Department Culture and Math Graduate Teaching Assistant Professional Development: A Tale of Two Institutions

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Mathematics Graduate Teaching Assistants (MGTAs) play a crucial role in undergraduate mathematics education, often providing instruction in smaller settings (e.g., recitation sections) where they can directly impact student learning and experiences (Selinski & Milbourne, 2015; Smith et al., 2021). While professional development (PD) is necessary to enhance MGTA teaching effectiveness, PD varies widely across institutions (Deshler et al., 2015).

As part of the larger ELITE PD program focused on MGTA PD in active learning, equity, and inclusion, we analyzed 11 interviews with department leaders (e.g., chairs, course coordinators, PD providers, etc.) from two participating institutions (Institutions Epsilon and Gamma) during the 2021-2022 academic year. Our goal was to investigate what supports or inhibits change when implementing the ELITE PD program. Using Reinholz and Apkarian's (2018) adaptation of Bolman and Deal's (2017) four frames (power, people, structures, and symbols) as a lens through which to examine each institution's culture, we identified five distinct areas (agenda setting and authority, autonomy and constraints, expertise and resources, collaboration and alliances, and institutional and departmental initiatives) that highlight the relationships between the frames within each department. For this poster, we focus on the relationships between the structural and symbolic frames, as symbols fundamentally influence how structures are implemented (Reinholz & Apkarian, 2018).

Our results revealed distinct approaches to MGTA development and involvement at the two institutions. Institution Epsilon emphasized symbols of teaching excellence and structured community, implementing hierarchical agenda setting through mandatory coordination meetings and PD focused on active learning, reflecting autonomy constraints. MGTAs participated in orientation, PD, and received support from experienced peer leaders, reflecting structured expertise and resource sharing. In contrast, Institution Gamma symbolic value of individual autonomy was reflected in informal coordination and optional coordination meeting attendance for MGTAs. While both symbolically valued active learning and equity, Institution Gamma's structures allowed more flexibility in their interpretation, positioning MGTAs as developing professionals through a required teaching and career readiness seminar. These contrasting approaches suggest different pathways for implementing the ELITE PD program. Understanding these institutional differences is crucial for effective PD implementation and fostering sustainable change. Future work will investigate how the ELITE PD program was taken up at each and its impact on MGTAs' teaching practices and institutional beliefs. A third institution in the ELITE PD program will also be included for further analysis and comparison.

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