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## Infographic: Lessons Learned from Successful Black Male "Buoyant Believers" in Engineering and Engineering-Related Fields

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# Lessons Learned from Successful Black Male “Buoyant Believers” in Engineering and Engineering-Related Fields\*

To help produce more Black male engineering and engineering-related undergraduates who are both **confident and resilient (i.e., buoyant believers)**, we (a) present **3 attributes** which lead to collegiate achievements and (b) offer **recommendations** to faculty and staff



## Attribute 1: Childhood adversity



"I grew up in [a large Midwestern city], two parent household, neighborhood was pretty decent but where I travelled to and from school [the] majority [of] high school it was a pretty rough neighborhood, **I had a lot of adversities that I had to overcome** as far as being a statistic **but I had a great foundation with my parents.** I got a scholarship to play basketball in high school at a Catholic private school downtown so I took advantage of that so I didn't have to go to my neighborhood school which wasn't a great school but high school is where **I kind of transitioned from being focused purely on basketball not academics** and I just kind of used basketball as a tool to get me where I am now which is in college."

- Charles, a senior aerospace engineering major



## Recommendation

- Solicit responses from students which allow students to describe times when they previously faced and overcame adversity; encourage students to use lessons from prior adversity to handle present and future challenges

## Attribute 2: Refusal to quit

"There was a lot that sustained my interest [in my major]. For one during my time here [in college] I have funding through a NASA program that I got accepted to in high school so one big reason was keeping my grades up and knowing that I was having funding from them definitely kept me motivated to stay within the major...so I fell into that category and definitely knew that I needed the funding to go here [to college] so that was one reason. **I didn't want to become like a lot of the few parents that I did know who went off to college and switched majors a bunch of times or dropped out** I just didn't really want to go through that route if I could avoid it, circumstances happen and then I just knew that I was gonna get over it somehow whether it be more studying or reaching out to people, **it just never crossed my mind to change my major or quit.**"

- Homer, a senior electrical engineering major



## Recommendation

- Develop opportunities for students to become involved in extracurricular activities on campus and to serve as mentors to their peers as well as mentees of alums so they have increased levels of accountability and support



## Attribute 3: Prior academic success

"Actually the reason why I first wanted to be an engineer, my parents said that when I was four years old my uncle is a structural engineer in [West Africa] and I admire him a lot and sometimes he would take me to his job sites and kind of show me like this is what I'm doing, this is the bridge I'm doing and I'm in charge of making sure it's built so that was the type of stuff so I've always wanted to be an engineer, which is weird since I was four and most people don't know what engineering is till they are in college. And, then as I went through school like **math and science were like my first subjects so I always did well in those classes and I did first-year robotics** and I kind of got interested in electrical [engineering] because I wasn't sure what kind of engineering I wanted to do..."

- Derrick, a senior electrical engineering major



## Recommendation

- Establish an environment where academic challenges and setbacks become opportunities for learning and growth, rather than only being evaluative measures

**NOTE:** \*This study is part of a larger, longitudinal study titled, Investigating the Critical Junctures: Strategies that Broaden Minority Participation in STEM Fields, funded by the National Science Foundation (NSF)

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