Developing the Developers: Lessons Learned from Work to Support Providers of Professional Development for Graduate Teaching Assistants

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Preparing graduate teaching assistants (GTAs) well for their teaching roles is a high-leverage opportunity to improve undergraduate mathematics education. The College Mathematics Instructor Development Source (CoMInDS) seeks to assist people who build and lead teaching-focused GTA professional development (TAPD) at their own institutions. CoMInDS offers direct support to these TAPD providers and seeks to enhance the development and use of research-based TAPD practices. We draw upon project evaluation data and team members' reflections to identify progress, opportunities and challenges in this work.

Keywords: professional development, teaching assistants, instruction, graduate education

As a group, graduate teaching assistants (GTAs) teach mathematics to thousands of undergraduates, particularly in lower-division courses that may serve as students' only college mathematics experience (Ellis, 2014). Yet GTAs often lack good preparation, skills and models for teaching (e.g., Speer, Gutmann & Murphy, 2005; Kung & Speer, 2009). Moreover, many college STEM educators gain their first teaching experience as a GTA (Connolly, Savoy, Lee & Hill, 2016). Preparing GTAs to be effective teachers thus offers a two-fold opportunity to improve undergraduate mathematics instruction, in courses taught by GTAs and in courses taught later by those who go on to careers as college instructors. Indeed, strong, teaching-focused GTA training is linked to good student experiences, retention and success in early college math courses (Rasmussen, Ellis, Zazkis & Bressoud, 2014). But this is not the norm: most GTA training is short in duration and focuses on logistics and uniformity of multi-section courses, rather than seeking to develop GTAs as effective teachers (Ellis, Deshler & Speer, 2016).

CoMInDS supports mathematics TAPD providers, especially newer providers, through intensive and online workshops that model TAPD activities and topics, connections to other providers, and a suite of practical resources—sample syllabi, activities, assessments and program models for TAPD. CoMInDS leaders also work with RUME scholars to help enrich research on TAPD and build research-practice connections (e.g., Deshler, Hauk & Speer, 2015). This poster identifies lessons learned from this work, drawing from evaluation findings and team members' insights to highlight what has worked, what we have learned, and what has challenged us. For example, we find that workshops reduce providers' isolation and foster their sense of TAPD as professional work, but most providers do not (yet) feel strong ties to a wider TAPD community. For many, the workshop is a first exposure to systematic thinking about the goals and design of a TAPD program. Not all providers embrace active learning as a program vision, but most seem open to framing that emphasizes building GTAs' skills in probing and using student ideas.

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