THE FUTURE NEEDS A PUSH

FEBRUARY 2023

FEATURED

Expanding Access & Equity in the College Admissions Process

STEM PUSH is working to change college admissions to expand access and equity for Black, Latina/o/e and Indigenous students in STEM fields. Our aim is to improve college-going and persistence in STEM for students in our participating 40+ pre-college STEM programs.

The Supreme Court is poised to weaken race conscious admissions practices, a move that may have profound implications for equity in higher education. As educators and admissions professionals seek effective ways to counter systemic inequities for Black, Latina/o/e and Indigenous students, the work of STEM PUSH's admissions strand is more important than ever.

Even before the recent challenge to race-conscious admissions practices, established higher education admissions has been systemically unfair to Black, Latina/o/e and Indigenous, and multiply marginalized students. Many of these students apply to colleges interested in STEM and with unique STEM skills and experiences developed through their pre-college STEM program (PCSP); however, some students have been rejected from institutions despite successes in their STEM program, which in some cases include authoring research publications.

We think such disconnects are due to several factors, including systemic limitations that are compounded through the admissions process, and a lack of support to help them stand out to admissions offices.

In this issue, we identify current challenges and opportunities in the college admissions process.

Disan Davis
Research Associate: Admissions, Accreditation & Ecosystems

STEM PUSH NETWORK

The Issue We Are Attempting to Address

Navigating the college admissions process puts a tremendous burden on the individual student to craft compelling personal narratives, demonstrate financial need, and in some cases to submit the paperwork needed for fee waivers.

Common quantitative metrics of college admissions (e.g. grades, or number of AP courses) are biased against racial and ethnically minoritized students due to lack of access and systemic barriers, including standardized testing and access to advanced STEM coursework.

Many STEM PUSH students have limited access to counselors and support networks guiding them through the current process. We advocate for systemic changes that reduce burdens on individual students and instead lift up their existing pre-college STEM program successes.

What We Are Doing: Keeping Equity at the Center of College Admissions

Many of the PCSPs in STEM PUSH were either founded or adapted over time to address gaps in STEM opportunities in their communities. Aligned with our aim to improve STEM college-going and persistence of our programs' Black, Latina/o/e, and Indigenous students, the admissions strand of our work supports programs in extending their offerings and impacts through their students' college application (and possibly college-going experience).

STEM PUSH is building a common language with admissions offices to convey program quality and student successes as other means of demonstrating potential for success in undergraduate studies.

By working with admissions offices to transform the inequities within the system, STEM PUSH hopes to shine a light on the problem, designing and testing potential approaches with college admissions partners in order to alleviate the burden on individual students, and supporting our programs and their students in their higher education and scholarship application processes

Navigating the application process is a large component of the support that STEM PUSH and its participating PCSPs work on with students. By partnering with institutions of higher education that are interested in supporting STEM persistence for Black, Latina/o/e and Indigenous students, we hope that more students will attend institutions where they will learn in academically and socially supportive environments.

What We Are Learning

Admissions are often looking for students who *will* be successful throughout undergraduate education. They often look to programs' former students' success as an indicator. STEM PUSH is helping programs to track this individually, as well as through studying the general impact of pre-college STEM experiences.

In our initial STEM PUSH research cohort, Black, Latina/o/e, and Indigenous students were

2X

as likely as their applicant / non applicant peers to **enroll and persist in STEM** undergraduate study.

STEM PUSH is working with pre-college STEM programs to support students in choosing to apply to college, exploring various college options and opportunities, putting together strong college applications, and promoting recognition of their students and programs by college admissions offices at local target institutions.

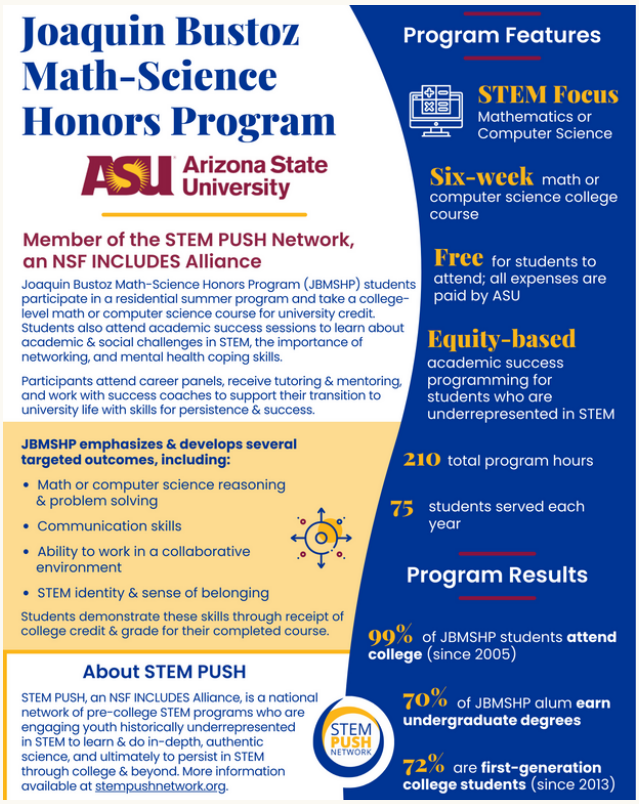
STEM PUSH is also working with admissions offices to make intentional connections between programs and the local institutions most often of interest to students in that program.

Pre-College STEM Program Profiles

As more institutions of higher education go test-optional or test-blind, it is an opportunity for the students in our pre-college STEM programs to showcase their STEM experiences and successes in other ways.

STEM PUSH is working to establish other ways for PCSP students to showcase their STEM learning and experience beyond coursework. STEM PUSH have piloted resources and supports for PCSPs.

We've learned ways we can support educators in communicating the strengths of their programs (program profiles) and their students (letters of recommendation).



STORIES FROM THE FIELD

Cynthia Barragan Romero, Program Manager of the Joaquin Bustoz Math-Science Honors Program (JBMSHP) at Arizona State University, shares more about the importance of JBMSHP's participation in STEM PUSH.

Barragan Romero tells us, "the program profile is also highly beneficial to our students, providing a detailed description of what they accomplished at the JBMSHP. This enhances their college and scholarship applications as well and helps them to stand out among their peers. It can also help them demonstrate their accomplishments to their high school teachers and to encourage their peers to apply as well."

Barragan Romero goes on to say, "the program profile has been a useful tool to supplement the student's letters of recommendation. It provides detailed program information and longitudinal data, which helps to demonstrate what a big deal student participation in JBMSHP is.

The STEM PUSH affiliation listed on the profile also helps to demonstrate the JBMSHP's commitment to helping underrepresented students succeed in STEM. It has also been beneficial when seeking funding from potential donors and keeping JBMSHP alumni informed of the program's effectiveness. The program profile also helps in recruiting new students to apply. Students can easily see the short and long-term benefits of being a JBMSHP participant."

"Many of the JBMSHP students are first-generation college-bound and/ or underrepresented in STEM. They may not have the same educational opportunities or the highest standardized testing scores, which are traditionally required for students applying to top-tier schools.

However, participation in the JBMSHP provides them with a life-changing college experience while they are still in high school, solidifies their STEM identity, and helps them learn that they can succeed in college.

This doesn't always translate on a college admissions application, so we hope that STEM PUSH accreditation will give our students a "gold star" among their peer's applications," says Barragan Romero.

Recent events—from the Covid 19 pandemic, to the "Varsity Blues" admissions scandals, have shown the need for reforming college admissions practices to ensure equity and access for all learners. STEM PUSH is committed to this goal, and we think our admissions work will provide viable, data-driven solutions.

OUR CURRENT STRATEGY

Build New Pathways between STEM Programs and Admissions Offices
Aligning program strengths and admissions priorities, fostering place-based connections and building partnerships with equity-focused admissions organizations.

Credential Quality Programs to Broaden Participation in STEM through Accreditation
All STEM PUSH Network programs are aligning to our quality standards, which include a stated goal of broadening participation in STEM. STEM PUSH has partnered with Middle States Association to build a "next-generation accreditation system" that centers equity in broadening access and participation in STEM.

Design and Promote Admissions Strategies to Broaden Participation in STEM
Recognize pre-college STEM programs as educational experiences in students' college applications, track STEM PUSH PCSP students through their application process, and reinvent the role for PCSPs experiences to be leveraged.

Study Impacts of STEM PUSH Programs on Admissions
STEM PUSH is conducting the first, large, cross-program, NSF-funded research study of the impact of pre-college STEM programs on student matriculation and persistence in STEM post-secondary education. The goal is to study the effects of this work over time.

Learn more about STEM PUSH admissions work by visiting www.stempushnetwork.org (We got a new look!)

Sign up for our newsletter and share with friends and colleagues.

This NSF INCLUDES Alliance is funded by NSF Inclusion across the Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science (NSF INCLUDES), a comprehensive national initiative to enhance U.S. leadership in discoveries and innovations by focusing on diversity, inclusion and broadening participation in STEM at scale. It is also co-funded by the NSF Innovative Technology Experiences for Students and Teachers (ITEST) program and the Advancing Informal STEM Learning Program (AISL).