
How Do Mathematics Teachers Describe Teacher Leadership and Teacher Leaders' Responsibilities?

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Significance

- Teacher shortage and attrition has been a continuous challenge, particularly for mathematics teachers (Carver-Thomas & Darling-Hammond, 2019; Ingersoll et al., 2018)
- Providing teacher leadership opportunities can be a solution to support developing and sustaining highly qualified teachers (Wenner & Campbell, 2017; York-Barr & Duke, 2004)
- **BUT...**
- There is little consensus on what constitute teacher leadership
- There is limited empirical research on teacher leadership including common understanding of “what do teacher leaders do?” and “who are teacher leaders?” (Nguyen et al., 2019; Wenner & Campbell, 2017; York-Barr & Duke, 2004)

Research Questions

- How do mathematics teachers describe teacher leadership (characteristics of teacher leaders and what teacher leaders do)?
- How do teachers' descriptions who participated in a master teaching fellowship (MTF) program differ compared to the experienced teachers (non-MTFs) in this regard?

Methods: Participants & Context

	Name	Ethnicity	Gender	School level	Years of teaching	U.S. Region
non-MTF	James	White	Male	High school	13	Northeast
non-MTF	Alexa	White	Female	Middle school	10	Southwest
non-MTF	Skyler	Biracial	Female	High school	15	Southwest
non-MTF	Joy	White	Female	Middle school	25	Midwest
MTF	Connor	White	Male	Middle school	19	Northeast
MTF	Hanna	African American	Female	Middle school	15	Southwest
MTF	Elise	White	Female	High school	13	Southwest
MTF	Colton	White	Male	High school	23	Midwest

Methods: Data Sources & Analysis

- 45-60 minutes semi-structured interviews
- Thematic data analysis (Saldaña, 2021)
 - Characteristics of teacher leaders
 - What teacher leaders do
- Developing common themes among four MTFs and four non-MTFs
- Comparing MTFs and non-MTFs

Methods: Developed Themes

Theme 1: Being a model

Theme 2: Being a lifetime learner and experienced teacher

Theme 3: Being a listener and aware of everyone's needs

Theme 4: Being communicator and collaborator

Findings: Characteristics of Teacher Leaders

No noticeable difference between MTFs and non-MTFs

- **Themes 1 & 2:** Being a model, lifetime learner, & experienced teacher

Alexa (non-MTF)	Colton (MTF)
They [teacher leaders] lead by example. They model what is expected in and out of the classroom.	They [teacher leaders] set an example for other teachers...they model what they should be doing.

- **Themes 3 & 4:** Being a listener, aware of everyone's needs, communicator, & collaborator

James (non-MTF)	Elise (MTF)
[As a teacher leader], I need to listen to other people. I need to listen to my students when they tell me things. I need to listen to other teachers when they tell me about the problems and the struggles that they are having.	I think just as a leader being able to communicate with a teacher without them, feeling like they're inadequate, or they don't know what they do, and you know, like, always, always trying to be positive with them, and just trying to build them up, versus knocking them down.

Findings: What Teacher Leaders Do

- MTFs thought of leadership responsibilities in a broader range compared to non-MTFs
- MTFs were more engaged in their school and district professional development programs compared to non-MTFs
- Different approaches to assisting teachers & improving students' learning

Skyler (non-MTF)	Hanna (MTF)
<p>The old expression, you know, I listen and I understand. But if I see you doing and I do with you, then I can really get it. So that's what I would like to see a teacher leader do. It's also someone who maybe sees some of the things that you don't see, and they're able to advise you on those areas.</p>	<p>I was always asked to lead professional development sessions, at different conferences, because people always wanted to continue to grow from what I was learning...and discussing student data.</p>

Discussion and Implications

- Conceptualizing what constitutes teacher leadership in the context of mathematics education
 - To model teacher leadership programs
 - To support the problem of teacher attrition
 - Support for engagement in professional development of other teachers
 - Support for improvement of school culture and others' job satisfaction
- (Basich, 2018; Dauksas & White, 2010)

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Thank You!

Questions & Comments?

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