

ACUE-Certified Faculty Lead to Sustained Improvement in Student Achievement

ACUE-Certified Faculty Linked to Higher Grades and Lower DFW Rates Across Texas A&M System Campuses

Introduction

Between fall 2022 and spring 2023, faculty across the Texas A&M System participated in ACUE certification courses designed to enhance teaching effectiveness. This evaluation examines the impact of ACUE certification on student outcomes at eight campuses across three time points: before (fall 2021–spring 2022), during (fall 2022–spring 2023), and after (fall 2023–spring 2024) faculty participation in ACUE courses. The study analyzed data from 4,880 course sections taught by 712 faculty members, with a total sample of 118,357 non-unique student enrollments, with 68 faculty, 23,516 students, and 876 course sections in the ACUE group.

Key Findings

The evaluation revealed significant and sustained improvements in student outcomes associated with ACUE certification across the Texas A&M System.

Reduced DFW Rates: Students taught by ACUE-certified faculty experienced a significantly larger decrease in DFW rates in the year following certification ($b = -0.14$, $p = .003$) than students in comparison sections.

- Students taught by ACUE-certified faculty experienced a significant 12% percent decrease, declining from 21.8% at baseline to 19.2% in the post period.
- The impact on DFW rates translates to approximately 145 fewer students receiving D or F grades or withdrawing than would otherwise be expected had faculty not become ACUE-certified.

Increased Average Grades: Average grades for students of ACUE-certified faculty improved significantly more than among students in comparison sections during the certification year ($b = 0.04$, $p = .043$), with even greater gains in the year after certification ($b = 0.14$, $p < .001$), rising from 2.69 at baseline to 2.86 in the year after certification.

Greater Impact on Student Subgroups: Male students of ACUE-certified faculty saw significantly larger grade increases during the ACUE course year ($b = 0.10$, $p = .018$) compared to female students, while Black/African American students of ACUE-certified faculty experienced larger improvements in the year following certification ($b = 0.21$, $p = .038$) compared to White students.

Methods

To ensure accurate comparisons between ACUE and non-ACUE faculty, Coarsened Exact Matching (CEM) was employed. This method matched course sections based on department, course level, and faculty tenure status, ensuring comparable instructional contexts. This matching process helped isolate the effects of the ACUE Framework from other instructional or contextual differences.

A Difference-in-Difference (DID) model was used to estimate the impact of ACUE certification on student outcomes over three time periods (before, during, and after certification). This approach enabled us to measure the impact of ACUE certification by comparing shifts in student outcomes over time between students taught by ACUE-certified faculty and those taught by non-certified faculty. The analysis controlled for faculty demographics (gender, race/ethnicity, tenure status, and instructional status), student demographics (gender, race/ethnicity, age, international status, college generational status, class standing, and student status), and course characteristics (format, section size, campus, and match weighing).

Conclusions

The findings demonstrate that students taught by ACUE-certified faculty showed sustained improvements over time, with larger improvements in average grades and decreases in DFW rates compared to those taught by non-ACUE faculty. These trends were particularly strong among male and Black/African American students. These results provide strong evidence that the ACUE Framework effectively improves academic success for all students.