

Catalyzing Research on Geographies of Broadening Participation

Broadening the Participation of Underrepresented Students in Geography at Texas A&M University

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The Geosciences continue to lag far behind other sciences in recruiting and retaining diverse populations. Thus our challenge is great in becoming more representative of science in general and the state of Texas in particular. In fact, the Geosciences are ranked lowest in diversity when compared with other disciplines in science, technology, engineering and math (STEM). Though African Americans comprise 12.4% of the United States population, and about 9% earned bachelor's degrees in 2008, only 3% of those bachelor's were awarded in geosciences. Hispanics comprised 15% of the United States population, yet in 2008 bachelor's degrees earned by Hispanics was approximately 8% and fewer than 5% were awarded in geosciences. Even more sobering statistics, from 2001 to 2006, 55 Hispanic men and 45 Hispanic women received Ph.D.s in the geosciences nationwide. On the whole, in the last 30 years a total of 249 Hispanic men and 104 Hispanic women received Geosciences Ph.D.s. In 2004, 2.8 per 1000 B.S. degrees in geosciences were awarded to African Americans (compared to 45.4/1000 in the biological sciences). From 1974 to 2004, 78 African American men and 23 African American women received Ph.D.s in the geosciences in the United States.

In the past four years, through elaborate pre-college programs (GeoX – Geosciences Exploration Summer Program, iGeo – Investigate Geosciences) and targeted recruitment of high school students, we have seen the number of Hispanics and African Americans entering the undergraduate programs in the College increased between 9% in 2008 to 22% in 2011. We nearly doubled the number and presence of underrepresented students at the College of Geosciences. Case in point, from 40 (8.1%) Hispanic students, we are up to 118 (40.4%) and from 3 (0.6%) African American students to 24 (4.3%). Although we have made great strides in underrepresented recruitment and enrollment of Hispanics and African American students, we clearly have to continue our quest to broadening participation as the number of students entering the College of Geosciences majoring in geography and spatial sciences have been and continue to be dismal. In fact, in the last three years, 2008-2011, we have had only four incoming freshmen majoring in geography and spatial sciences.

In a recent internal college study, we found that undergraduates entering as freshman majoring in geography and spatial sciences are largely white, affluent, with a majority male over female. When comparing to other geosciences departments/majors within the College, geography averages about 20% less first-time in college (FTIC) students than the combined average of other departments/majors. Most if not all transfer to geography after they arrive to Texas A&M University. This college study prompted collaboration with geography faculty members and the ALIGNED Pilot Project. Therefore, we are now planning exclusive geography targeted recruitment and

strategies for sustainable follow up with several high schools in Houston. The goal is to establish a sustained relationship with the programs that have qualified students, one reason to focus on Houston, one hour and half from College Station. We will be targeting schools with AP Environmental Studies and/or AP Human Geography, and ones with largely underrepresented groups. By targeting high school students, we minimize the “discovery” element in geography and turn it into a major of choice component. We will use the ALIGNED tool kit to identified three schools (Milby High School, Cesar Chavez High School, and Eastwood Academy). Each school is predominately Hispanic/Latino and in lower income areas of Houston.

Similarly, yet another objective of ours, is to use the ALIGNED Pilot Project Tool Kit to recruit a large number of incoming freshmen through a range of geography-specific outreach endeavors similar to other pre-college programs already established at the College. Our intent and ultimate goal is to bring in teachers and students for long weekends to teach them about the benefits of majoring in geography, spatial sciences, and GIS; then, we need to show the very decisive millennial generation the relationship between these majors with actual career paths, jobs opportunities, employability, and competitive salaries. In order to broaden participation, we must exclusively and entirely focus on best practices for recruitment in geography as a discipline, not the geosciences, only by doing so, we will boost the numbers of incoming first-time in college students.