



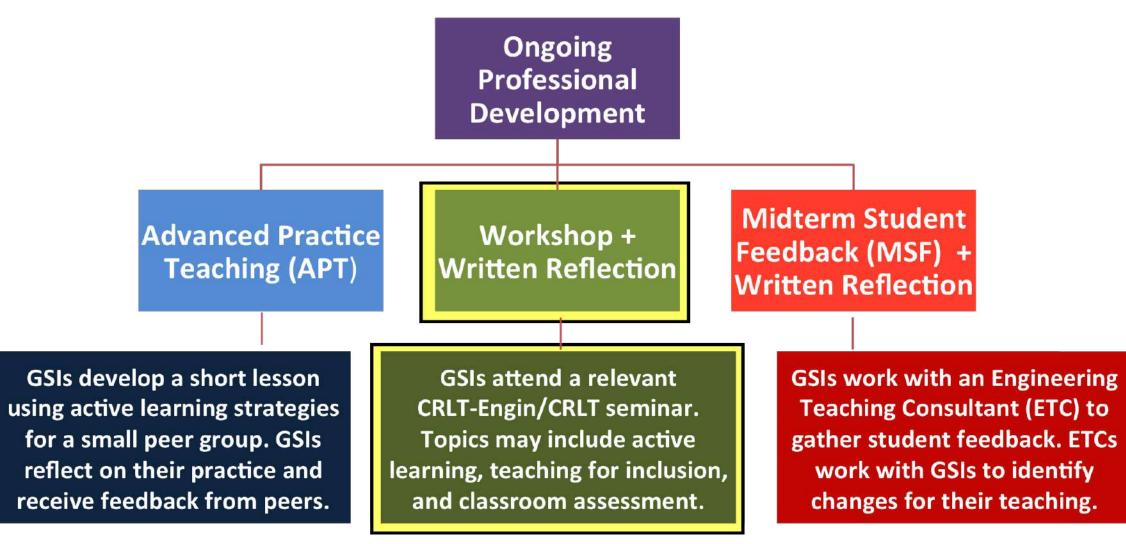
Introduction

Preparing graduate student instructors (GSI) to teach engineering students requires practical and relevant training. Historically, there has been concern that graduate students, especially in the STEM fields, were not receiving adequate



training to prepare them to teach as graduate students and as future faculty. However, more recent research has shown that when engineering graduate students receive instructional training, they are more likely to use teaching methods to engage undergraduate students when they become faculty (Lattuca, 2014).

All first-time engineering GSIs are required to participate in an all-day pedagogical training prior to the start of classes and ongoing professional development for the term. To complement the initial training, GSIs are provided with a choice between an Advanced Practice Teaching Session, participating in Midterm Student Feedback, or attendance at a Pedagogical Workshop. All of these options are accompanied by a written reflection.



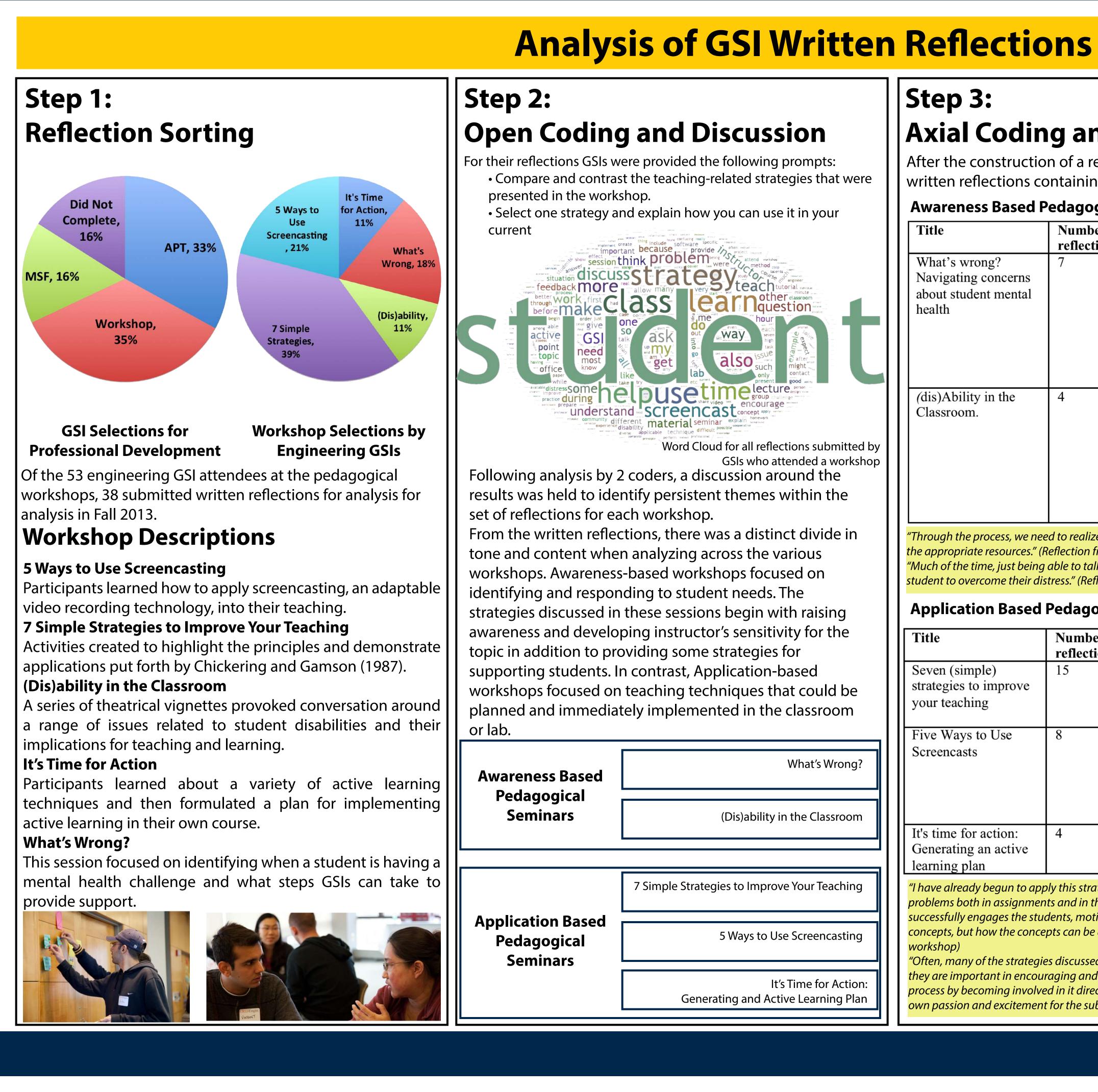
This research will primarily focus on the GSIs written reflections from the pedagogical workshop. It is through this context that we'll begin to address our research question:

• To what extent do new engineering graduate student instructors reflect on their ongoing professional development and apply the new skills from the pedagogical workshops to their classroom experiences?

Theoretical Framework

This project explores new Engineering GSIs' perceptions of their ongoing pedagogical professional development through the lens of Wlodkowski's motivational factors for adult learners (Wlodkowski, 1999). As summarized by Felder, Brent & Prince (2011), there are five key characteristics to engage adult learners. The combination of our workshops and subsequent written reflections are designed to meet this goal.





Discussion

Each of the five workshops discussed addressed a diverse set of teaching techniques, ranging from We would like to thank Anne Greenberg, Chickering, A. W., & Gamson, Z. F. (1987). Seven principles for good practice in undergraduate education. AAHE active learning strategies to addressing the mental health needs of students. For each workshop, the who conducted the statistical analysis for bulletin, 3, 7. written reflections collectively highlighted teaching approaches presented in the sessions; however, this project. Additionally, we are grateful to Felder, R., Brent, R., & Prince, M. Engineering instructional there were certain methods that resonated more readily with the first-time engineering GSIs. the Center for Research on Learning and development: Programs, best practices, and Additionally, it's important to recognize that there are a variety of factors that may not have been Teaching, the REBUILD Program and the recommendations. Journal of Engineering Education. mentioned in the written reflections that influence how GSIs are able to adopt strategies, including: the College of Engineering for their continued 100(1), 89-120. nature of their GSI assignment, their disciplinary backgrounds, and their reasons for choosing particular support and commitment to excellence in Lattuca, L. R., Bergom, I., & Knight, D. B. (2014). workshops. Future directions will be focused on the analysis and coding of reflections for the Advanced graduate student instructor professional Professional Development, Departmental Contexts, and Practice Teaching and Midterm Student Feedback professional development sessions. development. Use of Instructional Strategies. Journal of Engineering Education, 103(4), 549-572.







Leveraging Reflection to Deepen Engineering Graduate Student Instructor Professional Development

Step 3:

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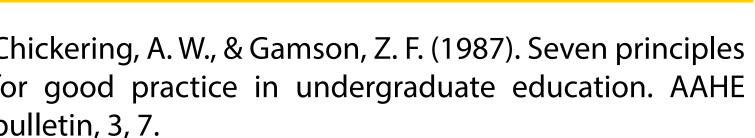
Acknowledgements







References



Wlodkowski, R. (1999). Enhancing adult motivation to learn: A comprehensive guide for teaching adults. 2nd Ed. New York, NY: John Wiley & Sons.