



2021 Virtual HBCU-UP/CREST PI-PD Meeting



Broadening Participation in Research

**Strategic Application of Science Capital to Increase African American Students' Motivation, Retention and Persistence in STEM at an HBCU**

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# Project Overview

## **Our overarching research question is:**

To what extent can institutional knowledge of students' science capital be leveraged to develop strategies for enhancing African-American student's motivation, retention and persistence in STEM at an HBCU?

## **Major Goals:**

Faculty become knowledgeable of science capital their students possess prior to and after matriculating into STEM program;

Faculty develop student asset-mindset in curriculum course delivery and advising;

Students and faculty are inspired to use science capital to improve student engagement, achievement, retention, and persistence in STEM.

# Best Practices/Successes

## Faculty & Science Capital

- Mini-studies/manuscripts for publication
- Engagement in survey design & professional development

## Students & Science Capital

- Promising - Dimensions of science capital reflective of students of color experiences

# Implications

- **Broader Impacts:** This project offers new strategies and is developing generalizable, replicable tools to transform teaching and learning for student success in STEM based on science capital.
- Understanding science capital from the perspective of students of color.
- Assessments validated using students of color perspectives.
- Using understanding of students of color science capital to design strategies and resources for students of color to influence their recruitment, retention, and post graduation career and graduate school decisions.

# Identified Gap(s) for Future Collaboration or Enhancement

## Future Collaboration

- Survey testing on other STEM populations on and off campus.
- Social science research professional development with other faculty in other STEM departments on campus.

## Enhancement

- Understanding the impact of Covid-19 on science capital for students of color in STEM
- Understanding relationships between undergraduate, graduate, and STEM career science capital for students in the target population