
Secondary Teacher Retention and Induction in Diverse Educational Settings (STRIDES)

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Overview of the STRIDES RAC Work to Date

Half of all teachers leave the profession within the first five years. This rate is highest for mathematics positions in high-poverty schools (Fantilli & McDougall, 2009; Goldring et al., 2014). Furthermore, with half of all current teachers in the United States retiring in the next five years (Foster, 2010), enrollment in teacher preparation programs declining, and teacher turnover costing America \$7.3 billion annually (National Math + Science Initiative, 2013), the mathematics teaching crisis needs immediate attention. This crisis leads to many underprepared mathematics teachers and has a profound effect on how well-prepared our students are to be successful in high school, college and beyond. Experts agree that addressing the mathematics teaching crisis meaningfully will require building a more cohesive system of teacher preparation, support, and development (Mehta, Theisen-Homer, Braslow, & Lopatin, 2015).

The Secondary Teacher Retention & Induction in Diverse Educational Settings (STRIDES) Research Action Cluster (RAC) addresses Mathematics Teacher Education Partnership (MTE-Partnership) Guiding Principle 8: Student Recruitment, Selection, and Support. Teacher preparation programs actively recruit high-quality and diverse teacher candidates and monitor and support them as they complete their programs. Since the inception of MTE-Partnership, the national problem of retaining secondary mathematics teachers within the profession has been a priority. A RAC on retention was proposed at the 2013 MTE-Partnership Annual Conference, but it was not implemented because recruitment was determined to be a higher priority at the time. This decision led to the formation and implementation of the Marketing for Attracting Teacher Hopefuls (MATH) RAC. A few years later, the driver diagram in Figure 1 was created, based on a review of recent literature on retention, with an aim statement and drivers that include support for early career teachers, PLCs, and the need to examine school structures and professional pathways to support/retain teachers.

Members of the RAC decided early on that the work of the RAC must focus on understanding and providing support for both pre-service and early in-service teachers, given the role of a cohesive, continuum of professional learning on teacher growth and retention. Thus, to launch early initiatives aimed at improving teacher retention rates, STRIDES RAC members designed a survey in summer 2015 to gather preliminary data on the nature and quality of professional support for pre-service, first-, second-, and third-year teachers. Specific research questions guiding this work were: What is the perceived scope, nature, and impact of professional support for early career mathematics teachers, and how does this (a) change as teachers progress in their teaching career, and (b) relate to how likely it is a teacher will remain teaching? Researchers from 13 institutions and secondary mathematics teachers from four school districts designed the pilot survey “Reflection on Professional Activities.” This survey was created through an iterative design and vetting process, having stemmed from a discussion centered on research-based reasons that teachers leave the field.

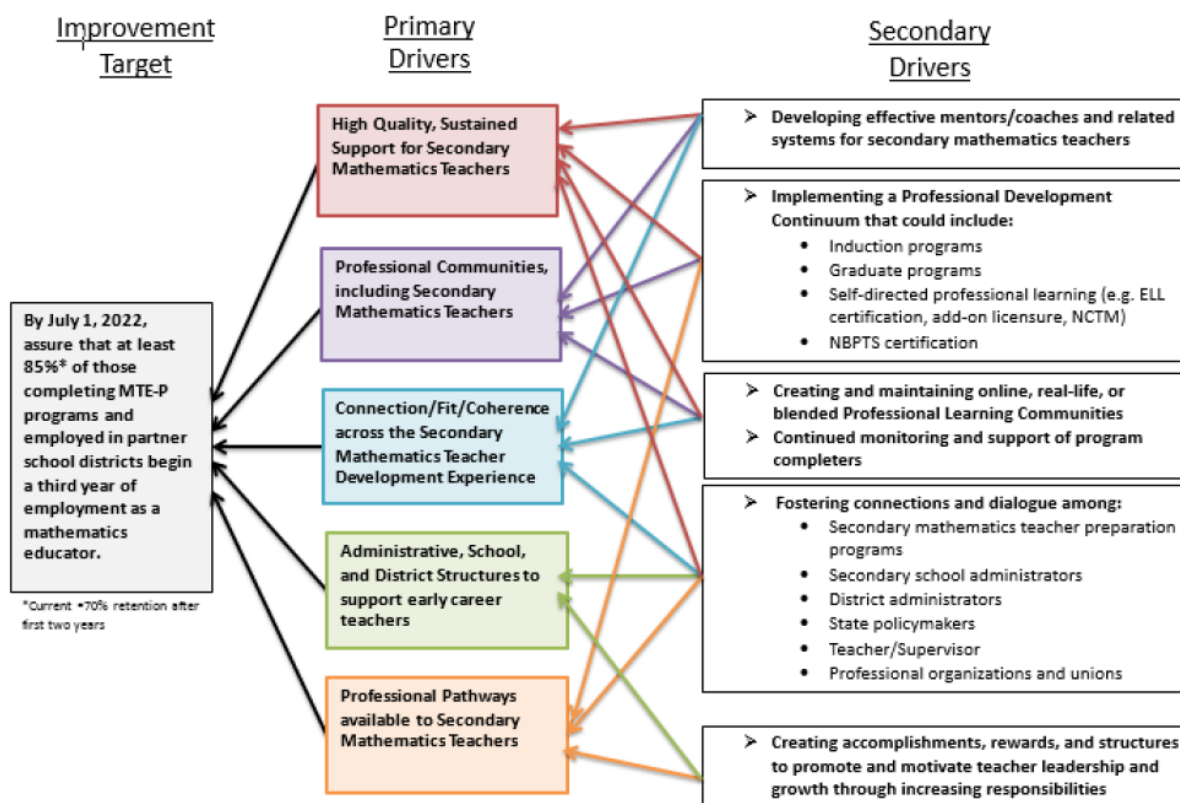


Figure 1. STRIDES driver diagram.

To better understand the degree to which early career mathematics teachers are being supported by professional learning opportunities, professional learning communities, and administrators, the survey allowed participants to specify activities that have helped them grow professionally and the degree to which these activities were worthwhile to them. Also, instructional context (i.e., public, private, etc.) data was collected, as well as whether the early service teachers serve students from special populations (i.e., special education, English language learner, gifted). Participant estimations regarding the degree that specific professional development activities changed these teachers' practices, as well as the level of "inspiration" these activities invoked, were surveyed, allowing researchers to discern connections between these two measures. Qualitative responses allowed survey participants to provide additional details regarding their support systems. Finally, the degree that the participants feel that their administrators support them professionally was measured, including specific areas (e.g. assessment, instruction, curriculum, classroom management, collegial collaboration, and course assignments/loads). The data from the summer 2015 pilot survey was analyzed in detail and provided the basis for a revised survey that was sent to MTE-Partnership member institutions in November of 2016. Data from this November 2016 survey was gathered from participants from a wide geographic area and included responses from 141 early career teachers across the USA (see Figure 2).

The data revealed the extent to which the participants received support in their early careers and what types of assistance were most meaningful for them. An initial analysis of this data was shared at regional conferences, most recently at the 2017 MTE-Partnership Annual Conference in New Orleans.

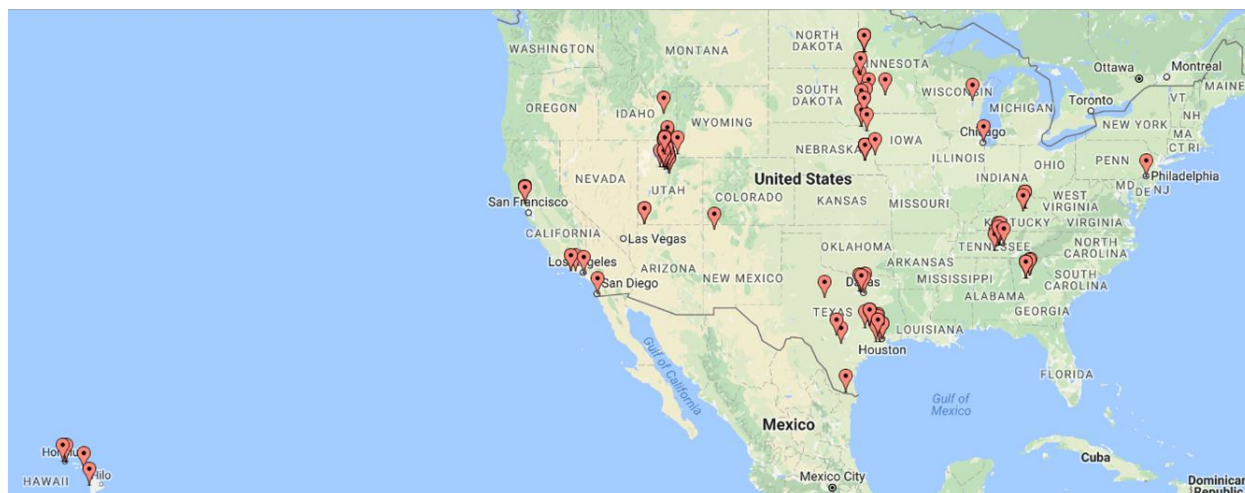


Figure 2. Geographic participation in the STRIDES survey.

Work of the STRIDES RAC at the 2017 Annual Conference

At the 2017 MTE-Partnership Annual Conference in New Orleans, STRIDES RAC members met for approximately 12 hours of “work time.” Persons with a variety of backgrounds/skill sets were present (mathematicians, math educators and school district representatives), many of which were new to the RAC, having been “recruited” during open session time in the first morning (second day) of the annual meeting. Members included (with sub-RAC in parentheses): Christine Smith (Admin), James Martinez (Admin), Lisa Amick (Mentoring), Josh Males (Admin), Lorraine Males (Admin), Fred Uy (Mentoring), Joleigh Honey (Mentoring), Diana Suddreth (Mentoring), Linda Hirashi (Mentoring), Judy Kysh (Mentoring), Robin Hill (Mentoring), Craig Schroeder (unaffiliated), Nicole Joseph (unaffiliated), Sarah Ives (Mentoring), Pia Damonte (Admin), and Jaspreet Sandha (Admin).

During the work time, a number of collaborative tasks were performed, facilitated by two of the RAC leaders (Amick and Martinez). The goals for the conference were to (1) update RAC members, new and “veteran,” on RAC efforts over the past year, (2) develop specific interventions based on collected data, and (3) determine which RAC members would commit to future tasks. The group performed an analysis of both qualitative and quantitative data from the November survey with two goals: (1) ensure that resulting interventions would be consistent with data collected, and (2) to set the stage to develop intervention(s) targeting professional learning and support for early career teachers. The group distilled themes and questions from the survey to identify possible interventions for bolstering professional learning and support of early career teachers. The group also agreed that due to time constraints, the administration of future surveys would not be needed to further define Plan-Do-Study-Act (PDSA) cycle interventions. During RAC work time, a number of topics were discussed that further defined potential RAC interventions, including: (1) compensation for participating educators for participating in interventions, (2) how retention connects to improved student learning and can this be measured, and (3) the potential of using (online) school-district-level informational meetings with administrators and/or other teachers to highlight retention issues (e.g. placement).

Additionally, the group reviewed a “mock” 10-minute meeting intervention devised by one of the RAC leaders (Martinez), which was piloted in May with an early career teacher and principal at the public Pacifica High School in Oxnard, California. Verbal responses were provided with the overall consensus that the intervention idea had merit and could be used to support the STRIDES goals. The STRIDES RAC group ended its collaborative work by defining a research question that would encompass its efforts: How does targeted, interpersonal support by on-

site, instructional leaders impact retention of early career secondary mathematics teachers? A final effort at the meeting was accomplished by splitting into self-selected sub-groups to flesh out interventions in three areas: (1) mentoring of early career teachers, (2) support for administrators to support early career teachers, and (3) determination of possible funding for continued work.

Table 1

Summary of future RAC work

FOCUS AREA	DESCRIPTION	WHAT WE WANT TO LEARN
ROLE OF ADMINISTRATORS	Support administrators by creating a common vision and using strategies to reinforce retention of early career mathematics educators.	<i>What targeted supports for administrators impact teacher retention?</i>
TRAINING & SUPPORTING TEACHER MENTORS BY SITE-BASED COLLEAGUES	Does training mentors affect teacher retention?	<i>How can mentors support early career teachers?</i>
FUNDING SOURCES	Determination of funding sources for continued work for STRIDES	<i>What sources of funding are available and applicable to the STRIDES work? What are applicable dates for submittals and which STRIDES member(s) will be working on this?</i>

At the conclusion of the work sessions, Dr. John Sutton, a senior researcher associate from RMC Research, spoke to the group about his work as grant evaluator and facilitator of Noyce grants, which he performs for other RACs and non-MTE-Partnership groups. He offered his services to the STRIDES RAC should we need him in the future.

Conclusion

The STRIDES RAC was fortunate to incorporate into its work important ideas expressed during non-work time sessions at the conference, specifically with regard to social justice/equity and transformations. STRIDES was able to recruit a number of new members who serve their institutions in a wide range of capacities (mathematicians, math educators, and school district representatives). They, along with “veteran” members, contributed significantly to the ongoing efforts of the RAC. “Work time” was efficient and relatively productive, achieving about half the goals originally stated for the conference. A good amount of work time was devoted to re-evaluating the results of the November 2016 survey to ensure that future interventions would adequately address the needs expressed by the survey participants. The decision was made to restrict the interventions to two areas: on-site mentoring and support for administrators. A vital task was accomplished in defining the STRIDES RAC research question; unfortunately, very little time could be dedicated to specifically define interventions (defined as part of individual PDSA cycles). This work will need to be assigned to individual RAC members in two “sub-RACs” and completed collaboratively. Finally, defining which local/state/federal/private grants can be used to support the STRIDES RAC goals was also only superficially addressed, requiring additional efforts by RAC members. Leaders of the STRIDES RAC will be holding a teleconference on August 11, 2017 to determine next steps, which will be communicated to all RAC members.

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