1145-P5-2713 **Kayla K. Blyman** (kayla.blyman@usma.edu), United States Military Academy, Department of Mathematical Sciences, 646 Swift Road, West Point, NY 10996, and **Kristin M. Arney*** (kristin.arney@usma.edu) and **Lisa Bromberg** (lisa.bromberg@usma.edu). *An Experiment in Assessing Creativity and Critical Thinking in a Freshman-Level Mathematical Modeling Course.*

Many undergraduate mathematics courses list developing creative and critical problem solving skills as a higher order learning goal. But so often testing, grades and traditional teaching methods reward the use of predetermined answers and therefore overshadow the critical role creativity plays in real world problem solving with mathematics.

In our course we are working to find ways to develop creative and critical problem solvers. We are looking for our students and instructors to gain the ability to overcome fixations in mathematical problem-solving and are working to reward divergent solution techniques within situations that best utilize mathematical solution techniques.

In an attempt to assess if our course improves mathematical creativity through problem solving, we conducted an experiment with over 200 students during the Fall 2018 semester. We chose two critical thinking problems that do not require the foundational knowledge of our course and can be solved using multiple methods. The students were given one of two critical thinking problems to solve on the first day of class and then on the last day of class were given the remaining problem.

The experimental design and preliminary results will be discussed. (Received September 25, 2018)