

Positive Impact of ACUE Certified Faculty on Students' Grades, Passing, and DFW Rates at the University of Arkansas Pulaski Technical College



Analyses show significant effects on students' likelihood of passing courses, likelihood of receiving DFW grades, and average course grades when taught by ACUE-credentialed faculty.

At the University of Arkansas Pulaski Technical College (UAPTC), one cohort of faculty completed the ACUE course in Effective Teach Practices during the spring 2018 semester; an additional cohort of faculty completed the course during the 2018-2019 academic year. Course outcomes were analyzed for the 15,580 non-unique enrollments of students taught by the first cohort of ACUE faculty and for the 12,994 non-unique enrollments of students taught by the second cohort of ACUE faculty. For the initial cohort, there was a significant effect of ACUE on students' likelihoods of passing courses and receiving DFW grades; the effect on DFW grades was greater for Black students. For the second cohort, there was a significant effect of ACUE on students' likelihood of receiving DFW grades and average course grades; the effects were greater for Hispanic/Latino students.

Key Findings: Cohort A (2017-2018)

★ Passing:

There was a significant effect of ACUE on the likelihood of students passing courses in the post time period, $p = .009$, $OR = 1.25$, controlling for faculty and student demographics and overall changes that occurred at UAPTC.

- The predicted probability of passing for students of ACUE faculty was 3.2 percentage points higher in the post time period than otherwise expected had faculty not earned the credential.
- Results suggest that an additional 120 students passed their courses.

★ DFW:

There was a significant effect of ACUE on the likelihood of students receiving DFW grades in the post time period, $p = .014$, $OR = .85$, controlling for faculty and student demographics and overall changes that occurred at UAPTC.

- The predicted probability of earning a DFW grade for students of ACUE faculty was 3.4 percentage points lower in the post time period than otherwise expected had faculty not earned the credential.
- Results suggest that 145 fewer students received DFW grades in their courses.
- In follow-up analyses, results show that the impact of ACUE on students' DFW rates was significantly greater among Black students, $p = .027$, $OR = .73$, relative to White students.
- The predicted probability of earning a DFW grade for Black students of ACUE faculty was 7 percentage points lower in the post time period than would have been otherwise.

★ DFW:

There was a significant effect of ACUE on students' likelihood of receiving DFW grades in both the during and post time periods, p 's < .001, controlling for faculty and student demographics and overall changes that occurred at UAPTC.

- The predicted probability of earning a DFW grade for students of ACUE faculty was 5.6 percentage points lower in the during time period and 5.2 percentage points lower in the post time period than otherwise expected had faculty not earned the credential.
- Results suggest that 250 fewer students in the during time period and 201 fewer students in the post time period received DFW grades in their courses.
- In follow-up analyses, results show that the impact of ACUE on students' DFW rates in the post time period was significantly greater for Hispanic/Latino students relative to White students, $p = .017$, $OR = .38$.

★ Grades:

There was a significant effect on students' course grades in both the during and post time periods, p 's < .003, controlling for faculty and student demographics and overall changes that occurred at UAPTC.

- Average grades were .14 grade points higher in 2018-2019 (2.65 instead of 2.51 on a 4.0 scale) and .18 grade points higher in 2019-2020 (2.79 instead of 2.61) among course sections taught by ACUE faculty than would have been otherwise.
- In follow-up analyses, results show that the impact of ACUE on students' course grades in the post time period was significantly greater for Hispanic/Latino students relative to White students, $p = .031$.

Methodology

These analyses were conducted at the student enrollment level for each cohort of ACUE faculty separately. For cohort A (spring 18), the sample comprised 26,502 student enrollments, including 8,461 non-unique student enrollments from 451 sections taught by ACUE faculty and 6,015 non-unique student enrollments from 326 matched sections during the baseline time period (fall 2016-fall 2017); 2,734 non-unique student enrollments from 145 sections taught by ACUE faculty and 1,843 non-unique student enrollments from 101 matched sections during the ACUE course (spring 2018); and 4,385 non-unique student enrollments from 236 sections taught by ACUE faculty and 3,064 non-unique student enrollments from 171 matched sections during the post-ACUE time period (fall 2018-spring 2019). For the cohort B (fall 2018-spring 2019), the sample comprised 23,163 student enrollments, including 4,647 non-unique student enrollments from 258 sections taught by ACUE-credentialed faculty and 3,743 non-unique student enrollments from 208 matched sections during the baseline time period (fall 2017-spring 2018); 4,469 non-unique student enrollments from 255 sections taught by ACUE-credentialed faculty and 3,464 non-unique student enrollments from 196 matched sections during the ACUE course (fall 2018-spring 2019); and 3,878 non-unique student enrollments from 218 sections taught by ACUE-credentialed faculty and 2,962 non-unique student enrollments from 170 matched sections during the ACUE course (fall 2019-spring 2020).

At UAPTC, passing marks included A, B, C, and D; and DFW marks included D, F, NC, W, WC, and WX. For outcomes on final course grade, course grades were converted from an alphabetic scale to a numeric equivalent (A = 4, B = 3, C = 2, D = 1, F = 0). Students who withdrew from a course before receiving a final grade or had grades that could not be converted to a numeric scale (e.g., P) were not included in analyses when course grades were used as an outcome. Analyses controlled for time period, faculty characteristics (gender, years at university, full time status), course format (online/hybrid vs. in-person, enrollment count), and the student characteristics such as race/ethnicity, gender, Pell eligibility, college generational status, international student status, and class standing.