University of Texas El Paso Uses EduGuide to Increase STEM Persistence in Minority Students

An evaluation by a major university found that EduGuide contributed to significant gains in key indicators of student persistence in STEM fields. The evaluation was part of a federal grant to address critical needs in STEM education.

A national Joint Working Group found a continuing major gap at every level in college STEM degree attainment for Hispanic, African-American and Native American students. This became a critical talent pipeline challenge at the University of Texas El Paso campus (UTEP) where 9-in-10 UTEP students are minority. For instance, STEM students at El Paso Community College were less likely to be retained in STEM fields, more likely to switch to a non-STEM field and less likely to transfer to a STEM field at UTEP. To address this issue, UTEP and its partners won a federal grant to restructure their STEM supports and to use EduGuide to increase student persistence as part of their STEMGrow initiative.

UTEP’s selection of EduGuide was based in part on prior research which found that non-cognitive, social-emotional factors (such as the sense of purpose and mindset skills that EduGuide builds) play a vital role in predicting students’ first-year performance in college engineering programs. As Ryan Senkpeil and Edward Burger found, student’s past academic performance alone can’t always adequately predict how they will handle the challenges of a new level and a new environment, leading them to conclude that, “changing students’ non-cognitive profiles can lead to noticeable changes in their academic performance.”

As part of the grant, UTEP embedded EduGuide in engineering courses. In the syllabus, students were simply asked to complete 10 online EduGuide activities for the semester to equip them to be more successful in their courses and career. Students could complete the activities in an average of 15 minutes on their phone or other device at their own pace during the semester. As they did so professors, peer mentors and support staff could respond back to them with coaching comments to build a deeper sense of belonging and to encourage their personal growth.

www.EduGuide.org
An evaluation of UTEP’s use of EduGuide as part of their STEMGrow initiative found promising results:

1. STEMGrow students experienced an increase verses comparison students in their capacity to persist in STEM studies.
2. STEMGrow students experienced a gain on the Grit Scale vs comparison students.
3. STEMGrow students reported growth on multiple non-cognitive mindsets and skills as detailed below.

The UTEP STEMGrow EduGuide evaluation concluded:

“The degree to which the STEMGrow cohort students perceived their significant growth in 14 vital areas directly and empirically associated with academic achievement and college success is a major finding. The assessments offer a compelling insight to the pervasive impact of EduGuide strategies, activities, and resources in enhancing the comprehensive academic readiness of students (especially amongst minority students with little or no history of college attendance and completions).”

Of the 14 factors measured, the most highly reported areas for considerable growth were:

1. More Curious to Learn New Things
2. Get Over Setbacks Quicker
3. Listen Better to Feedback
4. Complete More Schoolwork
5. Encourage and Mentor Others More

Following a presentation of the results at a national college success conference, lead evaluator Dr. Kwame Opuni of the University of Houston commented, “I have been involved in assessing student progress in a lot of programs over the last 20 years and generally I don’t see a lot of impact that is substantial or significant with educational programs. But with EduGuide, I was very surprised as one of the few programs that I have seen that have had a major impact within just one semester . . . I didn’t really think I would see such results so quickly . . . I was superbly impressed.” See video interview.