Interdisciplinary Research Conducted to Understand Why Latinas Pursue Engineering and Computer Science Degrees

The National Science Foundation awarded a $525,000 grant to the Center for Research in Engineering and Technology Education (CREaTE) at The University of Texas at El Paso to conduct an interdisciplinary research project titled *Latinas in Computer Science and Engineering: A Qualitative Study Examining Identity and Agency for Resilience and Persistence.*

For the past 20 years, there has been a steady increase in outreach programs both at the national and local levels to attract females to STEM fields of study. Engineering and computer science are two professions that have not yet reached gender parity, and the findings of this research at UTEP will inform stakeholders of ways to modify and extend outreach approaches to broaden participation of Latinas in these fields.

UTEP professors from the departments of Anthropology & Sociology, Teacher Education, Computer Science, Engineering, and Psychology will begin this interdisciplinary collaborative research over the next three years. The Principal Investigator is Dr. Elsa Villa with Co-Principal Investigators Drs. Martine Ceberio, Computer Science; Patricia Nava, Associate Dean of Engineering for Academic Affairs and Undergraduate Studies and former Chair of Computer & Electrical Engineering; Alberto Esquinca, Teacher Education; Pei-Ling Hsu, Teacher Education; and Michael Zárate, Psychology.

Investigators will collect data from approximately 30 Latina undergraduate students using interviews, life charting, and participant observation techniques to investigate how Latinas in engineering make decisions to choose, pursue, and complete engineering and computer science degrees. Factors taken into consideration for this study include socio-economic status, language, cultural knowledge, beliefs, family dynamics and values that may influence them into pursuing a degree in these fields.
UTEP has the ideal environment to conduct this research since it is a majority Hispanic institution and is a nationally recognized producer of Hispanic engineers. The undergraduate enrollment of engineering majors is 1,711 students of which 19% are female and 79% are Hispanic.

“Not only does this research project contribute to UTEP’s goal of reaching Tier 1 status, it will enable us to understand the mitigating factors attracting females to engineering that will inform us of ways to increase our female enrollment in engineering and computer science,” said Dr. Elsa Villa, Principal Investigator and Co-Director of CREaTE.
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