

Creation, Implementation, and Evaluation of a Training Program for Undergraduate Guided Study Group Leaders

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Duah, Croft, and Inglis (2014) define peer-assisted learning (PAL) as “a formal scheme of assistance that is provided by one or more students to other students to enable them to develop their understanding of course content, and also to assist them [in developing] the study skills required to be successful [in] the course” (p. 554). Inspired by other PAL models such as *Supplemental Instruction* (Fayowski & MacMillan, 2008) and *Learning Assistants* (Barrasso & Spilios, 2021), we discuss a PAL model called a Guided Study Group (GSG). A GSG is a small group tutoring session focusing on a singular mathematics course and guided by an undergraduate GSG leader who is employed as a mathematics tutor specializing in the mathematical topics within the course. The overarching goal of each GSG session is to help establish students within a learning community specifically catered to their course, engage them in a collaborative learning environment, equip them with study skills specifically pertaining to their course, and encourage them to rely on and connect with their peers.

The purpose of this research project is to create, implement, and evaluate a training program for undergraduate GSG leaders at a mathematics learning success center. Through colloquial conversations with past GSG leaders, I was able to determine and design training sessions that I believed would be beneficial for GSG leaders. Fifteen GSG leaders engaged in a training session at the beginning of the Fall 2025 semester. The training lasted approx. 1 hour and involved a review of GSG policies, procedures, and expectations as well as two training activities: *Exploring Mathematical Identities* and *Mock-Tutoring Scenarios*. The creation and implementation of the training was informed by the theoretical perspective of *Communities of Practice* (Wenger, 1998). Specifically, the training sessions required the GSG leaders to be active participants in the training in hopes that the training topics being conveyed would be accepted as a *reified object* in the community of practice we hope the GSG leaders will form. We will evaluate the training according to the following research questions: (1) *What impact does the training have on the practice of guided study group leaders?* (2) *In what ways does the training facilitate a community of practice among the guided study group leaders?* (3) *In what ways does the training equip the leaders to support the development of a community of practice among students?*

The data collection methods being employed in this study consist of: Session Reflections, Observations, and Interviews. This poster will present a case study of one GSG leader in particular. This participant was chosen based on preliminary data from session reflections and observation field notes which seem to indicate that the GSG leader displays behaviors that point to a positive impact from the training. In particular, this GSG leader showed that they were focused on making the students active members of the problem-solving process, repeatedly encouraged students to work together, and noticed common misconceptions which were then addressed as a whole group.

References

- Barrasso, A. P., & Spilios, K. E. (2021). A scoping review of literature assessing the impact of the learning assistant model. *International Journal of STEM Education*, 8(1), 12. <https://doi.org/10.1186/s40594-020-00267-8>
- Duah, F., Croft, T., & Inglis, M. (2014). Can peer assisted learning be effective in undergraduate mathematics? *International Journal of Mathematical Education in Science and Technology*, 45(4), 552–565. <https://doi.org/10.1080/0020739X.2013.855329>
- Fayowski, V., & MacMillan, P. D. (2008). An evaluation of the Supplemental Instruction programme in a first year calculus course. *International Journal of Mathematical Education in Science and Technology*, 39(7), 843–855. <https://doi.org/10.1080/00207390802054433>
- Wenger, E. (1998). *Communities of Practice: Learning, meaning, and identity*. Cambridge University Press.