



The Rice University Master Teaching Fellowship Program Results: Development of Teacher Leaders in High-Need Urban Schools

Adem Ekmekci & Mahtob Aqazade – Rice University;
Patricia McMorris & Stacy Jaster - Houston ISD

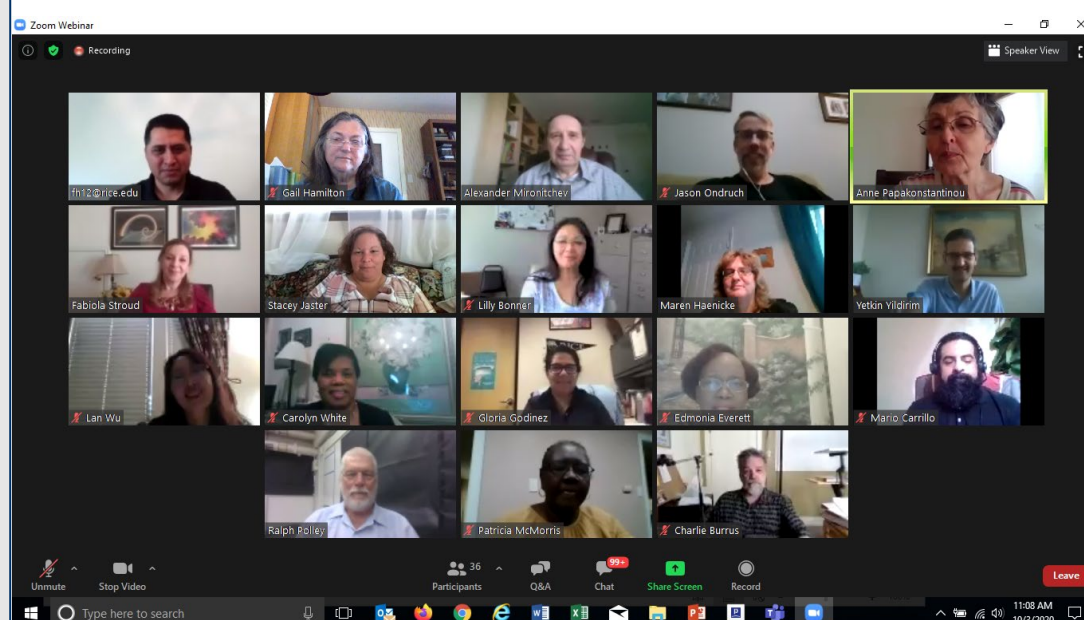


Project

The Rice University Noyce Master Teaching Fellowship Program (RU-MTF) - DUE #1556006
Anne Papakonstantinou (PI), Adem Ekmekci, Judy Radigan, & Richard Tapia, Rice University

Goal

Guide 14 exceptional secondary mathematics teachers' development as leaders who are deeply grounded in sound mathematical content and research-based pedagogical, leadership, adult education, and mathematics advocacy skills.



Timeline

Activities/Courses	Year 1 2016- 2017	Year 2 2017- 2018	Year 3 2018- 2019	Year 4 2019- 2020	Year 5 2020- 2021	Year 6 Fall 2021
NCSI 590; Math I; CRT-E	X					
NCSI 590; Math II; CRT-S		X				
Lesson demo for teachers	X	X	X	X	X	X
Plan/co-teach w/ teachers	X	X	X	X	X	X
Lead study groups/seminars	X	X	X	X	X	X
Mentor/observe teachers	X	X	X	X	X	X
Collaborate & interact w/ school community	X	X	X	X	X	X
Participate/lead math initiatives	X	X	X	X	X	X
Collaborate & interact with other MTFs	X	X	X	X	X	X
Plan & co-teach summer PD			X	X	X	X
Mentor pre-service/intern math teachers			X	X	X	X
Assist in math methods			X	X	X	X
Present at the Life in School Conference		X	X	X	X	X

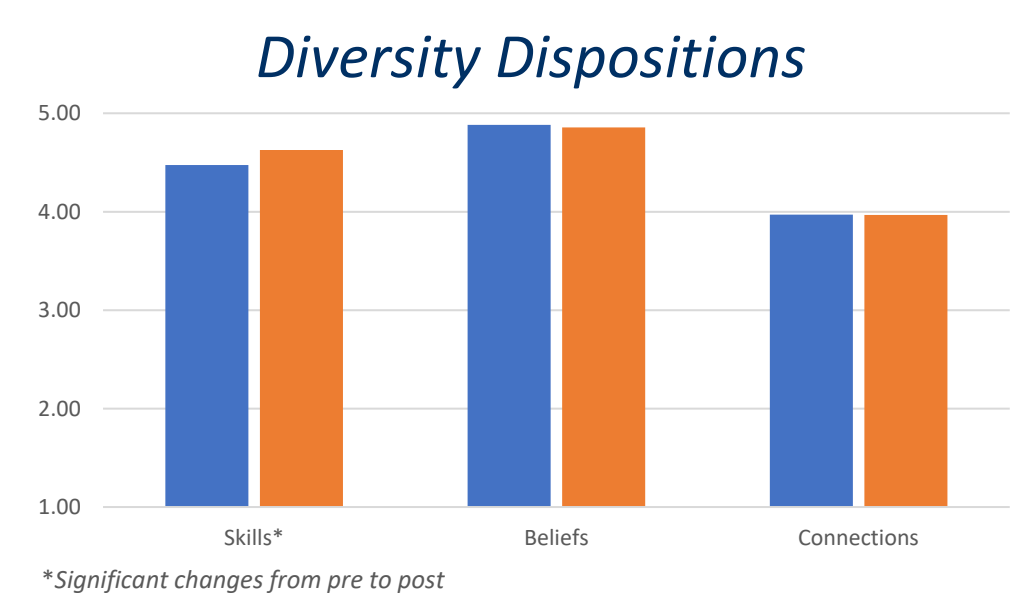
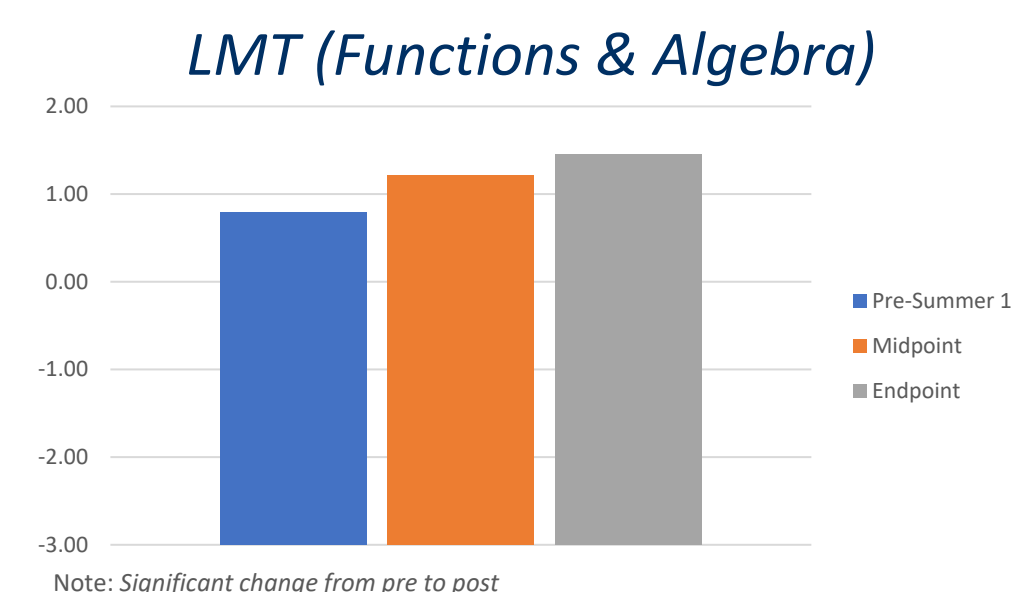
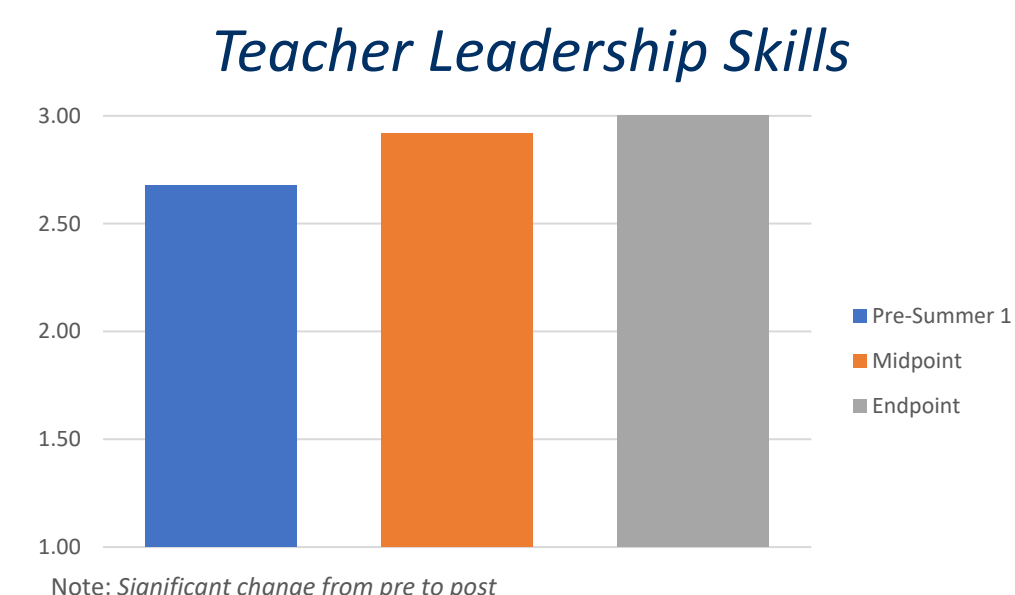
Theoretical Framework

- Teacher leadership [1]
- Reform-based mathematics teaching [2]
- Mathematical knowledge for teaching [3]
- Effective professional development [4]
- Culturally-relevant instruction [5]

Data Collection

- AVID Teacher Leadership Survey [6]
- Learning Math for Teaching [LMT; 3]
- Diversity Disposition Index [7]
- Focus group and open-ended questions

Results



Focus Group

What does effective mathematics instruction look like?

Students engaged, hands-on, discovering; teachers guiding, facilitating; effective communication in variety of ways

How well do your colleagues understand this?

Tests perceived as the most important element; deficit understanding of effective math instruction; can't make students love math

How well do administrators understand this?

Sharing and collaboration not valued; no content focus; micromanaging tendency

Ways the RU-MTF program affected your beliefs about equity/diversity in math?

Self-realization of deficit personal perspectives; evolving in to having a wider scope; more attentive to diverse students

Leadership roles you have assumed on your campus, in your community since RU-MTF?

Changed from individual to collaborative style; learned about organizing a workshop/program

Importance of community connectedness?

Parent and stakeholder involvement is vital; community engagement supports education



Open-ended Questions

Complications caused by the pandemic?

Learning gaps exacerbated; community connections weakened; feedback for colleagues obstructed; social interactions worsened

Any changes/improvement for RU-MTF?

More summer whole-group meetings; More PD facilitating experience

What's next for you?

Improve community connections; engage more in leadership; continue interacting with fellows



References

- [1] York-Barr, J. & Duke, K. (2004). What do we know about teacher leadership? Findings from two decades of scholarship. *Review of Educational Research*, 74, 255–316.
- [2] National Council of Teachers of Mathematics. (2000). *Principles and standards for school mathematics*. Author.
- [3] Hill, H. C., Ball, D. L., & Schilling, S. G. (2008). Unpacking pedagogical content knowledge: Conceptualizing and measuring teachers' topic-specific knowledge of students. *Journal for Research in Mathematics Education*, 39(4), 372–400.
- [4] Desimone, L. M. (2009). Improving impact studies of teachers' professional development: *Toward better conceptualizations and measures*. *Educational Researcher*, 38(3), 181–199.
- [5] Ladson-Billings, G. (1994). What we can learn from multicultural education research. *Educational Leadership*, 51(8), 22–26.
- [6] Mills, S. J., Huerta, J. J., Watt, K. M., & Martinez, J. (2014). AVID teacher leadership: Administrator and teacher perceptions of leadership attributes. *Journal of School Leadership*, 24(1), 146–163.
- [7] Schulte, L. E., Edwards, S., Edick, N. A. (2008). The development and validation of the diversity dispositions index. *Teacher Education Faculty Publications*, 5(3), 11–19.