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• U.S. Supreme Court justices weigh in (hambandedly) on race and equity in physics learning

scitation.aip.org/content/aip/magazine/physicstoday/news/10.1063/PT.5.8155

www.npr.org/2015/12/09/459099492

eblur.github.io/scotus/

lists.asu.edu (registration required)

www.whitehouse.gov/issues/education/k-12/educate-innovate#diversity

www2.ed.gov/about/inits/list/

sites.ed.gov/hispanic-initiative/

sites.ed.gov/whieeaa/

www.aps.org/about/governance/letters/scotus.cfm

“What unique perspective does a minority student bring to a physics class?”

This Dec. 7, 2015, rhetorical statement by U.S. Supreme Court Chief Justice Roberts was not actually seeking to improve physics learning. Justice Scalia’s following comments further illustrate the intended argument: “There are those who contend that it does not benefit African Americans to get them into the University of Texas, where they do not do well, as opposed to having them go to a less advanced school ... a slower-track school, where they do well.”

The Roberts/Scalia position is well known and discredited as “mismatch theory”—the idea that disadvantaged students should go to less challenging schools or take less challenging subjects; this has also been popularized as “the soft bigotry of low expectations.” In reaction, an “Open Letter to SCOTUS from Professional Physicists” was drafted by the Equity and Inclusion in Physics & Astronomy Group. The open letter cited a half-dozen references and garnered 2400 signatures in three days over a weekend before being sent to the court. The open letter noted that a much more fruitful unasked question could be “Why does physics education routinely fail brilliant minority students?” I believe addressing this latter question leads to changed practices that improve the physics learning experience and outcomes for all physics learners.

Earlier, on November 21st, a teacher posted a relevant observation on HS STEM courses on the Modeling-digest physics education listserv. J. Kremer wrote, “There’s a (tragically accurate) assumption that access to a high quality science education is in itself tied to privilege. ... to see this issue as political or anti-scientific is to ignore the depth of the injustice we’ve come to see as normal.”

What might low expectations look like where you live and work? I have been informally surveying high school physics and calculus course offerings where I live in Western NY, a land of highly segregated schools (by race and economics). Public suburban (and wealthy private) school districts in WNY over-

whelmingly offer access to high school physics and calculus courses. Rural districts generally manage (often by alternate year offerings to very small numbers). With a few notable exceptions, urban high-needs high schools do not generally offer their students access to calculus or physics courses. These high schools focus on low-expectation classes and often heavily remedial classes in Earth science and life science in an attempt to drive up their graduation rates (physics and chemistry are not required for the basic NYSED Regents HS diploma). I believe that similar patterns exist in elementary and middle school STEM preparation expectations. This makes it very unlikely (again, with notable exceptions) that inner-city public school students have been prepared to succeed in college physics or engineering. What is “normal” for the schools in your area?

“Soft bigotry” is being addressed by many organizations for underrepresented groups, and there are a number of White House/U.S. Department of Education committees and groups collecting and promulgating policies, research, and practices to address the issue via the White House Initiative mechanism. While the White House Initiative on Educational Excellence for African Americans is newly formed in 2012 (by President Obama), the White House Initiative on Educational Excellence for Hispanics dates back over 25 years (to President H.W. Bush). The WHIEEAA and WHIEEH sites (together with sites dedicated to other ethnic and racial groups as well as faith-based and neighborhood groups) link to catalogs of hundreds of online and off-line programs, videos, posters, tool kits, etc. focused on minority education.

Finally, here is one pithy and positive response to Chief Justice Roberts’ rhetorical question:

“They bring their background, ways of thinking, methods of applying physics to real world problems, and the potential to educate others through their unique perspective. APS is committed to supporting the advancement of knowledge, and the people who make this possible. *We cannot separate the two.*”

—Sam Aronson (2015 American Physical Society President)

• On recent costs for non-intro physics textbooks

dvschroeder.blogspot.com/2015/12/textbook-price-pandemonium.html

www.phys-l.org/archives/2015/12_2015/msg00046.html

Dan Schroeder’s blog and update on what has happened to publisher list prices of your undergraduate physics texts, including a link to a spreadsheet of over 135 sophomore through graduate school textbooks. The demand for independent textbook publishing appears strong.

—Submitted to PHYS-L by Dan Schroeder