

Developing *YOUth!*

Research Brief #3: Staff-Facilitated Supportive Space

This is part of Transition Points, a series of briefs describing the lived experiences of some alumni of the Museum's youth development program as they matriculated through college. For more details, background and other briefs visit <http://bit.ly/12345>

At a Glance

The Science Minors and Achievers were successful due in part to the dedicated Museum staff who were responsible for the youth development program. The following report explores how participants felt staff were a crucial component of the supportive space they found in the Museum. Further, we discuss participants' various experiences with and without supportive networks once in college.

As part of the **Developing *YOUth!* Project**, we talked to youths from the Science Minors and Achievers (SMA) program at the Museum of Science and Industry, Chicago (MSI). This report is part of a series of briefs discussing the lived experiences of some of our participants as they graduated from the program and matriculated through college.

About the Study

The **Developing *YOUth!* Project** is a mixed-method, longitudinal study following graduates of the Science Minors and Achievers program at MSI. The program focuses on high school youths from historically underserved communities and aims to prepare them for college. This study combines annual surveys with in-depth repeated interviews to follow participants through their college and professional careers. As of 2023, we will have followed our oldest cohort of participants for eight years, allowing us to look more broadly at how our participants' experiences with STEM and within STEM spaces has changed over time.

For these briefs, we drew upon qualitative research methods such as participant observation and multiple years of formal and informal in-depth interviews. We aim to center some of their lived experiences within STEM formal and informal spaces, including within the Museum itself.

This brief was prepared by Cindy La Nguyen, Ph.D. and C. Aaron Price, Ph.D.



Staff-Facilitated Supportive Space

While At MSI

Participants in the Science Minors and Achievers program felt that the Museum was a space where they could be themselves. They described a support network at the Museum that helped them feel safe to both be themselves and discover new aspects of their personalities. The Museum staff, and specifically the program facilitators, were critical in shaping their support networks and in fostering this environment.

Participants reported feeling that the staff genuinely cared about them and their well-being. Furthermore, participants reported feeling that this care and attention was unique to the Museum and made an impact on their lives and how they felt about themselves.

Pia described how one staff member's personality and positive energy set the tone each Saturday morning:

Melanie is always, um, she's just [laugh]... a lot, but in the best way, you know? [She's] really excited all the time. And it's really nice to see her get so excited every Saturday. She's like 'Happy Saturday, everybody!' So that makes it easier to wake up at nine and see her there, really excited. And she's always very encouraging, especially to people she knows she needs to help get out of their shell a bit more. So that's always really nice.

Participants were especially appreciative of how staff were intentional about acknowledging each of them as unique individuals. The program staff did this by making a point of learning each person's name, asking each participant in the program how their week went, and celebrating each person's good news or accomplishments. Some participants felt that the program staff also helped them uncover aspects of their personalities they had not been given a chance to discover yet. Ana shared,

I didn't realize that I was this kind of more quirky, bubbly kind of person because I was just always so shy and reserved as a kid. I think one of the people that brought that out was Melanie because she was just wild and crazy. I think she kind of caught on to me a little bit and I realized that, okay, I can totally express myself because this woman's being so expressive, and I didn't have to fit a mold of being a quiet scientist just focused on her work. I could have a personality too and be successful..

Participants also cited opportunities they had at the Museum to meet and learn from adults who were professionals in the industry or academics in participants' fields of interest. Floriana described getting the chance to tour a science lab at a nearby university and getting to meet two women who were PhD students in a STEM program there.

MSI did this Women in Science Expo and for one day they were like, 'okay, all the Achievers, go and [tour this Lab at Northwestern University]. And that was really helpful because we got to meet these two [women in a] PhD program at Northwestern [University]. They gave me all these really important tips and useful bits of insider advice that I would not have gotten elsewhere... Ultimately, I did decide to do a biology research program, so [I'm] grateful for that lab visit because that [was] the first time I was taught how to use a micropipette and learn what a lab looks like, proper protocol in a lab... it was so useful because when I started at [my university], they just assumed that you knew [all of] tha

While In College

As young adults attending college, our participants were no longer checking in with SMA staff each Saturday morning. They did not have SMA staff members encouraging them to speak with confidence and assert their presence. Instead, most participants described transitioning into a space without an existing supportive network, especially not a formal network, such as the one they had at the Museum.

Most participants turned to older students in their major, graduate students, and professors to find mentors to support their development. However, the ease of access to these networks seemed to vary for our participants. In particular, several of our white and/or men participants described finding and accessing a mentor or supportive network with ease. Cam found support from a professor and graduate students through something as simple as an email. When asked about how he secured a position on a research team while he was an undergraduate student, Cam said:

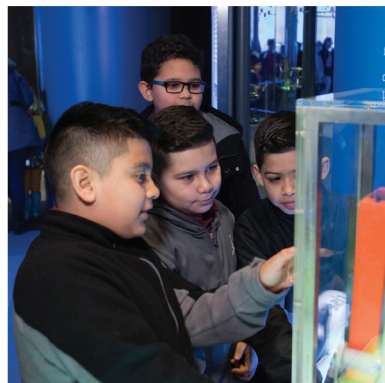
I just emailed him. And then we had some interviews. And then he accepted me. And I talked to a bunch of different graduate students before I joined the team to find out which one I would like to join. And then I decided on this one, so I joined this one. And then yeah, then it got ramped up last year.

The participants who talked about contacting professors and graduate students with ease were more often those whose identities appeared to align with those in the majority in STEM spaces, i.e., white and/or men. On the other hand, many of our women of color, and especially our Black Women participants, had a much more difficult, if not impossible, time accessing mentors and networks that were supportive of their developmental needs. In some cases, these participants even reported facing people in mentoring positions who were very much unsupportive.

In a unique situation, one participant's university did provide an immediate and supportive network for students of color in STEM. Before even starting a STEM program at her university, Brandy was contacted by the university's office specializing in support for students of color in STEM majors. This office organized a specialized orientation where Brandy and other students of color could meet each other and situate themselves on campus before the start of the term.

Implications

Staff at the Museum were responsible for facilitating a supportive space for participants in the program. Once outside of the Museum, our participants encountered variations in the support they felt by their receiving STEM community or institutions. Their varied experiences suggests that access to a supportive network fostered by staff (i.e., faculty and other academic leadership) is not necessarily a guarantee for all of our participants once they leave our program and start college.



Introducing Our Youth and Young Adults

These research briefs center the lived experiences of program alumni who began as youth and are now young adults. This is a little more about them.

Pia

Pia identifies as a Black Caribbean American woman. Early in her undergraduate career, Pia pursued a major in neuroscience. While she still loved science, she realized her passion and calling was in theater, creative writing, and the arts.

Ana

Ana identifies as an Indian Asian American and white woman. She is currently pursuing a Master of Science in Data Science. Ana hopes to work in data science, cognitive science, and artificial intelligence.

Floriana

Floriana identifies as a Latinx, Mexican American, and white cis-woman. After graduating with her bachelor's in Biology, Floriana is pursuing a degree in education and aims to become a high school science teacher.



Cam

Cam identifies as a white man and graduated with a degree in mechanical engineering. He is currently pursuing a Master of Engineering in Mechanical Engineering while interning at an aerospace and defense company.



Acknowledgements

The **Developing *YOUth!* Project** is supported by the National Science Foundation and the Elizabeth Morse Genius Charitable Trust. We acknowledge contributions to this report from Faith R. Kares, Ph.D., and Alison L. Mroczkowski, Ph.D.