

Average Grades Increased in Course Sections Taught by ACUE-Credentialed Faculty at Purdue University Northwest



Average course grades increased in course sections taught by ACUE faculty in the year after faculty earned their ACUE credential.

At Purdue University Northwest (PNW), one cohort of faculty earned their ACUE credential in the 2018-2019 academic year. An analysis of 1,403 course sections finds that the average course grades in course sections taught by the ACUE-credentialed faculty increased in the year after faculty earned an ACUE credential. The increase was at a significantly higher rate than in matched course sections over the same time.

The average course grades in course sections taught by ACUE-credentialed faculty were significantly higher in the year after faculty earned their credential when compared to the baseline period, $p = .001$.

Key Findings:

★ Grades:

The average grade for sections taught by ACUE faculty increased by approximately .16 points, on a 4.0 scale, between the 2017-2018 and 2019-2020 academic years.

- There was no evidence of an increase in average course grades for matched course sections during the same time period, $p = .162$.
- This resulted in a significant interaction between faculty type and year, $p = .031$, indicating that the increase in average course grades for sections taught by ACUE faculty was significantly greater than the increase in average course grades for matched sections.
- Even after adjusting for course level and instructor demographics as well as overall improvements that occurred at PNW, average grades were .16 grade points higher in 2019-2020 among sections taught by ACUE faculty than would have been otherwise—3.30 instead of 3.14 on a 4.0 scale.

Methodology

The focus of this analysis was the 27 PNW faculty who earned an ACUE credential during the 2018-2019 academic year

(Cohort B). Coarsened Exact Matching (CEM) was implemented to match course sections based on course subject, course level, academic term, and faculty rank. There were 418 (out of 495) course sections taught by ACUE faculty that were matched based on the matching criteria, and each course section could be matched to multiple sections taught by non-ACUE faculty (i.e., one-to-many).

Data were aggregated and analyzed at the course-section level using difference-in-differences with normalized CEM weights. The analytic sample contains 1,403 course-section records, representing 133 course sections taught by ACUE faculty and 355 matched sections during the baseline time period (2017-2018), 137 course sections taught by ACUE faculty and 344 matched sections during the ACUE course (2018-2019), and 148 course sections taught by ACUE faculty and 286 matched sections during the post-ACUE time period (2019-2020).

Methodology (continued)

Course grades were converted from an alphabetic scale to a numeric equivalent (A = 4, B = 3, C = 2, D = 1, F = 0). Courses taught during the summer, independent study courses, course sections with 5 or fewer student enrollments, and courses taken Pass/Fail were dropped from the analysis prior to matching. Additionally, 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 considered in calculations of average course grades.

Section-level control variables included the number of students enrolled. Faculty-level control variables included gender and years of teaching experience at PNW. These variables were included because of their significant relationship with ACUE status and average grades.