
The MTE-Partnership Story as Revealed through Its Conferences: An Overview of the Partnership and Its 2016 Conference

W. Gary Martin
Auburn University
martiwg@auburn.edu

Howard Gobstein
Association of Public & Land-grant Universities
hgobstein@aplu.org

The MTE-Partnership was formed by the Association of Public and Land-grant Universities (APLU) in 2012 to address a major problem in secondary mathematics teacher preparation, an undersupply of new secondary mathematics teachers who are well prepared to help their students attain the goals of the *Common Core State Standards for Mathematics* (CCSSM) (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010) and other rigorous state mathematics standards. This consortium of over 90 universities and over 100 school systems has a common goal of transforming secondary mathematics teacher preparation using the Networked Improvement Community design (Bryk et al., 2015). This essay will provide a brief overview of how the Partnership has evolved, told through the lens of the past four MTE-Partnership Annual Conferences, outline the goals and accomplishments of the fifth conference held in 2016, and conclude by looking at future directions for the MTE-Partnership.

The Development of MTE-Partnership through the Lens of Past Conferences

While the work of the MTE-Partnership carries on throughout the year, the annual conferences have served as important landmarks where many of those active with the Partnership gather together to reflect on the progress that has been made and set forth plans for the coming year. Indeed, the initial concept for the MTE-Partnership was formulated by participants at the 2011 conference of APLU's Science and Mathematics Teaching Imperative (SMTI), which focuses more generally on improving mathematics and science teaching. The focus of that conference was on changes needed in higher education to effectively respond to the CCSSM, which had just been released. Several speakers, as well as a working paper released prior to the conference (Wilson & Martin, 2011), discussed the need for significant changes in mathematics teacher preparation. Several mathematics educators attending the meeting discussed the specific needs at the secondary level, and a white paper was submitted to the

SMTI Executive Committee proposing the formation of a new project focusing on preparing secondary mathematics teachers to help their students meet these new, more rigorous standards.

Over the coming months, a planning team was formed to organize what became the MTE-Partnership. In response to an invitation to universities to apply for membership to the partnership, 38 teams representing 30 states became the founding members. (Since that time, an additional team has joined the partnership, and several teams have expanded to include additional campuses, bringing the total number of campuses to over 90.) Additionally, each team was required to include at least one school district partner. As the invitations to apply to join the partnership went out, applicants were asked to plan to attend the first conference, held in April 2012 in Atlanta.

2012 Conference

As a part of the application process to join the MTE-Partnership, applicants completed a needs analysis based on an initial framework designed by SMTI (Coble, 2012), including both their core values for secondary mathematics teacher preparation as well as their progress in meeting those core values. Their responses were used to create an initial draft of guiding principles for the MTE-Partnership that became the focus of discussion at the 2012 conference. Following the conference, the *Guiding Principles for Secondary Mathematics Teacher Preparation* (Mathematics Teacher Education Partnership, 2012), since updated in 2014, were released as to “describe a shared vision to be explored and refined by the MTE-Partnership and others involved in preparing secondary mathematics teachers” (p. 1), thus serving as the central organizing document for the Partnership.

At the 2012 conference, participants were also asked to identify potential challenges in meeting those principles. This became the first step in developing the problem space for the Partnership; a follow-up survey of conference attendees was used to further define this list of challenges, and a subsequent survey was sent to representatives of all the partnership teams, asking their judgment of both the importance of each item on the list to their team, as well as their team’s interest in attempting to address each item. The results from this survey were used to identify a set of priority challenges to be addressed by the partnership. This emerging set of high-priority challenges was presented to the partnership for further reaction, which led to the formation of working groups to address a set of four highest priority challenges (Martin & Strutchens, 2014). Over the coming months, members of the working groups wrote draft white papers providing a review of relevant literature and initial recommendations for actions.

As members of the planning team reflected on the 2012 conference, they recognized that a stronger design was needed for the Partnership to address several needs, including (a) the need to maintain the engagement of the teams in the work of the Partnership, so that

everyone felt that had a role to play, and (b) the need to maintain a focus on disciplined inquiry consistent with the mission of universities (Martin & Gobstein, 2016). One design that was investigated, based in part on the recommendation of a reactant at the 2012 conference, was the Networked Improvement Community (NIC) model being developed by the Carnegie Foundation for the Advancement of Teaching (cf. Bryk et al., 2015). The decision to reconstitute the Partnership as a NIC was ratified by the membership in Spring 2013, leading up to the 2013 Annual Conference. The high-priority challenges being addressed by the working groups were reconstituted as “primary drivers” that would help the Partnership reach its aim of producing more well-prepared secondary mathematics teachers; see details in the first two (leftmost) columns of Figure 1.

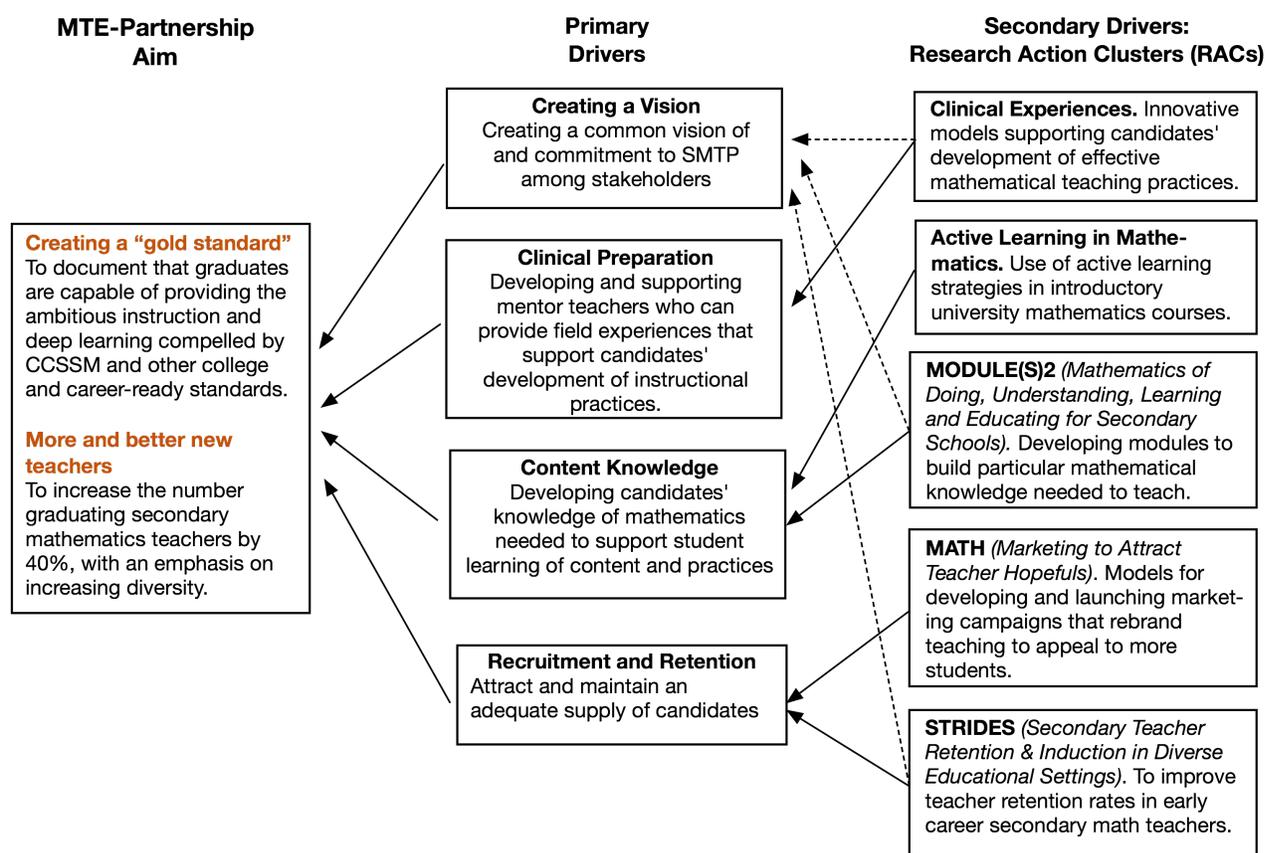


Figure 1. The MTE-Partnership driver diagram.

2013 Conference

The 2013 Conference, held in early June in St. Louis, focused on learning more about the newly-adopted NIC design and developing the problem space for the Partnership in alignment with that design. Close to 90 participants gathered into four breakout groups organized by the four primary drivers; each participant was asked to select one of the working groups. Over the course of the conference, the breakout groups provided feedback on the respective white

paper for their chosen primary driver, identified possible aims and secondary drivers relevant to that aim, and discussed possible measures that might be used to track progress towards the aim.

The work of the breakout groups culminated with the identification of potential interventions that were then presented to the conference participants. Across the four groups, thirteen potential interventions were presented in a final session of the conference in which participants were asked to physically gather around the posters of their highest priority potential areas of action as a first indication of interest. Following the meeting, the MTE-P Planning Team eliminated or consolidated several of the areas based on that initial feedback, and a subsequent survey sent to all team leaders further narrowed the list to five interventions as being of the most importance and interest to MTE-Partnership.

In fall 2013, partnership teams were invited to apply to join “research action clusters” (RACs) organized to develop each of these five interventions. These RACs have become the primary structure for participation in the MTE-Partnership. A “boot camp” was held in November 2013 with RAC leaders to launch their work. Plenary sessions on tenets of NIC design were interspersed with breakout sessions in which participants met by RAC to apply those tenets to defining more specific driver diagrams, aim statements, measures to track progress, and an initial action plan for the RAC. Note that one RAC was later disbanded as consensus was not reached on a plan of action, and an additional RAC was formed summer 2015 to address an emergent area of concern, induction of candidates into the profession. The current list of RACs, along with their connections to the primary drivers is shown in Figure 1. Each RAC incorporates the NIC design, using improvement cycles to develop interventions addressing its identified aim.

2014 Conference

The 2014 conference, again held in early June in St. Louis, was focused around the work of the RACs. RAC members met in small groups to review their initial work in forming an aim and driver diagrams and to begin planning specific improvement efforts to be undertaken in the coming year using “Plan-Do-Study-Act” (PDSA) cycles as a model; see Figure 2. PDSA cycles describe a process of planning, implementing, collecting data, and revising in alignment with the NIC design. Additional sessions focused on increasing understanding of the NIC design and exploring issues related to secondary mathematics teacher preparation. A final poster walk allowed RACs to share their progress with members of other RACs.

Following the conference, the work of the Partnership was largely focused on RAC-level work, as RACs built on their progress at the conference throughout the following academic year, using a combination of virtual, on-line, and face-to-face communications. Additionally, the planning team continued to meet periodically to ensure collaboration across the RACs and to

maintain focus on the Partnership aim. A working group began meeting to develop common measures across Partnership teams to track progress towards the aim. Several surveys were developed addressing key variables, including candidate production and targets, a self-assessment to be completed by team leaders, and a self-assessment to be completed by program completers. These instruments were refined and piloted over the following academic year.

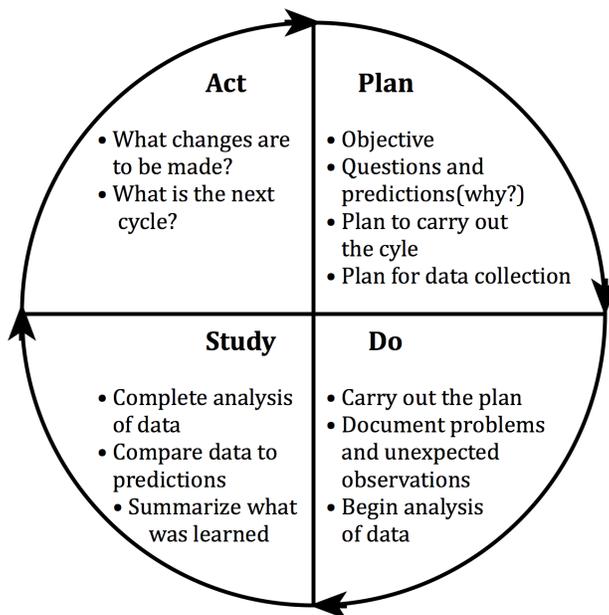


Figure 2. The Plan-Do-Study-Act (PDSA) Cycle. (Adapted from Langley et al., 2009)

2015 Conference

The 2015 Conference was held in Fullerton, CA in late June with a continuing focus on the RACs. Following feedback to the 2014 conference, the worktime spent meeting in RACs was expanded. The aforementioned new RAC on improving the retention of program graduates in the profession was also launched. However, one of the major developments at this conference was the increased participation by members of the California State University system, which expanded its participation to include all 22 campuses that provide teacher preparation. This created an influx of new participants, and a special session was held to introduce them to the Partnership and the NIC model. The RACs each produced one-page “promotional sheets” designed to encourage these new participants to join in their activities.

The 2015 conference also introduced an emerging emphasis on program transformation, reflecting the challenges programs face in moving beyond making changes based on the one or two RACs in which they are actively engaged to aggregating the findings of multiple RACs to undertake the broad-scale changes needed to ensure both the necessary quantity and quality of secondary mathematics teacher candidates. Issues include ensuring that

the human capital is available to participate in the improvement effort, that secondary mathematics teacher preparation is a priority across stakeholder groups, and that institutional resources and support structures are provided. The proposed solution is to provide tools and techniques to support institutions in creating “strategic pathways for transformation” in which they scale up their use of the approaches designed by the RACs.

This summary of progress of the progress of the MTE-Partnership over the course of its first five conferences now sets the stage for a discussion of the 2016 conference.

Goals of the 2016 Conference

The 2016 MTE-Partnership Conference, held late June in Atlanta, GA, had four primary goals building on the work done in previous years. Each goal is discussed in turn, along with how the structure of the conference supported that goal.

1. To build focus on the transformational change needed for teams and programs to achieve the partnership aim. Following the 2015 conference, a working group was formed to begin development of strategies supporting transformational change, as discussed above, possibly culminating in the creation of a new RAC. Members of the working group presented a panel discussion of issues related to transformational change at the conference, and a series of brief research reports was designed to share on-going work across the partnership.

2. To make equity and social justice more explicit as an essential component of the partnership aim. While attention to equity and social justice is embedded in the *Guiding Principles* and in the work of many of the RACs, members of the planning team noted that this is not visibly a part of the Partnership aim or drivers. Thus, a decision was made to begin to make the focus on equity and social justice more explicit, with discussions at the conference serving as a starting point. A work session was held at the conference to begin those discussions. Moreover, during their worktime at the conference, each RAC was charged with considering how issues related to equity and social justice could be made more visible in their goals and work, and to then reporting on their progress in this area in the closing session.

3. To build a sense of joint purpose and identity across the partnership. Given that much of the work of the MTE-Partnership is now focused on the RACs, in some cases it has become challenging to maintain a sense of common purpose and identity for the Partnership; participants may tend to focus more on the problems that interest them, particularly the work of the RACs in which they are involved (Martin & Gobstein, 2015). While the RACs may be their specific focus for participation, there is much to be gained by emphasizing the broader structure of the Partnership, including learning from and with the other RACs and considering the more general context for the work of the RACs.

At the conference, general sessions included to emphasize the sense of joint purpose and identity. A keynote address by Suzanne Wilson provided national context in which to

consider the work of the Partnership. Overview sessions by the project leaders emphasized the overall aim and purpose of the Partnership, as well as its accomplishments. In the opening and closing sessions to the conference, the RACs shared progress made in achieving their goals. Finally, three reactants provided insights gleaned from observing the work of the Partnership across the RACs.

4. To accelerate the work of the five Research Action Clusters (RACs) towards their aims. Arguably the major goal of the conference was to support the work of the RACs. Having an extended period (more than 8 hours) over several days in which to collaborate face-to-face can provide an important stimulus to their work. The RACs spent time reflecting on their past progress and making plans for the coming academic year. In addition, a panel on the NIC design and improvement science shared insights from members of the Clinical Experiences RAC who attended a series of workshops offered by the Carnegie Foundation to support groups using the NIC model.

Conclusions and Next Steps

The activities for the coming academic year and beyond build firmly on the foundation of the work done at the 2016 Annual Conference. The transformation change working group met after the conference and will continue to develop plans to create a formal research action cluster focusing on supporting institutional change. Discussions related to equity and social justice will continue after the conference, with a major focus on how to best organize continuing work in this area. While a distributed approach is essential in furthering the work, a new working group on equity and social justice is being considered to build cross-RAC focus. The sense of joint purpose and identity of Partnership participants continues to be nurtured through efforts of the planning team to coordinate and focus the work and through Partnership-wide communications, such as the *Partnership Pipeline*, a newly-launched quarterly newsletter. Finally, the RACs continue to meet both virtually and face-to-face to meet their aims.

While much of the activity of the MTE-Partnership now occurs within the RACs, over the years the conferences have served an important role in establishing and catalyzing the Partnership's vision and direction. Moreover, they have continued to serve an important role beyond supporting the work conducted in RACs, as they have brought together participants across the RACs to share their on-going work. This has both provided opportunities to cross-pollinate efforts across the RACs but also to develop a sense of shared identity and commitment to the broader MTE-Partnership effort, beyond participation in one aspect of its work.

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