S-STEM HUB NEWSLETTER

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Investigating the Capacity of Historically Black Colleges and Universities to Develop, Accommodate, and Graduate Low-Income STEM Students

*The **QEM-AIR Research Hub (The Hub)** uses the S-STEM network to curate and cultivate research on effective strategies that support low-income students' success at HBCUs to produce well-trained and highly qualified individuals who enter the STEM workforce to understand optimal pathways to graduation and professional success for low-income STEM students.*

***The Hub** team will identify and conduct research at HBCUs with a large population of low-income students that host S-STEM programs. **The Hub** will not merely conduct research on HBCUs but will conduct research with HBCUs to understand optimal pathways for low-income students to graduate and become STEM professionals.*

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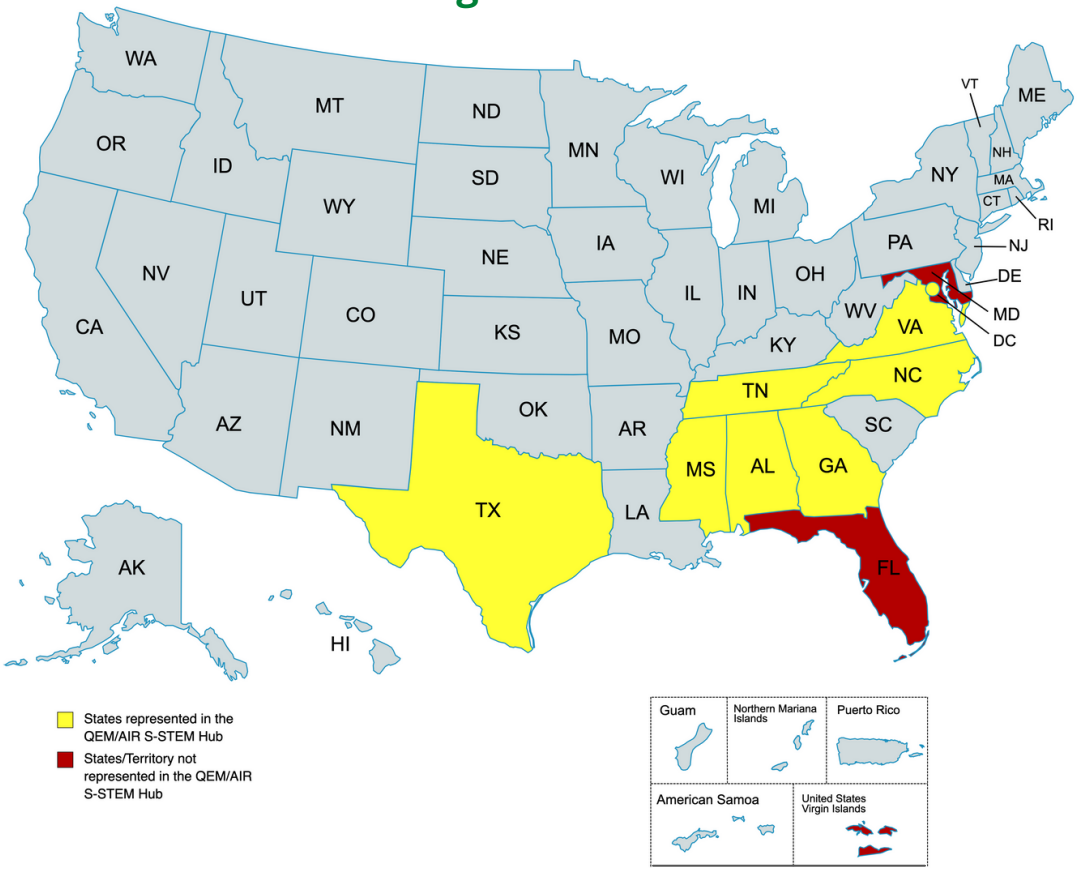
HBCUs with S-STEM Programs



NSF S-STEM AWARDS

- 729 Active NSF S-STEM Awards (as of Sept. 29, 2022)
- 30 S-STEM awards to 20 HBCUs from 9 States, Washington, D.C., and 1 Territory

THE HUB PROJECT:
GOALS AND PARTICIPATING INSTITUTIONS

- Conduct robust and innovative research using primary and secondary data to understand the optimal pathways by which low-income students matriculate at HBCUs and enter successful careers in STEM.
- Provide capacity building, technical support, and strategic alliances for researchers who are based at HBCUs to contribute to our collective understanding of pathways to success for low-income STEM students.
- Disseminate research findings on optimal pathways for low-income students to matriculate at HBCUs and enter successful careers in STEM within academia, government, nonprofits, and industry.

INSTITUTION	PRINCIPAL INVESTIGATOR
Alabama A&M University	Aschalew Kassu, PhD
Albany State University	Louise Wrensford, PhD
Elizabeth City State University	Kenneth Jones, PhD
Fort Valley State University	Sarwan Dhir, PhD
Howard University	Dennis Davenport, PhD
Jackson State University	Jacqueline Jackson, PhD
Lane College	Melanie Van Stry, PhD
Norfolk State University	Claude Turner, PhD
Prairie View A & M University	E. Gloria Regisford, PhD
Savannah State University	Agegnehu Atena, PhD
Tennessee State University	Lin Li, PhD
Tuskegee University	Mohammed Qazi, PhD
Tuskegee University	Moses Ntam, PhD
University of the District of Columbia	Freddie Dixon, PhD

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SITE LIASION WEBINAR SERIES

Meeting 1: June 28, 2022, at 2:00 PM ET

Title: Strengths, Weaknesses, Opportunities, and Threats of Conducting Research on Low-income STEM Students at HBCUs

"We had one of our first students graduate and she came in as dual enrollment and graduated in two years which was, I thought phenomenal, especially considering how most of our students take like 5 or 6 years to graduate. I think we have a lot of opportunities to really learn about what it is that HBCUs do that helps our students to be so successful."

- Dr. Melanie Van Stry, Division Chair, Natural and Physical Sciences, Lane College

*"***Most of the students that didn't do well, the courses that really hurt them were calculus and chemistry. Almost all of them that had left the program because of grades did not do well in at least one of them. A lot of times they're not going to do well in those two courses when they come in, because they have not been prepared properly at their home and at their high school"**

- Dr. Dennis Davenport, Associate Chair, Director of Graduate Studies, Department of Mathematics, Howard University

Key Takeaways:

- Site Liaisons are critical for improving and maintaining relationships with students
- The COVID-19 pandemic and the switch to remote-learning impacted retention and success of students
- Liaisons that completed the post webinar survey indicated that they are (1) very familiar with IRB processes and (2) opportunities within the QEM S-STEM project and research publishing opportunities and (3) are very likely to use research findings to change policies and pathways to improve the success of low-income STEM students

Pictured above (left to right): Brittany Boyd, PhD (Project Co-PI), Mercy Mugo, PhD (Project Co-PI), Moses Ntam, PhD (Tuskegee University), Melanie Van Stry, PhD (Lane College), Candice Jones, PhD (Lane College), Elica M. Moss, PhD (Alabama A&M University), Angelicque Tucker Blackmon, PhD (Project External Evaluator), and Ivory Toldson, PhD (Project PI)

2022 S-STEM SYMPOSIUM

Meeting 2: October 1, 2022, at 9:45 AM ET

Title: Understanding the Difference Between Educational Research and Program Evaluation While Conducting Research with Low-Income S-STEM Students

During the S-STEM PI symposium, the project team in partnership with the project's external evaluator, Dr. Angelicque Tucker Blackmon, provided an overview of QEM/AIR S-STEM Hub and dived deeper into the topic. The session also provided early findings from the HBCU S-STEM Research Hub, which seeks to better understand strategies for engaging and graduating low-income STEM students.

Twelve participants including five HBCU liaisons on the QEM/AIR S-STEM Hub joined the hybrid session. The session focused on how to avoid data evaporation and ensure regular communication with project evaluators. Ten participants responded to the post-session survey. All of them indicated they have an evaluator for their project. Workshop participants found the information about supporting low-income STEM students motivating and useful, but it is clear there is more work to be done for this support system of theirs to become truly effective.

HBCUs are vital to diversifying the nation's STEM workforce. The S-STEM program seeks to increase access to STEM education for students from economically disadvantaged backgrounds by providing scholarships and support services. The HBCU S-STEM Research Hub is a multi-institutional effort to enhance research opportunities and collaborations between HBCUs. The HBCU S-STEM Research Hub is committed to supporting and improving access to STEM education for students from economically disadvantaged backgrounds. The team will continue to work closely with PIs and evaluators to ensure that effective practices are being implemented and that research findings are effectively communicated.

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UPCOMING HUB ACTIVITIES

October - December 2022

Staff Interviews

*AIR will send an email from **hbcustem@air.org** to liaisons to share more details about the interview and schedule a time to meet.*

Student Usability Survey

*AIR will send an email from **hbcustem@air.org** with a link to the survey to site liaisons. The survey includes items about school climate, faculty relationships, personal psychosocial factors related to persistence in low-income students (e.g., sense of belonging, efficacy, mindsets), as well as student academic and postbaccalaureate plans. Every S-STEM liaison is expected to recruit 2 students to complete the pilot survey before the survey is available to all students in 2023.*

Early 2023

Student Focus Groups

Semi-structured student focus groups will enable students to "share and compare" their experiences with one another while discussing various topics (e.g., HBCU selection, S-STEM experiences, interactions with faculty or program staff, academic preparation, financial aid, research or industry opportunities. Details will be shared in early 2023.

Student Survey

Details will be shared in early 2023.

EXTERNAL ADVISORY COMMITTEE

Kofi Bota, PhD
STEM Consultant and former Kimuel A Huggins Distinguished Professor of Chemical Physics, Clark Atlanta University

Shaun Harper, PhD
Provost Professor of Business and Education and Executive Director, USC Race & Equity Center, University of Southern California

Nicholas Daniel Hartlep, PhD
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Kofi Lomotey, PhD
Chancellor John Bardo and Deborah Bardo Distinguished Professor of Educational Leadership, Western Carolina University

Kelly M. Mack, PhD
Vice President for Undergraduate STEM Education and Executive Director, Project Kaleidoscope, Association of American Colleges and Universities

Iris Wagstaff, PhD
STEM Program Director, American Association for the Advancement of Science

EXTERNAL EVALUATOR

Angelicque Tucker Blackmon, PhD
CEO and Chief Inspiration Officer, Innovative Learning Center LLC

FOR MORE INFORMATION

Visit the QEM Website - https://qem.org/s-stem-hub/

Contact the Principal Investigators (PIs):
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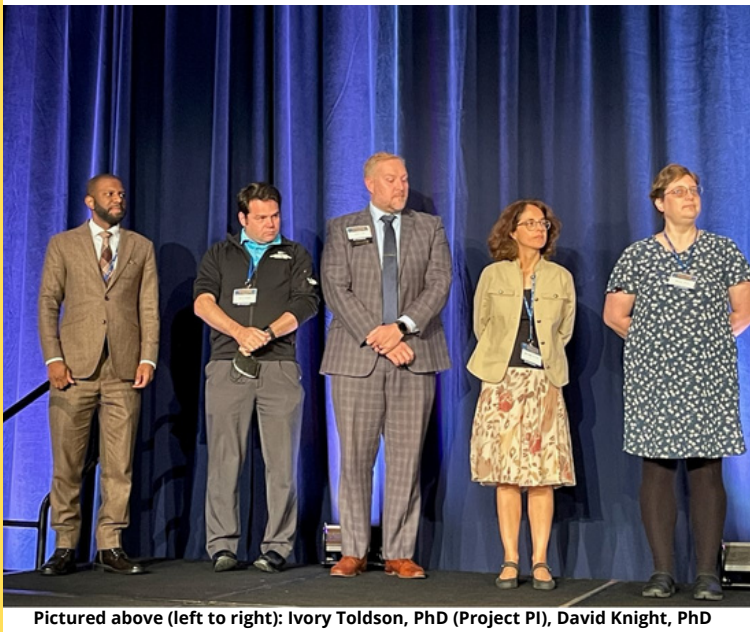

Pictured above (left to right): Ivory Toldson, PhD (Project PI), David Knight, PhD (Virginia Polytechnic Institute and State University S-STEM PI), Travis York, PhD (AAAS S-STEM REC PI), Michelle Van Noy, PhD (Rutgers University S-STEM PI), and Wendy Smith, PhD (University of Nebraska S-STEM PI)

OTHER OPPORTUNITIES

AAAS S-STEM Resource and Evaluation Center (AAAS S-STEM REC)

- QEM and AIR are partners on the S-STEM REC
- Opportunities for S-STEM scholars and PIs
- QEM will coordinate the Minority-serving Institutions (MSIs) outreach

For more information, please visit the project abstract page for NSF Award # 2224093

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