

IMPACT OF LIVED EXPERIENCES OF AFRICAN AMERICAN UNDERGRADUATES IN ENGINEERING PROGRAMS

Need – Despite efforts to broaden their participation in STEM, African Americans continue to be underrepresented in the STEM disciplines. The disaggregated data shows that of all the STEM fields, African Americans have the lowest representation in engineering. Further, studies show that after enrolling in their STEM degree program, African Americans switch to non-STEM majors or leave university altogether at the highest frequency compared to other groups.



Vision – Our study asks how African American undergraduates' lived experiences associated with engineering program culture affects their decisions to persist or switch to non-engineering majors. We hypothesize that African American students who report experiencing racial and gender exclusive dynamics are more likely to switch to non-engineering majors after their first or second year. We further hypothesize that African American students who report these lived experiences and persist in their engineering programs are likely to develop “survival” strategies such as establishing a supportive social network and joining engineering professional organizations, thereby reducing their isolation and likelihood of switching to non-engineering majors.

Research – This mixed-methods study includes a survey and interview to learn about their academic, socioeconomic, and engineering backgrounds as well as their experiences in their major programs. We also use the experience sampling method to get real-time data from participants and storytelling to understand how they construct their realities within their engineering program cultures. The combination of all these methods increases the validity of the data and enhances our ability to triangulate data.



Impact – Our research findings will provide STEM educators and policymakers with data and insights that can transform engineering culture and improve interventions to broaden the participation of African Americans as well as other underrepresented minorities.

Who We Are: The UConn Neag School of Education is nationally recognized for its studies in research productivity, scholarly influence, innovation in teaching and curriculum, and program evaluation. For more information, please contact Gladis Kersaint at kersaint@uconn.edu

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