

Abstract 2499

Exploring the Effects of Psychosocial Factors on STEM Persistence at an HBCU through a SSTEM Scholarship Program

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Lane College, founded in 1882 by former slave Bishop Isaac Lane, has strong history of educating underserved, minority students through student-center approaches. The Lane College S-STEM program aims to increase the number of low-income students entering STEM fields by providing scholarships, cocurriculum and high impact program activities to support Lane College students majoring in biology, chemistry, computer science, mathematics, or physics. These activities include development and implementation of new first-year STEM courses, including CHE 110 Scientific Literacy and Critical Problem Solving and PHY 111 Galileo and the Church. We have successfully recruited 3 cohorts of S-STEM scholars who have participated in several project activities including bi-weekly cohort meetings, undergraduate research projects, community outreach, internships, mentoring, and professional development. For the research project, we are exploring the development of non-cognitive factors known to impact student persistence in STEM (Grit, Self-efficacy, Growth Mindset, etc.) as S-STEM scholars matriculate through the program. Our initial measures of Grit and Growth Mindset for cohort 1 do not show a significant difference between S-STEM scholars and the control group of academically talented Power of Potential scholars. However, we have experienced low student participation in surveys during the period of remote instruction in response to the COVID-19 pandemic. For cohort 2, we measured self-efficacy for students in cohort 2 using the selfefficacy formative questionnaire developed by Gaumer Erickson and colleagues. Our data for the five students cohort 2 who completed the survey show an average score of 80.8% for focus, 60.8% for steps, and overall 72.5%. These initial data suggest that the students will benefit from targeted instruction aimed at developing growth mindset and self-efficacy. This research is supported by National Science Foundation Award DUE # 1833960.