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Jason K. Belnap^{*} (belnap@mathed.byu.edu), 183 TMCB, Provo, UT 84602. Ascertaining the Professional Development Needs of Graduate Mathematics Teaching Assistants. Preliminary report.

Graduate mathematics teaching assistants (GMTAs) are heavily involved in undergraduate education, greatly impacting the quality of mathematics instruction. Understanding this, most departments provide formal professional development (PD) for their GMTAs. While the duration and makeup of PD varies greatly, many evidence planning and complexity, aimed at providing GMTAs with ongoing support or mentoring. As departments and researchers have given more attention to GMTA PD, they have asked researchers poignant questions regarding PD, such as: how much should be provided? what specific content is important to cover? and what are the most effective activities in preparing new GMTAs?

The answers to these questions are crucial to the success and effectiveness of PD, but cannot yet be answered. With the lack of research underlying existing PD programs and with limited research on GMTAs, the existing knowledge base is insufficient.

To ensure that PD meets GMTA needs, we need to identify those needs; this is what I begin to do in this paper. Based on the data collected during a yearlong qualitative research study, I identified a number of GMTA needs (e.g. social networking, problem resolution, and self-efficacy), which both open discussion and research directions regarding PD. (Received September 16, 2008)