Abstract Submitted
for the APR10 Meeting of
The American Physical Society

For the Love of Science: Learning Orientation and Physical Science Success[1] ZAHRA HAZARI, GEOFF POTVIN, Department of Engineering and Science Education, and Department of Mathematical Sciences, Clemson University, ROBERT TAI, JOHN ALMARODE, Curry School of Education, University of Virginia — An individual's motivational orientation serves as a drive to action and can influence their productivity. This study examines how the goal orientation of students towards the pursuit of their graduate degree in physics and chemistry influences their future success outcomes as practicing scientists. Two main orientations are focused on: performance (or ego/ability) orientation and learning (or task/mastery) orientation. The data was obtained as part of Project Crossover, which applied a mixed methodological approach to studying the transition from graduate student to scientist in the physical sciences. Using regression analysis on survey data from 2353 PhD holders in physics and chemistry, we found that individuals exhibiting a learning orientation were more productive than those exhibiting a performance orientation in terms of first-author publications and grant funding. Furthermore, given equal salary, learning-oriented physical scientists produced more first-author publications than average.

[1]This work was supported by NSF Award 0440002.

Zahra Hazari
Department of Engineering and Science Education, and
Department of Mathematical Sciences, Clemson University

Date submitted: 23 Oct 2009 Electronic form version 1.4