## Abstract Submitted for the APR17 Meeting of The American Physical Society

Forms LAURA WOOD, AMANDA MATHESON, SCOTT FRANKLIN, Rochester Institute of Technology — Student self-reflection is an important metacognitive skill to developing expert-like habits of mind. This study focuses on student responses to Guided Reflection Forms (GRFs) and individualized instructor feedback to the submissions. Student and instructor entries were hand-coded by an emergent rubric and, separately, analyzed with LIWC (Linguistic Inquiry and Word Count), a computerized text analysis program that extracts affective sentiment. Sentiment analysis supports the development of a stable basis set (rubric) to describe responses that is robust across both introductory and advanced classes. The analysis also reveals the instructor's use of the "praise sandwich," instinctively embedding critiques and suggestions between specific and general encouragements. The study demonstrates the utility of validated, automated, sentiment analysis as a method by which to analyze large corpuses of written text.

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