
MTE-Partnership Reflections from an AMTE Lens: Reacting and Catalyzing

Michael Steele, University of Wisconsin-Milwaukee, steelem@uwm.edu

When I was invited to the MTE-Partnership meeting, it was with the purpose of serving as a reactant: to observe and interact with partnership groups and research action clusters (RACs) as they worked, and to provide some remarks at the close from an AMTE perspective to continue to push the thinking. Borrowing from a conversation with my co-reactant Cathy Martin, I think that the metaphor of “reactant” is a bit fraught – I don’t wish to invoke the notion of a caustic chemical reaction that wouldn’t take place if not for my presence. Rather, I’d like to invoke the notion of a catalyst, in the hopes that my perspectives shared here will help shape and change the work of the MTE-Partnership in some small way.

First and foremost, I’d like to thank everyone for letting me wander in and out of the RAC sessions and make obnoxious comments as you were doing your work, letting me be annoying, pushing on some things and then scurrying out the door. I also want to thank everybody for taking seriously the work of integrating the AMTE Standards for Preparing Teachers of Mathematics. As the person who led the AMTE task force charged with disseminating the Standards and now as President-elect of AMTE, I’ve always maintained the stance that we must work to bring the Standards to life if we wish them to have a meaningful impact on the work of teacher preparation. They have the potential to be just another document on a shelf, either a physical or a virtual one, and I think there’s probably a dozen documents that I have that are like this. It gets released, it’s interesting, we read it, and they sit on a shelf and collect dust because there’s never any effort to bring them to life. I want to thank you all for bringing the standards into the work, into the MTE-Partnership, and into the RACs; specifically because it’s going to be what helps bring these Standards to life and makes them operational. With that, I want to say a few things about why the MTE-Partnership matters from an external view, with the goals and aims of AMTE in mind.

The MTE-Partnership’s focus on secondary mathematics teacher preparation is critical. Too much of what we do in secondary mathematics teacher preparation has been idiosyncratic and local, and that’s largely because we’re smaller in numbers compared to elementary. Where I see the MTE-Partnership contributing significantly to bringing what I am referring to as *sensible data driven homogeneity* to the work of preparing secondary math teachers. This is not to say that we should or have to make every program look the same, because we don’t, and we shouldn’t. There are, however, some aspects of preparing secondary mathematics teachers that should be a central core to the work that we do across programs and institutions. A strength I see in the work of the MTE-Partnership is a networked community bringing forth deep and meaningful conversations about the work we do in preparing secondary math teachers. Across the RACs that I sat in on, I was pleased to see a focus on data collection and research across sites and across contexts.

The AMTE Standards provide guidance for programs at both the individual-candidate level and at the program level. For candidates, this means thinking about their mathematical knowledge for teaching, their dispositions, why they’re staying in programs, and why they’re leaving programs. For programs, this means thinking about program-level transformation, which is critical, as I believe that as a field, we have not thought about program transformation as systematically as we could. Pulling first on the candidate knowledge, skills, and dispositions from the AMTE Standards, I could walk around to every one of the RAC meetings, every one of the

presentations, and see aspects of all four of the ideas in the candidate standards coming forth in the work that you do. The candidate standards are center mass of the work that you're doing.

Now I'd like to provide a few things to consider with respect to the Partnership's embracing of the AMTE Standards and the implications of that work. I wonder to what extent the MTE-Partnership work is embodying a shared set of values. You may think, "Well, of course there are a shared set of values. We have a mission and goals, and the driver diagram," and I would agree. My push for you to think about is, how is the work that you're producing embodying those values and making them visible? Could I walk through and see those reflected in everybody's work? And I think that the question that we grappled with Monday afternoon, and that the MTE-Partnership will continue to grapple with, is how are the cross-cutting working groups focused on equity and transformation of programs providing coherence for the RAC work?

Also, how are aspects of the shared vision made visible in the work you're producing? For this, I go to the assumptions that are listed in the AMTE Standards. The idea behind these assumptions was that there exists a core set of values and a shared vision that we wanted to be embedded in everything that mathematics teacher educators do, in the name of advancing the candidate standards and advancing the program standards. These assumptions are not necessarily the MTE-Partnership's shared values exactly, but I think an articulation of the MTE-Partnership's shared values are embedded in these assumptions. For example, the assumptions note a focus on equity and career-long learning. The STRIDES RAC group is thinking about how to launch career-long learning with a central focus on mathematics. The ALM RAC has a strong focus on the idea of learning to teach mathematics involving mathematics content, which is another one of the assumptions. Having multiple stakeholders invested in preparing teachers of mathematics, another assumption, seems fundamental even just to the formation of the MTE-Partnership. Finally, being committed to improving the effectiveness of mathematics teacher preparation programs connects to the fundamental character of the MTE-Partnership as a networked improvement community.

The AMTE standards also identify program standards, which discuss the importance of partnerships, opportunities to learn mathematics, to learn to teach mathematics, and recruitment and retention. Attending to program features and standards is work that the MTE-Partnership institutions are focusing on, trying to figure out how to do good work in secondary mathematics teacher preparation. The notion of assessing these program standards is an opportunity in which the MTE-Partnership has to be a leader in the field. Consider the question, what would the data be that would show that programs are meeting the set of program standards well?

As I noted, I have a few gentle nudges from the AMTE perspective that are designed to help MTE-Partnership teams, individually and collectively, think about how to advance the work that you are doing and support the field of mathematics education. Let me start gentle nudge number one with what might be a controversial statement: It's becoming increasingly clear that the halcyon days of having multiple robust mathematics teacher preparation programs at multiple universities in every state are all but over. I look at my state of Wisconsin, and we have mathematics teacher preparation programs at the University of Wisconsin-Milwaukee, Madison, and LaCrosse; Marquette University in Milwaukee; Alverno College; and at least a dozen more private and public institutions across the state. A decade ago, we would view these programs as competition. Now, we are thinking about them as places in which we can share and pool resources, because in some sense it's the only way our programs are going to survive, let alone thrive. I know this is not a phenomenon unique to Wisconsin. Here is how I think the MTE-Partnership can make a productive contribution to this issue: How can you translate the idea of the networked improvement community upon which the MTE-Partnership is built to the local or regional context? Nebraska is a leader in this thinking with respect to how they are pooling resources across state institutions and then branching into the private sphere. I think this is a direction we as a field will need to take if we are to take seriously the charge of innovating, growing, and advocating for the work of mathematics

teacher preparation. The questions to this group are: What aspects of what the larger community does can be translated and adapted to the local context, and how can the work at the local level be shared back into the larger network to improve the broader community?

Gentle nudge two is about how this group can advocate for coherence in secondary mathematics teacher preparation. I wrote this down as I was listening to one of the MODULE(S²) talks yesterday. The speaker said, “Every institution is different related to lesson planning format.” I immediately heard that and said in my mind, “Yeah, they are,” and then I immediately had a second reaction to it: “Why? Should we be?” Aren’t there some things that we agree that we care about in lesson planning? This disconnect feels like 20 years ago when I was a middle school classroom teacher and it was OK to teach differently from down the hall because teaching is just a matter of style—and that’s Ray’s style down there and that’s Mike’s style over here, and they both work fine. All of our research tells us that is not the case. So why are we accepting this in our own community? I want to think about: How can the MTE-Partnership advocate for and promote some common structures, routines, and tools in preparing teachers of mathematics. How do we identify what are the things that we know work? What are the things that we know are effective? I think about the *Principles to Actions*’ effective mathematics teaching practices that are transforming, catalyzing my own work in preparing teachers. Is there an analogous list of effective mathematics teacher education practices that we should be naming, identifying, and doing across our contexts?

For gentle nudge number three, I’m going to pick on Wendy Smith, whom I heard yesterday saying, “Having meetings can be progress,” and today said, “Stop reinventing wheels.” I heard every RAC talking about the data you’re going to collect, how to document what you’ve done, and as academics, these conversations start small, and they expand exponentially quickly. All right, we’re going to collect data on these three things. So, thing two really needs to have seven sub-bullets to it, and we should think about thing four, and five... and by the time we’re done we now have a list of 371 items about which we’re trying to collect data. Now that you have a history of designing tools, making decisions, and creating resources, I want the MTE-Partnership, and the RACs in particular, to think about: What are the non-negotiables in the data you want back about these ideas? There could be 100 different ideas about data you’d like back about idea A that could be helpful with Idea B, but really what are the core non-negotiables, and then how are revisions going to be made public to this community and then disseminated outside this community? I think with an edited book on the horizon, this task is going to be an important one to make that work useful to the broader community. I’d encourage you all to keep writing and making the tools that are successful public. You don’t have to open everything up and share every single thing that you’ve done. But think about, what are the real successes that you want to highlight out of this work and bring those forward to the community.

Thinking forward to my term as president of AMTE, which starts in February, and a couple of the priorities that we’ve already talked about as a board, I intend to move forward a more public national push toward recruitment and retention, reshaping the conversation about what mathematics teaching looks like in conjunction with NCTM and several of our other partner organizations. I can imagine this work connecting to the work that the MTE-Partnership, and PR² in particular, is doing and elevating that work. There’s been talk within AMTE about, if it would make sense to collect a set of secondary mathematics methods resources and create a book or resource that can be used as a secondary mathematics methods text? These are all things on the horizon that you’re thinking about as a community. I want to encourage you to consider AMTE as a partner in doing that work, and I want to thank everybody for the very interesting conversations about what my goals are for AMTE and finding these points of connection with the MTE-Partnership. Think about what the boundaries of the MTE-Partnership should be. Where are they now? Where should they be? What ideas move across those boundaries, both out into our general community and down in to your local regional networked communities? The MTE-Partnership is an incredibly productive, highly functional, and well-managed group. Thinking about where things move from here is

important. AMTE has already put out a call last fall for supplementary materials related to the Standards, and there's going to be a refresh of that call coming out and one related to program standards. These are resources that we would like to give to our broader AMTE community that represent these sorts of best practices. Please consider submitting, when you see that call come out, some of the artifacts that you've designed and embedded; they don't have to be large, we're thinking small here. Small pieces that add up to something larger. I want to thank the MTE-Partnership once again for having me, and being able to provide some thoughts from the AMTE perspective.