

Session Title:

Developing Math Teachers' Knowledge and Skills to Engage in Leadership

MSP Project Name:

Mathematics Teacher Leadership Center (Math TLC)

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Project Session**Strand 2****Summary:**

The Math TLC has designed a math teacher leadership program based on defining leadership as taking responsibility for what is important to you and on the recognition that the work of teacher leaders varies in scale and scope from mentoring a student teacher to holding an office in a national organization. This session highlights what that means for program and teacher leader development and provides information about the four focus areas of the program (exploring teacher leadership, working with teachers, impacting students' understanding of mathematics, and analyzing interactions among culture, mathematics teaching and learning).

Section 1: Questions framing the session:

Given the many dimensions of mathematics teacher leadership (local level to national level, informal to formal, coach to curriculum coordinator, K-12, etc.), what strategies and methods support the growth and development of teachers who identify and engage in leadership opportunities in their settings?

Section 2: Conceptual framework:

A theme that drives the Math Teacher Leadership Center (Math TLC) is attending to the interactions among mathematics teaching and learning, culturally responsive teaching, and teacher development. This theme underscores our 2-year, 24-credit hour, Teacher Leadership Program that provides a *model for developing teacher leaders* based on defining leadership as taking responsibility for what is important to you. This definition is responsive in that it asks the teachers to decide what kind of leadership they want to take instead of focusing on a particular kind of teacher leadership (math coach, math curriculum coordinator, etc). With this personally grounded definition of leadership at the heart of our program, we focused on engaging teachers in small-scale teacher leadership opportunities appropriate to their interest and context and helping them develop knowledge and skills common to many types of teacher leadership. Teachers who

complete this program identify as teacher leaders, even if they didn't before the program, and engage in a wide variety of teacher leadership endeavors.

Section 3: Explanatory framework:

As our teacher leadership program evolved, we identified four areas that are crucial in developing teacher leaders.

Exploring Teacher Leadership: Teacher leadership involves general leadership skills as well as an understanding of issues particular to teacher leadership in schools.

Working with Teachers: Teacher leaders work with teachers in a variety of formats; we focus on coaching and professional development.

Impacting Students' Understanding of Mathematics: Teacher leaders work to positively impact students' understanding of mathematics; we focus on developing teacher leaders' capacity to engage teachers in deepening their mathematical knowledge for teaching as a vehicle for improving the quality of their instruction.

Analyzing Interactions among Culture, Mathematics Teaching and Learning: Culture interacts with math teaching and learning in profound, often unseen, ways. In this strand, we examine tools and perspectives for understanding these interactions and making them more visible.

The last strand is a particular focus of our project and is more general than the other three. Our summer courses attend to all four strands equally; the academic year courses focus on one strand and address the others as appropriate. We have learned that our most powerful course activities and assessments engage teachers in identifying and practicing teacher leadership as appropriate to their interests and context. These activities always include a component where teachers are asked to reflect on their challenges, successes and next steps as teacher leaders. We've also learned that powerful learning happens for our teacher leaders when they support, encourage and learn from each other's experiences.

Section 4: Discussion:

One of the things we've learned is that many teachers don't have an image of what it means to be a teacher leader; because of that, we often find them reluctant to commit to a 2-year program. With clear descriptions of our four areas of focus, we are better able to communicate to potential teacher leaders what they will learn in our program and how they might use that knowledge. Our next step is to use what we've learned to divide the program into smaller chunks (4-6 credit hours) that can be offered independently to provide different access points to developing teacher leadership knowledge and skills. Currently the courses build on each other with projects that extend across courses.

Our approach to developing a broad set of teacher leadership skills, along with many of the strategies, projects and activities, could be used in other programs developing math teacher leaders and easily adaptable to developing leaders in other STEM disciplines.

Section 5: How will you structure this session? What is your plan for participant interaction?

This presentation begins with an overview (7 minutes) of our teacher leadership development model with 2 minutes for questions. Then a teacher leader from our program will talk about how their development was influenced by program activities (8 minutes) with 3 minutes for questions. We will have examples of course activities to distribute.