A Theory of Change

Increasing equity in access to a four-year degree in Arizona

Early Academic Outreach  eao.arizona.edu
VISION

Inspiration for the work of the Office of Early Academic Outreach at The University of Arizona (EAO) is motivated by our vision of a day when all students are equally likely to prepare for and succeed in higher education, regardless of family wealth or status.

MISSION

The mission of the Office of Early Academic Outreach at The University of Arizona is to increase the number of low-income, minority and first-generation college-bound students who aspire to attend and are eligible to enter a university degree program.
Why is our mission important to Arizona?

Higher education is a source of many benefits to individuals and their communities, yet only 25% of Arizonans over age 25 hold a bachelor’s degree. Even more telling of our state’s educational attainment is that Arizona ranks 43rd among other states for the college-going rate of students directly graduating from high school. This indicates that college enrollment following high school is significantly lower than the U.S. national average, and is problematic for our state’s future wellbeing.

A university education is a good individual investment. Despite rising costs of college, the average graduate recoups both forgone earnings and the full cost of undergraduate tuition and fees by the age of 33. Over a lifetime, adults who hold bachelor’s degrees earn on average $800,000 more than those who do not continue their education beyond high school. Adults who then pursue professional or advanced degrees can expect average lifetime earnings to reach over $1,000,000 more than can be expected by a high school graduate. In addition, college graduates are more likely to be employed in positions that provide health insurance and pension benefits, have a better perception of their health, and engage in leisure time exercise. In short, for low-income families that do not already enjoy the many benefits listed, pursuit of higher education can be one of the quickest paths to economic security.

A greater proportion of college educated adults provides greater economic security for entire communities. Not only do higher wage earners pay more in taxes to support government services, but adults with four-year degrees also have lower unemployment rates and are less likely to rely on social safety-net programs. As the percentage of college graduates in a given metropolitan area increases, the wage for adults with any level of education in the same area also increases. Participation in civic actions such as volunteering, voting, and blood donation are also positively correlated with higher levels of education.

Why focus on first-generation, low-income, and minority students?

One of the most important benefits that college educated adults contribute to a highly-educated society is the orientation of their own children toward a future that includes a bachelor’s degree. In its report on first-generation students in postsecondary education, The National Center for Education Statistics found that 68% of 1992 high school graduates whose parents earned a bachelor’s degree or higher graduated with a four-year degree by the year 2000. Only 25% of the graduates whose parents did not hold a bachelor’s degree had completed that credential during the same time frame.

A lack of family economic security makes a student much less likely to enroll in a four-year degree program, even when a student’s academic aptitude is taken into consideration. In its 2007 Education Pays report, the College Board revealed that only 29% of high achieving math students in the class of 1992 who came from low-income families had earned bachelor’s degrees by the year 2000. In contrast, 74% of the high achieving math students from the top income bracket earned that credential. In fact, lowest achieving students from high income families earned their degrees at the same rate as the high achievers from the lowest income bracket.

A report commissioned by the Arizona Commission for Postsecondary Education has also found that the student population at Arizona’s universities does not fully reflect the ethnic diversity of our state. Although over a quarter of Arizonans identify as Hispanic, only 13% of Arizona residents attending the state’s universities do.
Why does this pattern exist?

Colleges and universities across the country have strong recruiting programs and provide financial aid counseling to promising high school seniors from all backgrounds. These strategies are necessary, but they are only the tip of the iceberg when it comes to ensuring that first-generation and low-income students identify themselves, and are identified by university recruiters, as promising college students when they reach their senior year. Many decisions that determine a student’s educational path must be made long before a student reaches 11th or 12th grade.

The Office of Early Academic Outreach knows that many low-income students aspire to obtain college degrees, and that their parents share these same expectations. UA Evaluation Research & Development (ERAD) surveyed 2,847 middle school students attending selected schools that serve low-income students in Tucson while they were in both 7th and 8th grades. ERAD found that 71% reported they plan to earn a bachelor’s degree or higher. Their parents were also surveyed, and 75% of the 599 respondents indicated that they expected their children to earn at least a bachelor’s degree.

Research has shown that parents hold the most sway over the aspirations of low-income students prior to the 10th grade. Yet many of these parents do not have complete information about how their student’s current academic choices will affect the college and career options available after high school. For this reason, the early messages these students receive about options after high school differ significantly from the messages their more affluent peers receive. By the time a student seeks the advice of a teacher or a college recruiter, many of the curricular decisions that shape a student’s options may have already been made.

Further, the policies and processes of Arizona’s education system send messages that are at odds with the information students need to make a commitment to college preparation well in advance of their senior year. Enrollment in the coursework required for university admission is not the automatic option for most Arizona high school students. Specifically, the key subject area courses Arizona high schools require for graduation do not match the 16 courses required for admission to our state’s universities. These different requirements pose a significant barrier to students. The Arizona Board of Regents has determined that overall only 47.9% of 2006 Arizona high school graduates were eligible for admission to our state’s universities. Significantly fewer than half of Arizona minority students’ transcripts indicated they were eligible for university admission: specifically, only one quarter of Native American, 35% of Hispanic and 32% of African American students were eligible.

In particular, students’ completion of the sequence of high school math courses determines in large part their eligibility for university admissions. The 2007 Arizona Board of Regents (ABOR) study on high school eligibility demonstrated that completion of the required sequence of Algebra I, Algebra II, Geometry and advanced math, such as Calculus, was the most common barrier. Only about a quarter of Hispanic, Native American and African American students completed the required four years of math. In fact, 40% of Arizona students did not complete even three years of the specific math sequence and therefore were excluded from university eligibility.

While Arizona has recently increased the required years of math to four, and of science to three, for students in the high school graduating class of 2013, the specific sequence of advanced math and science courses is not specified as it is for university admission. Therefore, students require education about this gap in expectations and support within their schools that will keep them on the track to university eligibility.

Finally, low-income students and their parents may preemptively exempt themselves from pursuit of the steps necessary for admission, because they perceive that they will not be able to afford college. A 2009 National Center for Public Policy and Higher Education survey showed that 67% of Americans believe that the majority of people qualified to go to college do not have the opportunity to go and that students have to borrow too much to pay for college. When we consider that the estimated cost of attendance at one of our state’s four-year universities is over 70% of the median income of the 40% of Arizonans in the lowest income bracket, it is easy to imagine how this factor could be discouraging to families who have not developed a full picture of the ways that financial aid and need- or merit-based scholarships can allow prepared low-income students to attend our universities.
What will EAO do to change this pattern?

For low-income, minority and first-generation college students to aspire to a four-year degree and be identified as eligible prospects for admission, they need to receive from their families, peers, school personnel and community members more of the high-quality, college-going messages that inspire them to believe college is possible. This will empower them to take the steps to prepare appropriately.

Given EAO’s understanding of the complex circumstances facing low-income and minority students, and our position in the Division of Student Affairs at The University of Arizona, there is a significant opportunity for us to harness the will and resources of UA departments and students, school districts, community partners and students and families themselves. This will encourage development of college aspirations and the family, school and community support needed to realize those dreams. We will focus our expertise and resources to advance the following five priorities at the University, and among schools, families, students and community partners:

Supporting a college going culture within schools and the community

We will encourage Arizona schools to define their success in terms of improvements in the numbers of students who earn diplomas that reflect readiness to enter four-year degree programs. We will also encourage schools to educate staff in the ways a focus on college-readiness also supports achievement of state education standards-based metrics. We will support professional development and other interventions designed to increase the number of college-going messages all students encounter during the school day and in their communities.

Educating students about postsecondary options and the value of preparing for a 4-year degree

We will provide and support opportunities for students to develop an understanding of their options after high school, and how different options are tied to expected individual and societal benefits. We will emphasize how their high school preparation can earn them valuable scholarships when they apply to college.

Engaging families

To serve as allies in setting high expectations for students, parents who have not attended college themselves need accurate information about their children’s options, university requirements, and the availability of financial aid. We will engage families to help them understand the value of a college education, the important role they play in advocating for college preparatory coursework for their children, and how affording a 4-year degree can be possible, regardless of family income.

Fostering career aspirations and personal discovery

We will support efforts that inspire students to discover academically-centered interests and the ways that 4-year degrees can open connections between those interests and a variety of career paths.

Connecting students with college-bound peers

We will encourage and support opportunities for students to interact with other peers around activities that encourage college planning and preparation.

Our Indicators of Change

In order to measure the effectiveness of our efforts within partner schools, we will track the following three indicators over the next three to five years:

- Evidence that key college preparation indicators, such as completion of the “Sweet 16” courses, college enrollment, admissions assessment test scores and scholarships awarded, are becoming internal measures of success and learning at partner schools.
- An increase in the number of 9th and 10th grade students who complete Algebra I, Geometry and Algebra II.
- An increase in the number of students taking PSAT, SAT and ACT tests at partner schools.
Endnotes


2. NCHEMS Emerging Triangle report, May 2007, p. 15, based on U.S. Census Data


A Theory of Change is a guiding document for the Office of Early Academic Outreach’s strategic efforts to increase access to a four-year degree for low-income, minority and first generation students in the State of Arizona.

Established EAO Programs and Events
Mathematics, Engineering, Science Achievement (MESA)
College Knowledge for Parents
College Academy for Parents (CAP)
Tucson GEAR UP Project
Algebra Academy
Native American Science and Engineering Program (NASEP)

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Rising to the Surface
THE EAO THEORY OF CHANGE

Much of the focus on college access has to do with ensuring that high school seniors from first-generation, low-income and minority backgrounds understand and complete processes of admission and financial aid. However, these steps on the path to college are only the tip of the iceberg for these students. EAO focuses on the underlying foundation of college aspirations and college preparation steps that take place before the senior year. So that more students will rise to the surface as prospects for 4-year college admissions and scholarships, we work with students, families, schools and communities to clarify the sometimes murky messages about college and the educational policies in which these students find themselves submerged.