One benefit of mathematical modeling is that it allows for various suitable solutions. The challenge then is helping students understand what a "good" model is when there is not one right answer. Providing students with feedback on their mathematical model is one way to address this issue.

This study examined how students in a first-year engineering course perceived and responded to written feedback from Graduate Teaching Assistants (GTAs) on three Mathematical Model-Eliciting Activities (MEAs) in a single semester. Students’ perceptions of the feedback they received were identified from interviews with 41 students. Students’ subsequent course assignments were used to identify how they responded to the feedback they received.

Students stated that GTA feedback was helpful and they preferred clear and specific feedback over vague and generic. Students believed that they made changes based on the feedback they received, but the extent of the actual changes varied. Major themes from the interviews, the impact of the feedback on students’ solutions, and recommendations for improving the feedback system will be discussed. (Received September 25, 2012)