

## Alternative Scoring Methods in Collegiate Mathematics Courses

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*This poster presentation will highlight the results of a qualitative, multicase study which explored the use of alternative scoring practices in collegiate mathematics classes. Specifically, the researchers explored the use of two different scoring practices: one in an entry-level College Algebra course and one in an upper-level Modern Geometry course. In addition to classroom observations, data collection for each case consisted of two interviews for each course instructor, one interview with each course designer, and interviews with students in each course. This poster presentation will detail themes from cross case analysis which suggest important details for successful implementation of alternative scoring practices in collegiate mathematics courses.*

**Keywords:** Assessment, classroom practices, case study

Grading and scoring practices have been a topic of debate and discussion for more than a hundred years (e.g., Starch & Elliot, 1913). There has been a recent push, however, in collegiate mathematics to implement alternative scoring practices (e.g., MAA, 2018). At a University in the rocky mountain region, there are two different methods used in two different courses. The purpose of this case study was to explore the implementation of each of these methods during the fall semester. In both cases, the scoring practices were implemented by instructors who were mentored in the method by another instructor who designed the course and initially implemented the scoring method. This study sought to describe the nature of alternative scoring practices in collegiate mathematics courses.

### **Data Collection and Analysis**

For each course, the first author conducted pre- and post-interviews with each course instructor. The purpose of these interviews was to better understand their teaching philosophies as well as their use of the alternative scoring practice. She then observed each course for a period of four weeks on days in which the instructor returned scored work. Following classroom observations, she interviewed the course designer as well as three students per course. After data collection, the data was analyzed using an open coding process to determine and explore emergent themes.

### **Themes and Discussion**

The emergent themes from cross case analysis suggest key details for the successful implementation of alternative scoring practices. These themes include instructor buy-in and consistent implementation, communication between instructor and students, and the ability to implement feedback and correct work for an improved score.

### **References**

- Mathematical Association of America. (2018). Proceedings from *MathFest 2018*. Denver, CO: MAA.
- Starch, D., & Elliott, E. C. (1913). Reliability of grading work in mathematics. *The School Review*, 21(4), 254-259.