

Culture and Exposure encourage Latinas to persist in computing

SUMMARY

Although Latinas are the fastest growing undergraduate student population and computer science (CS) is among the fastest growing career sector, Latinas remain woefully underrepresented in this field of study. Latinas earn just 2% of all bachelor's degrees awarded in computer science and comprise just 5% of all women working in computing jobs. However, a new study finds that centering efforts to recruit and retain Latinas in computing on just three primary strategies may positively impact persistence

Primary Strategies to Support Latinas in Computing

- 1) Enhancing a sense of belonging
- 2) Utilizing introductory computing courses as spaces of support
- 3) Providing greater exposure to computing opportunities

“Most students who have learned CS did so in a **class at school**, although Black and Hispanic students are more likely than White students to have learned CS **outside of the classroom** in after-school clubs.”

~Google, Diversity Gaps in Computer Science: Exploring the Underrepresentation of Girls, Blacks, and Hispanics, 2016.

Although 64% of Latinas in the study were first generation college students, 12% had a parent working in a computing career and 20% had a parent working in a non-computing STEM career.

INTRODUCTION

There is a tendency to think of progress as linear but data from a longitudinal study on degree attainment for women of color in computing shows that computer science degree completion for Latina, Black and Native women has decreased over the past 30 years. Efforts to better understand these statistics and the lived experiences of Latinas in undergraduate computing programs have resulted in a new study by researchers from UCLA and Texas A&M University-Commerce. Researchers analyzed 2015 & 2016 survey data from 240 Latinas enrolled in introductory computing courses and interviewed 10 of those students to learn about the factors that drew them to and helped them continue in computing.

The research team learned that Latinas leverage cultural capital and various computing experiences to persist in computing. Latinas noted that their families and their identities as marginalized minorities in White male-dominated spaces provided them with a source of pride, strength, and resilience as they navigated the CS program. Their desire to prove they belonged and to pave the way for more Latinas in computing also contributed to their ability to persist in the major. Latina persistence in CS was also attributed to participating in STEM focused organizations specifically for Latinas as well as participating in internships and attending conferences.

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STRATEGIES AND RECOMMENDATIONS:

Based on the results of this study and the small but growing body of research focused specifically on undergraduate Latina experiences in computing, the researchers recommend three primary strategies for higher education institutions seeking to recruit and retain Latinas in computing:

- **Enhance a sense of belonging** for Latina students expressing interest in or pursuing computer science degrees.
 - Policies to bolster this strategy should be institution specific but may include:
 - Formalizing **mentorship programs**
 - **Expanding funding** for gender and ethnic specific CS conferences such as Grace Hopper and Tapia
 - **Leveraging students' familial capital** in the computing context, which may include revamping curricula to be more inclusive of such experiences
- Utilize the **introductory computing course as a space of support**, especially for first generation college students.
 - Identify, collate, and normalize usage of institutional resources available to support the academic success of Latinas in computing
- **Provide Latina students** with specific and necessary CS skills and information
 - **Computing internships**
 - Pursuing research with professors
 - **Preparation for computing careers**
 - Preparation for graduate school

"I wanted to **bridge that gap** and then also **give back** to those who are younger than me, which is why I also work in the K-12 outreach office just because I want to **pave the way for the next generation** too." – Kiara, Computer Science

72% of Latinas had computing experience prior to enrolling in the introductory undergraduate course.