

Climate & Gender Equity Research Grant 2011-2012

Project Title:

Closing the achievement gap in STEM: Assessing the impact of a values affirmation task at NDSU

Abstract:

Research has documented a pervasive and persistent gender achievement gap in STEM disciplines, especially in math and physics. Instructional efforts to reduce the gender achievement gap in STEM disciplines have yet to yield much success. A recent study conducted at the University of Colorado---Boulder found that participation in a non---instructional intervention, a values affirming writing task, significantly reduced the gender achievement gap in an introductory calculus---based physics course, especially for women who identified with a negative gender stereotype. This intervention holds promise for reducing or eliminating the gender achievement gap, but needs testing with diverse populations of students before the results can be considered robust.

We propose to investigate the gender achievement gap at NDSU across a broad range of introductory STEM courses. Specifically, we will (1) characterize performance differences of women and men enrolling in introductory STEM courses at NDSU using valid and reliable concept tests and (2) quantify the impact of the values affirming writing task on the gender achievement gap. Results from this research will impact instructional practices at NDSU while contributing to the national dialogue on women in STEM disciplines.