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Infographic: Black Male "Bouyant Believers" in Engineering and Engineering-Related Fields

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Black Male "Buoyant Believers" in Engineering and Engineering-Related Fields*

- To help produce more Black engineering and engineering-related undergraduates who are both confident and resilient (i.e., buoyant believers), we offer several recommendations to faculty and staff

"Buoyant Believers": Confident and Resilient

Samrawi, a Black mechanical engineering major says, "Although I am a minority I think I have confidence in myself. If you show the professor and the other people that you're actually a good student that you know what you're doing, they'll just get past [the fact that you're a minority]. I feel like this day and age it's not like before, I feel like things are changing."

Samrawi proceeds to describe how he handles difficult situations, "Well, this happened last semester [I was in a difficult class and wasn't doing as well as I'd like]...I never like regret it, but I kinda feel like there's something wrong with me and I think I should try harder. I always blame myself, I don't blame other people for it...I just try."



Recommendation

- Attentive support and constructive feedback to ensure that students stay on track to earning a college degree in engineering or related STEM fields

"Ballers": Resilient but not Confident

Tony, an African-American science major displays how although he lacks confidence, he is still persistent, "I thought about leaving my major a couple times, but not to the point where I was really contemplating it, because the thing is I'm really hard headed so once I start something I really like to finish it off."



Recommendation

- Providing constructive feedback to Black STEM undergraduates with actionable strategies for incorporating that feedback into building competencies and confidence in one's cognitive abilities

- 27 African American** students were recruited to participate in an interview revealing 4 categories among college students: "Buoyant Believers," "Blamers," "Ballers," and "Avoidant Give-Up'ers"

"Blamers": Confident but not Resilient

Abraham, a Black chemical and bio-molecular engineering student describes how he handles tough courses, "if I did not do well I actually start studying more or maybe seeking help by going to office hours. If it's out of my hands ... I'll probably drop the class."



Recommendation

- Establishing relationships through well-designed STEM mentoring programs, learning communities, involvement in fraternities or sororities, and faculty student research collaborations

"Avoidant Give-Up'ers": Neither Confident nor Resilient

Emmanuel, an African-American science major says, "I have thought about leaving my major because I wasn't passionate my first year in college. I decided not to leave because...it's UCLA. I mean, people that pass through UCLA do it why should my situation be different. So, I decided to stay in my major and I'll probably be in it until I graduate...I'm going to keep going...I struggled barely passing some of my classes, I just had to keep going through."

Recommendation

- Work with Black STEM students to help them set realistic proximal goals, with a series of attainable intermediate goals to give them a sense of accomplishment and progress



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; **The terms African American and Black are used interchangeably

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