The Role of Families in Motivating Latino Youth to Pursue Science in High School

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Supported by a grant from the Division of Research on Formal and Informal Settings, Directorate for Education & Human Resources, National Science Foundation

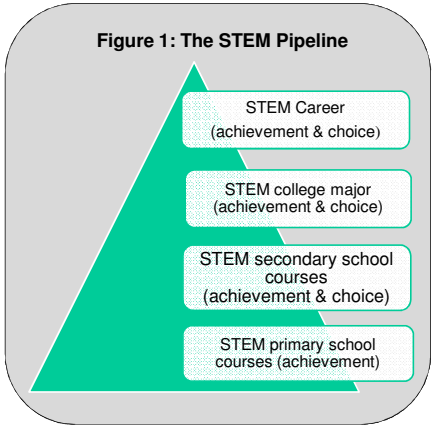
THE PROBLEM:

Latinos—the largest and fastest growing ethnic minority group in the U.S.—are underrepresented throughout the science, technology, engineering, and mathematics (STEM) pipeline. We know that high school is a critical turning point in the STEM pipeline, where talented Latino students opt out of science courses. However, we know little about how families, teachers, and peers motivate Latino youth to pursue science in high school.

CURRENT RESEARCH

- The Families and Science Project, begun in 2011 at Arizona State University, is a longitudinal study of 150 9th grade Latino students, their families, and their science teachers.
- The study uses focus groups, surveys and administrative data to explore: (1) Latino youth's motivation and beliefs about science and (2) the role of families in motivating Latino youth to pursue science in high school.

Figure 1: The STEM Pipeline



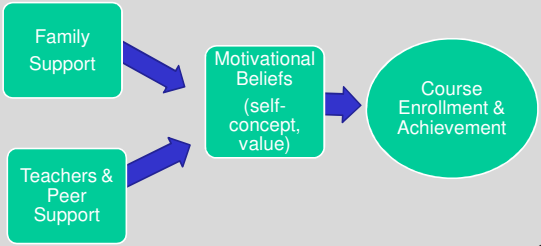
WHY THIS MATTERS

- The road to a STEM career is composed of a series of achievements and choices that begins in childhood, known as the STEM pipeline. (Figure 1)
- Studies show that Latino youth take a smaller number of math and science courses in school than their ethnic majority peers. In the math and science classes they do take, Latino students are less engaged in the classroom and have lower achievement than their peers.
- Youth's motivational beliefs regarding science are important predictors of their science achievement, the number of science courses they take in high school, and long-term STEM success. (Figure 2)
- Understanding the role of parental support, as well as support from teachers and peers, is critical in comprehending factors that contribute to STEM success. (Figure 2)

IMPLICATIONS FOR STEM EDUCATION

- Findings from this study can inform interventions for Latino youth and families related to youths' interest and achievement in high school STEM subjects.
- Findings from this study will also inform the science teaching profession, which is eager for more information on how to better support Latino students and families.
- This research will be particularly relevant in Arizona (and other parts of the Southwest and West), where 40% of all students are Latino.

Figure 2: The Role of Families, Teachers, and Peers in Supporting Youths' Motivational Beliefs and Later STEM Success



FACTS

- Latinos make up 16% (50.5 million) of the U.S. population.
- Only 38% of Latino high school students were proficient in the 2006 Arizona state science exam.