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IMPROVED LEARNING AT DEMOCRACY'S COLLEGE:

Findings from Miami Dade College, Part B

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ABOUT ACUE

In an effort to catalogue the evidence-based teaching practices that improve student achievement, ACUE reviewed over 300 citations from the scholarship of teaching and learning and engaged with teaching and learning experts across the country to develop its Effective Practice Framework[®]. The Framework was independently validated by the American Council on Education (ACE) and serves as a consensus statement of the teaching skills and knowledge that every college educator should possess in order to teach effectively, regardless of discipline. ACUE developed and offers online courses in effective teaching practices that are fully aligned to the Framework's five major units of study: Designing an Effective Course, Establishing a Productive Learning Environment, Using Active Learning Strategies, Promoting Higher Order Thinking, and Assessing to Inform Instruction and Promote Learning. ACUE's courses on effective college teaching recommend over 200 evidence-based teaching approaches and are certified by Quality Matters. To satisfy course requirements, faculty engage with content, are required to implement evidence-based practices, and write rubric-aligned reflections on their implementation, including citing changes in student behaviors. Faculty who satisfy course requirements for at least 25 modules earn a Certificate in Effective College Instruction endorsed by ACE.

EXECUTIVE SUMMARY

Our evaluation showed that courses taught by faculty who earned their credential during the spring 2018 semester **had significantly higher** average course grades than courses taught by the same faculty in the prior semester.

Several recent evaluation studies have found positive effects on student outcomes, however, these evaluation studies were conducted with the inaugural cohorts of partner schools with full academic year implementations. To increase the generalizability of evaluation findings, it is important to examine the effect of ACUE partnerships across a variety of types of institutions, student characteristics, and implementations.

The evaluation outlined in this report was conducted at Miami Dade College (MDC), a large, public college in an urban setting, where three cohorts of faculty earned their credential in effective college instruction from ACUE during the spring 2018 semester, marking two years of MDC's partnership with ACUE. The evaluation focuses on student impact, specifically course completion and grades. We evaluated change in course completion rates and grades for courses taught by faculty who earned their credential in spring 2018 and for all courses in the same disciplines that were taught by non-credentialed faculty.

Our evaluation showed that courses taught by faculty who earned their credential during the spring 2018 semester had significantly higher average course grades than courses taught by the same faculty in the prior semester. Specifically, average grades in courses taught by these faculty improved from 2.84 on a 4.0 scale in the fall 2017 semester to 3.03 in the spring 2018 semester. Furthermore, there was no significant improvement among the comparison courses during the same time period. This evaluation was completed while faculty were engaged in and finishing the requirements necessary to earn their ACUE credential.

Improved Learning at Democracy's College: Findings from Miami Dade College, Part B

The Association of College and University Educators (ACUE) developed an accountability framework in order to conduct evaluations of its partnerships with colleges and universities where faculty are credentialed in effective college instruction through ACUE's courses in effective teaching practices (see MacCormack, Snow, Gyurko, & Candio Sekel, 2018). This accountability framework has six levels of evaluation, from faculty engagement through institutional outcomes. Several recent evaluation studies have found positive effects on student engagement (Level 4; Morrison, Ross, Morrison, & Reid, 2017; Morrison, Wilson, Ross, Wolf, & Latham, 2017) and course outcomes (Level 5), specifically rates of student success (Lawner & Snow, 2018), course completion rates (Lawner, Snow, MacCormack, & Waltje, 2019), and average grades (Lawner, Snow, & Burt, 2019).

All of these evaluation studies were conducted with the inaugural cohorts of partner schools and most with full academic year implementations. To increase the generalizability of evaluation findings, it is important to examine the effect of ACUE partnerships across not only a variety of types of institutions and student characteristics (see Lawner, Snow, & Burt, 2019), but

also across various implementations, including semester-long courses, later cohorts, and larger implementations with multiple simultaneous cohorts.

The evaluation outlined in this report was conducted at Miami Dade College (MDC), a large, public college in an urban setting. MDC is one of ACUE's earliest partners, and their two initial cohorts have already been evaluated (Morrison, Ross, et al., 2017; Morrison, Wilson, et al., 2017). The current evaluation focuses on MDC's spring 2018 cohorts, which are their sixth, seventh, and eighth cohorts to earn the ACUE credential. MDC recruits faculty to participate in their ACUE cohorts through an open invitation to all faculty to participate. Typically, faculty sign-ups have exceeded the number of open spots, and MDC has chosen in those circumstances to give priority to full-time faculty. In total, 78 faculty at MDC earned their ACUE credential during the spring 2018 semester. This evaluation focused on student course outcomes and aimed to replicate prior findings and advance claims on generalizability with a larger school, that also varies in its implementation, including multiple cohorts.



Participants and Procedures

This evaluation focused on the 78 faculty who earned their credential during the spring 2018 semester. The analysis examines change over time in courses taught by ACUE-credentialed faculty and compares those courses to all other courses in the same disciplines that were taught by non-credentialed faculty. The MDC Office of Institutional Effectiveness provided course-level data for all sections taught by those 78 faculty during the 2017-2018 academic year, as well as course-level data for all sections in the same disciplines that were taught by other faculty during the 2017-2018 academic year. Any courses with fewer than 10 students enrolled were not included in the dataset. Sections taught by faculty who earned their credential prior to the spring 2018 semester were removed from the comparison dataset. Nine continuing education courses in which all enrolled students withdrew were also removed from the comparison dataset prior to analysis.

This resulted in an analytic dataset with 225 ACUE courses (108 for the fall and 117 for the spring) that had 12,603 non-unique student enrollments (6,473 in the fall and 6,130 in the spring) and 1,307 comparison courses (634 in the fall and 673 in the spring) that had 326,365 non-unique student enrollments (173,149 in the fall and 153,216 in the spring).



Measures

Course data included both course completion and student grades for all students who did not drop the course before the end of the drop deadline. Course completion encompasses all students who did not withdraw from a course, regardless of their final grade in the course. Course grades were examined based on pass rates, success quotient, and average grades. The pass rate is based on the proportion of all students enrolled in a course who received A, B, C, or S grades. The success quotient is based on the proportion of students who completed a course (i.e., excluding those who withdrew) who receive A, B, C, or S grades. Average course grades were calculated by converting letter grades to a 4.0 scale on which an A is 4.0, B is 3.0, and so on, and then averaging the grades of all students in a course. Since only A through F letter grades can be calculated on this scale, the average for a course excludes students who received all other grades, specifically I, IW, W, P, S, and U grades, and courses that are only grades pass/fail are not included in the analysis of average grades.

Data Analysis Plan

All analyses involved 2 (faculty) x 2 (semester) factorial ANOVAs. The primary effect of interest is the interaction between faculty and semester because that indicates whether the courses taught by ACUE faculty changed over time in a way that is different from the change over time for the comparison courses. This is typical of pretest/posttest control group designs.

Course Completion

There was a significant main effect of faculty $F(1, 1,528) = 34.59, p < .001$, with ACUE courses having a lower completion rate ($M = 92.64\%$, $SD = 8.30\%$) than comparison courses ($M = 95.20\%$, 5.60%). The main effect of semester was not significant, $F(1, 1,528) = 0.96, p = .327$, nor was the interaction between faculty and semester, $F(1, 1,528) = 0.64, p = .425$.

Pass Rates

There was a significant main effect of faculty $F(1, 1,528) = 30.11, p < .001$, with ACUE courses having a lower pass rate ($M = 81.55\%$, $SD = 15.92\%$) than comparison courses ($M = 86.68\%$, 12.38%). The main effect of semester was not significant, $F(1, 1,528) < 0.01, p = .965$, nor was the interaction between faculty and semester, $F(1, 1,528) = 0.13, p = .722$.

Success Quotient

There was a significant main effect of faculty $F(1, 1,528) = 17.88, p < .001$, with ACUE courses having a lower success quotient ($M = 87.56\%$, $SD = 12.88\%$) than comparison courses ($M = 90.75\%$, 9.96%). The main effect of semester was not significant, $F(1, 1,528) = 0.23, p = .635$, nor was the interaction between faculty and semester, $F(1, 1,528) < 0.01, p = .988$.

There was a statistically significant improvement in average grades in courses taught by ACUE-credentialed faculty from the fall 2017 semester, before faculty started the Course in Effective Teaching Practices, to the spring 2018 semester, when faculty earned their credential.



Average Grades

The improvement in average grades during the same period among all courses in the same disciplines taught by non-credentialed faculty was not statistically significant.

There was a significant main effect of faculty $F(1, 1,485) = 30.25, p < .001$, with ACUE courses having lower average grades ($M = 2.94, SD = 0.59$) than comparison courses ($M = 3.15, 0.52$). The main effect of semester was also significant, $F(1, 1,485) = 9.37, p = .002$, with higher grades in the spring 2018 semester ($M = 3.15, SD = 0.53$) than in the fall 2017 semester ($M = 3.09, SD = 0.53$). However, these main effects were qualified by a significant interaction between faculty and semester, $F(1, 1,485) = 4.07, p = .044$. Examining ACUE and comparison courses separately shows a significant main effect of semester among ACUE course, $F(1, 218) = 6.08, p = .014$, with courses taught by credentialed faculty having higher average grades in the spring 2018 semester ($M = 3.03, SD = 0.61$) than in the fall 2017 semester ($M = 2.84, SD = 0.56$). In contrast, there was not a significant main effect of semester among comparison courses, $F(1, 1,267) = 1.93, p = .165$ (see Figure 1).

Course grades by semester and faculty type

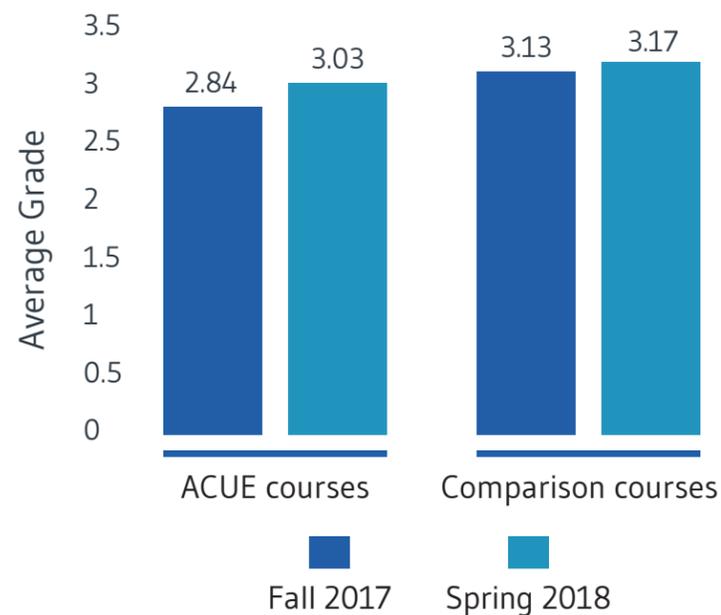


Figure 1

Courses taught by faculty who went on to earn their credential in effective college instruction during the spring 2018 semester performed worse across several student academic outcomes than all other courses in the same disciplines. More importantly, student grades improved significantly between fall 2017 and spring 2018 in the courses taught by credentialed faculty, while there was no significant improvement in the comparison courses. The .19 increase in average course grade is the equivalent of 19 percent of the students in each course, on average—about 128 students total—receiving a full letter grade higher.

These results supplement findings demonstrating the positive impact of ACUE partnerships on students (Lawner, Snow, & Burt, 2019; Lawner, Snow, McCormack, et al., 2019; Lawner & Snow, 2018). Not only do these findings replicate the prior findings from City College of San Francisco (CCSF), which similarly found an improvement in student grades, but in the current evaluation the improvement was among faculty whose courses initially had worse student outcomes, whereas the credentialed faculty at CCSF started off with better student outcomes than their peers (Lawner, Snow, & Burt, 2019). Thus, the current study helps to address some of the concerns regarding faculty self-selection. For example, one critique is that faculty who choose to participate in an ACUE course are likely to be the faculty on a campus who are already committed to their teaching and therefore their student outcomes at baseline are likely to be better than a comparison group. The current evaluation demonstrates that ACUE partnerships can reach the

faculty who have the most room to grow, even without requiring or targeting specific faculty to participate. This evaluation also shows that ACUE is effective for those who start out with worse outcomes, not just for those who are already doing better than their peers.

One limitation of this evaluation is the fact that the data are at the course level, and not the section, instructor, or student level. Thus, it was not possible to examine any differences in faculty or student demographics, nor to control for any such differences that might exist. Given that MDC has prioritized full-time faculty when they were not able to accommodate all interested faculty, there may be demographic differences that should be taken into consideration. In addition, as with the prior evaluations (Lawner, Snow, & Burt, 2019; Lawner, Snow, McCormack, et al., 2019; Lawner & Snow, 2018), this evaluation focuses on outcomes while faculty are engaged in an ACUE course. Future research will examine longer term student outcomes to examine whether benefits are sustained or even increase over time.





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