen, J. A., Stroupe, D., & Reinholz, D. L. (2021). Who participates? *Educational Leadership, 78*(6), 41-46.

STUDY OVERVIEW

This study focuses on a group of five veteran mathematics teachers involved in an intensive professional development experience. Four of the teachers identified as White women and one identified as a White man. All of the teachers showed deep commitments to improving their teaching; however, professional development centered on equity in their teaching was a new experience.

The professional development consisted of four EQUIP cycles (observation-reflection-action planning) over a school year. After each cycle, our research team met with the teachers to support them in making sense of EQUIP data and planning changes to their practice. During these meetings, we engaged teachers in both group discussions and one-on-one discussions.

This analysis focuses on the group discussions among teachers, which lasted approximately two hours per meeting. We were interested in the frequency of teachers' **social marker talk,** which refers to times when teachers are explicitly or implicitly referencing social markers like gender, race, etc. For example, a statement like, "The girls in my class are participating way more than the boys" would be counted as *two* instances of gender talk. All teachers' classrooms were racially and gender diverse, so the professional development focused mainly on race and gender.

The following research questions guided our study:

1. *What patterns in social marker talk emerged during this yearlong professional development?*
2. *How did they relate to teachers' use of the EQUIP tool?*

Because EQUIP shows data disaggregated by social markers, we expected that teachers would engage in higher rates of social marker talk as the professional development continued through the school year. Our assumption is that higher rates of social marker talk indicate greater comfort on teachers' part to engage in equitable teaching.

FINDINGS

We analyzed a total of five meetings with this group of teachers. In four of these meetings (October, December, March, May), teachers spent meeting time reflecting on and discussing EQUIP data collected during each of the four EQUIP cycles. However, there was a fifth meeting (January) where we only had teachers watch *video* of lessons they had taught. Although teachers were asked to reflect on equity and inequity based on the videotaped lessons, they did not engage with EQUIP data during that meeting.

Table 1 reveals differences in the frequency of social marker talk between meetings where EQUIP data were central and where it was not.

Finding #1: Teachers' social marker talk was more frequent during EQUIP-driven meetings.

Compared with the January meeting, all three forms of social marker talk—race talk, gender talk, and intersectional talk (e.g., talking about race-gender together)—occurred with higher frequency in the meetings where teachers debriefed on their EQUIP data.

Finding #2: Frequency of teachers' race talk increased after the first EQUIP cycle.

During the October meeting, race talk was rare. Although teachers did engage in intersectional talk, it was almost entirely implicit (e.g., mentioning a girl of color by name but not her racial group). However, race talk increased substantially during the December meeting. Given that it is often easier for White teachers, in particular, to discuss gender compared with race, this is a notable finding. Still, explicit race talk was not sustained during later meetings.

Limitations

Our research design does not allow us to make causal claims about the efficacy of the EQUIP professional development model or the EQUIP tool itself. It is possible that other factors—possibly in conjunction with EQUIP—supported teachers' use of social marker talk, such as how we, the research team, facilitated the meetings (e.g., particular questions/prompts posed by us to the teachers at particular times). A more nuanced qualitative analysis would be needed to understand why these patterns of social marker talk emerged.

Table 1. Frequency of social marker talk across teacher meetings

	Race Talk	Gender Talk	Intersectional Talk	Social Marker Talk (Total)
October Meeting (EQUIP Cycle #1)	9	48	28	**85**
December Meeting (EQUIP Cycle #2)	56	66	47	**169**
January Meeting (Video Only)	1	2	8	**11**
March Meeting (EQUIP Cycle #3)	9	0	36	**45**
May Meeting (EQUIP Cycle #4)	23	26	15	**64**

RECOMMENDATIONS

Data alone cannot change teaching practice. However, the findings of this study point to ways that classroom-level data on equity and inequity might support teachers—especially White teachers—to learn to teach for racial equity.

In that spirit, we offer two recommendations for policymakers and for site leaders designing or implementing racial equity-focused professional development for teachers:

Recommendation 1: Support *long-term, rather than short-term,* teacher professional development.

Teacher learning of any kind—but especially teachers' learning about racial equity—is difficult work that takes time and requires intensive support. Teachers cannot learn to teach for racial equity in a single workshop.

Recommendation #2: Design and implement professional development that is *explicit about social markers like race rather than generic about "equity."*

Generic conceptions of equity make it easier for educators to avoid difficult topics like race and racism.[5] Teachers can learn to teach for racial equity when we directly engage them in thinking about how racial equity and inequity show up in their classrooms.

CONCLUSION

Teachers play a crucial role in redressing racial inequity in schools. The decisions teachers make in the classroom and how teachers distribute learning opportunities ripples out and shapes equity patterns across a school system. However, teachers cannot learn to teach for racial equity in isolation. Site leaders and professional developers can support teachers through professional development that is sustained and explicit about social markers like race, and connected to what is happening in teachers' classrooms. When we support teachers in these ways, they become part of a systemic effort to amplify racial equity in education.

5 Martin, D. B. (2003). Hidden assumptions and unaddressed questions in mathematics for all rhetoric. The Mathematics Educator, 13(2), 7-21.

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