

# Faculty must lead inclusion

Later this year, I will step down as president of the University of Maryland, Baltimore County (UMBC), after 30 years. I know this to be true—faculty members have the power. Presidents, provosts, and senior leaders at an institution set a tone and create the setting for successful programs. But ultimately, it is the commitment of professors and teaching staff that determines whether students—all students—can pursue their interests and achieve their goals. It takes high expectations for both students and educators.

My own passion for helping people from all backgrounds to become scientists began in my childhood. I joined the 1963 Children's March in Birmingham, Alabama, because I wanted a better education. Along with hundreds of other Black youth who joined the protest, I spent nearly a week in jail. A year later, I participated in a federally funded program for high-achieving Black high school students. A math professor challenged us to work together on a difficult problem. Solving it took us 2 days. I learned from both experiences that high expectations and group work are powerful.

A quarter-century later, in the fall of 1989, UMBC decided to commit to diversity and inclusion in science and engineering by launching its Meyerhoff Scholars Program, which focused on Black students in science, technology, engineering, and mathematics (STEM) fields. (Later, the program would include students of all backgrounds.) Faculty pulled students into their research, and the university created settings in which students could work together, learning, growing, acquiring agency, and finding a sense of belonging. UMBC has used a holistic approach to admissions for its Meyerhoff program, considering test scores, coursework, and grades, but also a student's grit, drive, "fire in the belly," and excitement about STEM research.

Thirty years later, Meyerhoff Scholars are five times more likely to graduate from a STEM PhD or MD-PhD program than students who were invited to join the program but attended another university. UMBC is the number one producer of African American undergraduates who go on to earn PhDs in the natural sciences and engineering or an MD-PhD. Today, The Pennsylvania State University and the University of North Carolina, Chapel Hill, each have a Meyerhoff-like program. The Howard Hughes Medical Institute intends to fund 24

research universities to develop and implement similar programs. The Chan Zuckerberg Initiative is also funding programs at the University of California's Berkeley and San Diego campuses.

For university leaders to achieve long-term sustainable change in diversity and inclusion, they need to bring faculty into this work as allies in a "high expectation" strategy. Staff members offer crucial support, providing advice, professional development, and programming. Faculty create an empowering culture in which students find a sense of community and help each other study and learn. Because of this, university leaders want faculty to rethink the way they teach, redesigning courses to emphasize active and team-based learning, for example. University leaders want them to advise and mentor students and bring them into their research—in the lab or in the field. It takes scientists

to produce scientists.

Introducing this kind of "Meyerhoff change" in a university begins by collecting and analyzing data for science and engineering students. What percentage, by race and gender, is passing introductory biology and chemistry courses? Are they progressing to the next course and doing well? Are students persisting in STEM majors? Working

with faculty, leaders can discuss information to understand problems, brainstorm solutions, and agree on a plan. Educators who have had success with underrepresented minority students should be invited to speak with the faculty. They can provide insight and inspire faculty members to become allies and champions by taking a lead in changing STEM education. Minority students can be invited to speak about their experiences as well. To make all of this work, institutional funds will be necessary, as will a commitment to raising money from agencies, corporations, foundations, and individuals.

It takes broad institutional commitment to produce scientists. Leaders set the tone, staff provide support, and faculty lead in the classroom and in the lab. When faculty take ownership of inclusion in science and engineering, mentoring undergraduates and graduate students, bringing them into the work, and championing them on their career journeys, then universities will finally "move the needle" on diversity in these fields.

—Freeman A. Hrabowski III



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