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ADVANCING ACADEMIC EQUITY AT BROWARD COLLEGE:

*Improved Course Completion and Passing, Particularly
Among Pell-eligible and Black Students*

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ABOUT ACUE

The Association of College and University Educators (ACUE) promotes student success through quality instruction. In partnership with colleges, universities, higher education systems, and associations, ACUE prepares and credentials faculty in the evidence-based teaching practices that improve student achievement and close equity gaps. Numerous and independently validated efficacy studies confirm that students are “more engaged, learn more, and complete courses in greater numbers—more equitably with their peers—when taught by ACUE-credentialed faculty. ACUE’s online, cohort-based credentialing programs are delivered through institutional partnerships and open-enrollment courses endorsed by the American Council on Education (ACE).

ACUE’s programs are based on its Effective Practice Framework, a comprehensive statement of the instructional skills and knowledge that every college educator should possess regardless of discipline. It is supported by more than 300 citations from the scholarship on teaching and learning, was developed with teaching and learning experts, and was independently validated by the ACE. ACUE’s programs address numerous teaching competencies across five major areas of practice: 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. To learn more, visit acue.org.

Across both sets of cohorts at Broward College, there was a significant impact of the ACUE course on students' likelihood of completing and passing their courses.

Several recent studies have found positive effects of the ACUE course on student course outcomes (Hecht, 2019; Lawner & Snow, 2018; Lawner & Snow, 2019; Lawner, Snow, & Burt, 2019; Lawner, Snow, MacCormack, & Waltje, 2019). Although it is important to increase the success of all students, there is particular interest in improving outcomes for groups that are most underrepresented in higher education. This paper examines the impact of the ACUE course on student course outcomes at Broward College, a primarily associate-degree-granting institution where most of the students are Black or Hispanic, nearly half are first-generation college students, and many students receive Pell grants. The studies focus on two sets of ACUE cohorts at Broward College, one that completed the ACUE course during the 2017–2018 academic year and another that completed the course during the 2018–2019 academic year. Both studies examine change in student course outcomes over time—from baseline through the year faculty completed the ACUE course for the 2018–2019 cohorts, and from baseline through the post-ACUE period for the 2017–2018 cohorts—for students of the ACUE faculty compared to students in matched course sections.

Across both sets of cohorts at Broward College, there was a significant impact of the ACUE course on students' likelihood of completing and passing their courses. The time period when these effects occurred differed between the earlier and later cohorts, with the impact on students occurring in the years after faculty completed the ACUE course for earlier cohorts and later cohorts experiencing an impact on their students while they were completing the ACUE course. In addition, the results demonstrated a larger impact on two historically underrepresented groups of students in higher education: low-income students and Black students. Furthermore, the greater impact for these groups led to the closing or narrowing of gaps in course outcomes. The gap in passing courses between Pell-eligible and non-Pell-eligible students of ACUE faculty in the initial cohorts closed, as did the gap in course completion between Black and White students of ACUE faculty in the later cohorts. The gap in passing courses between Black and White students of ACUE faculty in the later cohorts was cut in half.

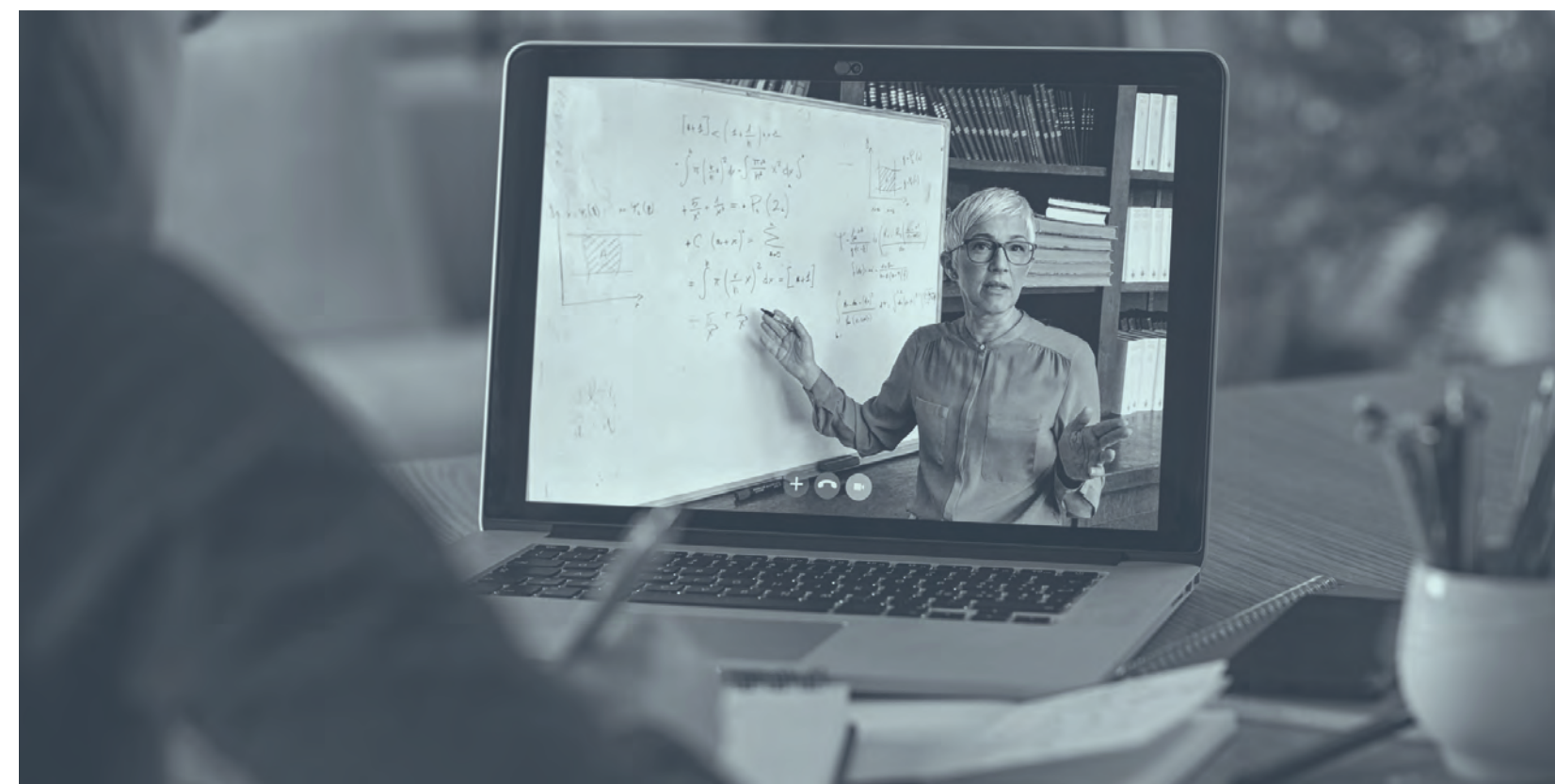
BACKGROUND

The mission of ACUE is to improve student outcomes through quality college instruction (MacCormack et al., 2018). Several recent studies have found positive effects of the ACUE course on student course outcomes (Hecht, 2019; Lawner & Snow, 2018; Lawner & Snow, 2019; Lawner, Snow, & Burt, 2019; Lawner, Snow, MacCormack, & Waltje, 2019). Although it is important to increase the success of all students, there is particular interest in improving outcomes for groups that are most underrepresented in higher education. In addition, the ACUE course includes many instructional practices known to be particularly beneficial for marginalized students (ACUE, 2016), and there is an emphasis throughout the course on growth mindset, which has been shown to contribute to the narrowing of equity gaps in college courses (Canning et al., 2019).

Most of the studies on ACUE to date have examined course-level outcomes (Lawner & Snow, 2018; Lawner & Snow, 2019; Lawner, Snow, & Burt, 2019) or were unable to obtain student demographics (Hecht, 2019), and thus were unable to examine impacts by student subgroups. The one study that was able to explore whether impacts of the ACUE course might be larger for historically disadvantaged student groups was conducted at a four-year university that grants degrees from bachelor's through doctorates (Lawner, Snow, MacCormack, & Waltje, 2019). Thus, it is important to study whether the ACUE course has a differential impact on historically disadvantaged students at a college that primarily grants associate degrees, particularly at a school with a diverse student population.

This paper examines the impact of the ACUE course on student course outcomes at Broward College, a primarily associate-degree-granting institution where most of the students are Black or Hispanic, nearly half are first-generation college students, and many students receive Pell grants. The studies focus on two sets of ACUE cohorts at Broward College, one that completed the ACUE course during the 2017–2018 academic year and another that completed the course during the 2018–2019 academic year. Impacts for these two sets of cohorts are examined separately because a full year of post-course data were available only for the 2017–2018 cohorts at the time of analysis. Both studies examine change in student course outcomes over time—from baseline through the year faculty completed the ACUE course for the 2018–2019 cohorts, and from baseline through the post-ACUE period for the 2017–2018 cohorts—for students of the ACUE faculty compared to students in matched course sections.

This paper examines the impact of the ACUE course on student course outcomes at Broward College, a primarily associate-degree-granting institution where most of the students are Black or Hispanic, nearly half are first-generation college students, and many students receive Pell grants.



Participants and Procedures

2017–2018 Cohorts. ACUE requested student-level course outcome data from Broward College’s Office of Institutional Research for all courses taught from fall 2015 onward by faculty who earned their ACUE credential as part of the two inaugural cohorts at Broward College, as well as matched course sections during the same time period. Because these cohorts earned their credential during the 2017–2018 academic year, data from the 2015–2016 and 2016–2017 academic years are considered baseline data, data from the 2017–2018 academic year are considered to be during the ACUE course, and data from the 2018–2019 and 2019–2020¹ academic years are considered to be post-credential data.

Matched course sections for the courses taught by the ACUE faculty were all other sections of the same courses that were taught by non-ACUE faculty. For this reason, there are many more match sections than ACUE sections and many more match faculty than ACUE faculty in the data set. The data set includes 42,777 non-unique student enrollments² in 1,787 course sections taught by 45 ACUE faculty and 461,835 non-unique student enrollments in 18,119 course sections taught by 1,338 match faculty. See Table 1 for a breakdown of student enrollments and course sections by time period. Recruitment of faculty for these initial ACUE cohorts focused on full-time faculty, and thus there are differences in faculty role between the ACUE faculty and the matched instructors. The majority (62.2%) of ACUE faculty are full-time faculty, whereas the majority (76.5%) of match faculty are part-time faculty. See Figure 1 for more detail.

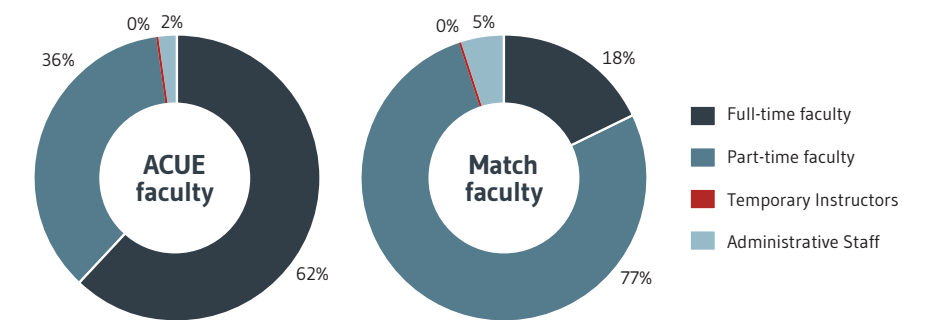
¹Data were received on March 24, 2020, and thus only include courses that were completed at that time. For the 2019–2020 academic year, this includes fall 2019 courses, as well as session II spring 2020 courses, which ended on March 1, 2020.

²Students who audited courses were excluded from all analyses and thus are excluded from the description of the sample.

Number of Student Enrollments and Course Sections by Faculty Type and Time Point for the 2017–2018 Cohorts Sample

Time point	Faculty type			
	ACUE		Match	
	Non-unique student enrollments	Course sections	Non-unique student enrollments	Course sections
Baseline	15,231	669	194,295	7,848
During ACUE	11,463	470	110,841	4,357
Post-ACUE	16,083	648	156,699	5,914

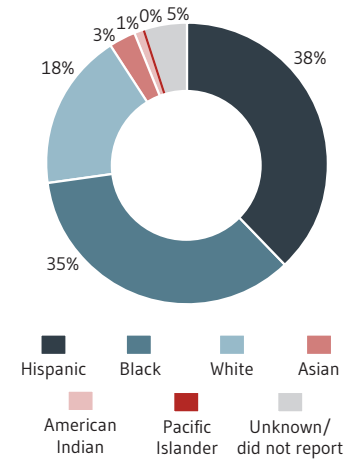
Figure 1
Frequencies of Faculty Roles in the Sample for the 2017–2018 Cohorts



Some students are represented multiple times in the data set because they were enrolled in more than one course that was included.³ There are 112,697 unique students in the data set. Thirteen students were missing all demographic information except for Pell eligibility at all time points, and an additional six students were missing all demographic information except for Pell eligibility for at least some semesters. For those six students, demographics that would be stable across semesters (i.e., race, gender, first-generation college status, and international student status) were filled in based on the data available from other semesters, and when possible, age was calculated from the data available from other semesters.

³Each unique student was included up to 28 times in the data set, with a median of three times

Figure 2
Race/Ethnicity of Students in the Sample for the 2017–2018 Cohorts



To report on student demographics at the unique student level, reported demographics, which sometimes varied by time point, were averaged across each instance that student was represented in the data set. The average age of students in the sample was 23.69 years (SD = 8.04), and the average number of credits earned to date was 25.83 (SD = 24.12). The most common race/ethnicity of students in the sample was Hispanic (37.9%), followed by Black (35.3%), and then White (17.5%); see Figure 2 for more detail. The majority (57.9%) of students in the sample were female, about half (50.8%) were Pell eligible in at least one term, close to half (47.0%) were first-generation college students, and a small proportion were international students (4.3%); see Figures 3–6 for more detail. The demographics of the sample are fairly similar to those for Broward College as a whole.

Figure 3
Gender of Students in the Sample for the 2017–2018 Cohorts

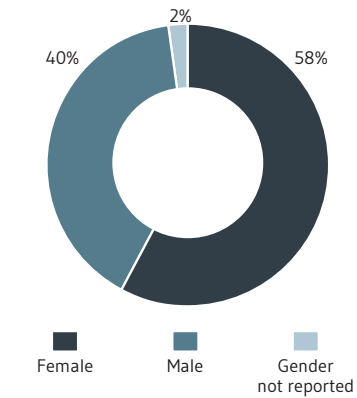


Figure 4
Pell Eligibility of Students in the Sample for the 2017–2018 Cohorts

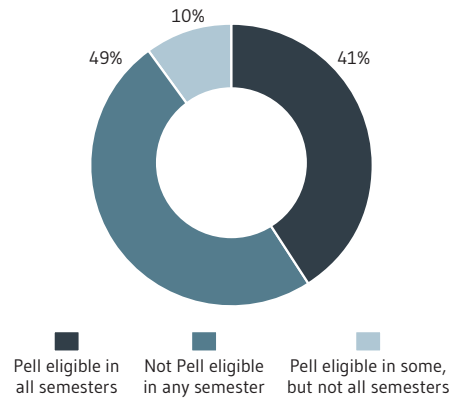


Figure 5
College Generational Status of Students in the Sample for the 2017–2018 Cohorts

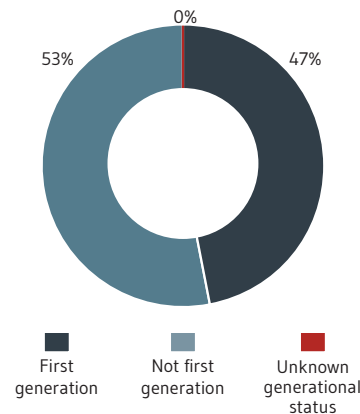
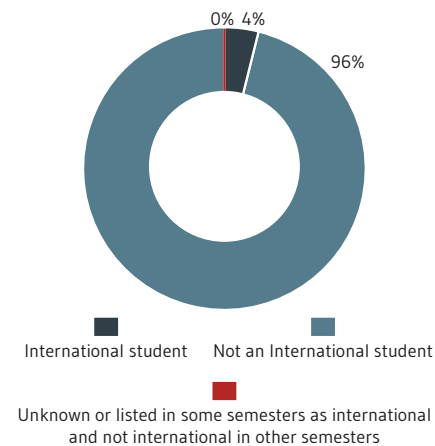


Figure 6
International Status of Students in the Sample for the 2017–2018 Cohorts



2018–2019 Cohorts. ACUE requested student-level course outcome data from Broward College’s Office of Institutional Research for all courses taught from fall 2015 through spring 2019 by faculty who earned their ACUE credential as part of the three 2018–2019 cohorts at Broward College, as well as matched course sections during the same time period. Because these cohorts earned their credential during the 2018–2019 academic year, data from the 2015–2016, 2016–2017, and 2017–2018 academic years are considered baseline data, and data from the 2018–2019 academic year are considered to be during the ACUE course.

Matched course sections for the courses taught by the ACUE faculty were all other sections of the same courses that were taught by non-ACUE faculty. For this reason, there are many more match sections than ACUE sections and many more match faculty than ACUE faculty in the data set. The data set includes 56,022 non-unique student enrollments⁴ in 2,440 course sections taught by 64 ACUE faculty and 507,186 non-unique student enrollments in 20,390 course sections taught by 1,576 match faculty. See Table 2 for a breakdown of student enrollments and course sections by time period. Recruitment of faculty for the cohorts focused primarily on full-time faculty, and thus the majority (60.9%) of ACUE faculty are full-time faculty, whereas the majority (75.2%) of match faculty are part-time faculty. See Figure 7 for more detail.

⁴ Students who audited courses were excluded from all analyses and thus are excluded from the description of the sample.

Number of Student Enrollments and Course Sections by Faculty Type and Time Point for the 2018–2019 Cohorts Sample

Table 2

Time point	Faculty type			
	ACUE		Match	
	Non-unique student enrollments	Course sections	Non-unique student enrollments	Course sections
Baseline	40,757	1,801	389,198	15,893
During ACUE	15,265	639	117,988	4,497

Figure 7
Frequencies of Faculty Roles in the Sample for the 2018–2019 Cohorts

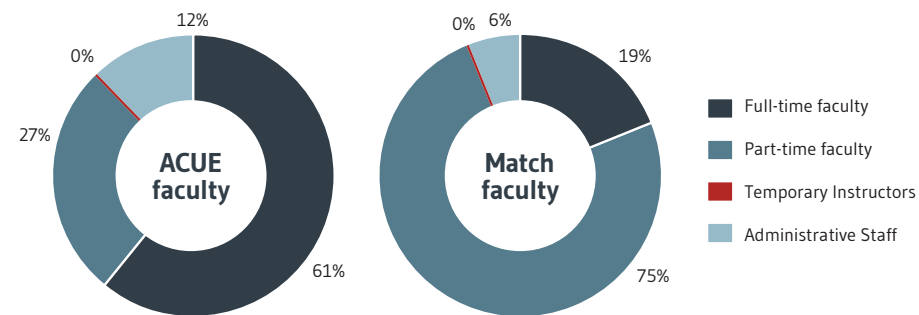
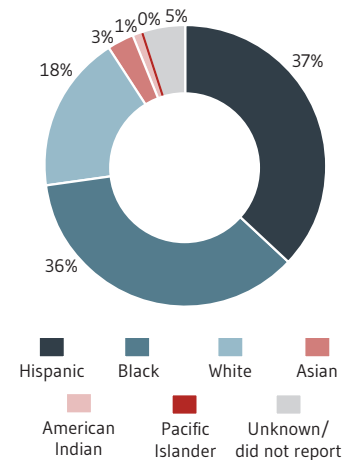


Figure 8
Race/Ethnicity of Students in the Sample for the 2018–2019 Cohorts



Some students are represented multiple times in the data set because they were enrolled in more than one course that was included.⁵ There are 110,813 unique students in the data set. Sixteen students were missing all demographic information except for Pell eligibility at all time points, and an additional seven students were missing all demographic information except for Pell eligibility for at least some semesters. For those seven students, demographics that would be stable across semesters (i.e., race, gender, first-generation college status, and international student status) were filled in based on the data available from other semesters, and when possible, age was calculated from the data available from other semesters.

To report on student demographics at the unique student level, reported demographics, which sometimes varied by time point, were averaged across each instance that

⁵Each unique student was included up to 32 times in the data set, with a median of four times.

Figure 9
Gender of Students in the Sample for the 2018–2019 Cohorts

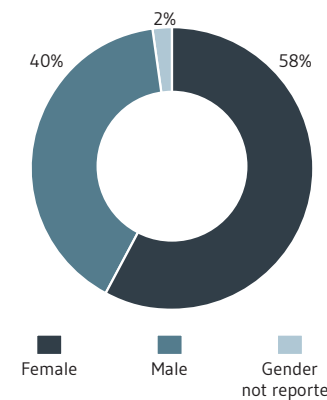


Figure 10
Pell Eligibility of Students in the Sample for the 2018–2019 Cohorts

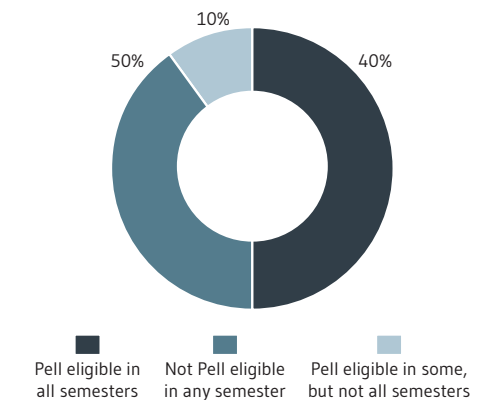
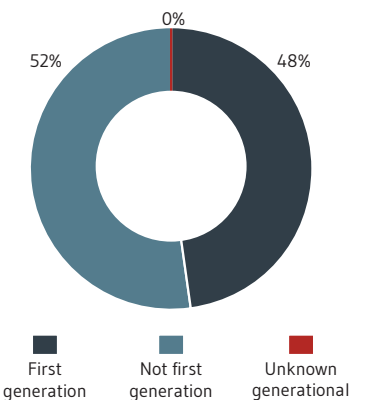
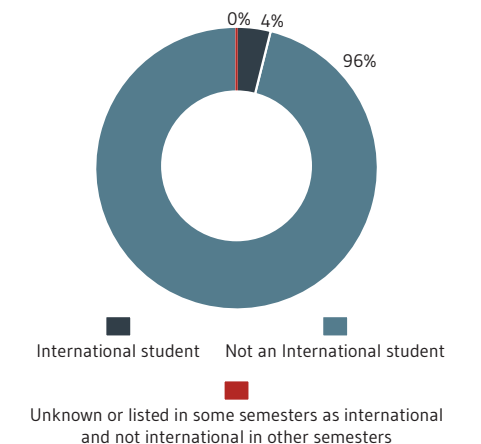


Figure 11
College Generational Status of Students in the Sample for the 2018–2019 Cohorts



student was represented in the data set. The average age of students in the sample was 24.24 years (SD = 8.37), and the average number of credits earned to date was 26.98 (SD = 25.53). The most common race/ethnicity of students in the sample was Hispanic (37.2%), followed by Black (35.5%), and then White (17.9%); see Figure 8 for more detail. The majority (58.0%) of students in the sample were female, about half (50.1%) were Pell eligible in at least one term, close to half (47.5%) were first-generation college students, and a small proportion were international students (4.2%); see Figures 9–12 for more detail. The demographics of the sample are fairly similar to those for Broward College as a whole.

Figure 12
International Status of Students in the Sample for the 2018–2019 Cohorts



Measures

Course outcomes were assessed in terms of course completion and passing. Course completion was defined as all students who did not withdraw from a course, regardless of whether they received a passing final grade in the course. Passing was based on Broward College's definitions of successful and marginal grades, specifically receiving an A, B, C, D, CR (credit), S (satisfactory), and PR (progressing at a satisfactory pace but has not completed the course). Grades of F, I (incomplete), U (unsatisfactory), and W (withdrawal) were considered to be nonpassing grades.

RESULTS

2017–2018 Cohorts

Data Analysis Plan. Analyses were conducted using hierarchical logistic regression, which requires that all categorical variables be dummy coded. All faculty and student demographic variables were entered in Step 1. Faculty role was simplified to full-time faculty, part-time faculty, and all others, which combined temporary instructors and administrative staff, both of whom were represented in small numbers in the sample. Full-time faculty were used as the reference group because recruitment of ACUE faculty focused on that group. Because the vast majority of students were Hispanic, Black, or White, race/ethnicity was simplified to four categories, with the fourth category combining Asian, Pacific Islander, American Indian, and unknown/unreported race/ethnicity. Although the fourth category was the highest performing for both course completion and passing, it was not used as the reference group because it was a mix of several races/ethnicities, and therefore findings would be more difficult to interpret. Instead, White students, who were the second highest performing group, were used as the reference group. For gender, female was used as the reference group because the majority of students were female. College generational status was simplified to be first generation versus not first generation/unknown college generational status. International student status was simplified in the same way.

Main effects for faculty type (ACUE versus match) and time point (baseline versus during ACUE versus post-ACUE) were entered in Step 2. Two-way interactions between faculty type and time point were entered in Step 3. Analyses were initially conducted with the baseline time period as the reference group so that time period effects, including interactions, would indicate change from baseline. If there were significant effects for the post-ACUE time period,

analyses were then conducted with the during-ACUE time period as the reference group to examine the interaction between faculty type and the post-ACUE time period, which would indicate whether there was significant change from during to after the ACUE course.

The primary effects of interest are the two-way interactions between faculty type and time period because this would indicate that the change over time was different for students taught by ACUE faculty compared to students in matched sections. When those interactions were significant, follow-up analyses were conducted to examine the main effect of time among students taught by ACUE faculty and separately among students taught by match faculty.

There was also a particular interest at Broward College in understanding whether impacts are larger for students from marginalized groups. Thus, when an interaction between faculty type and time period was significant, additional analyses were conducted that separately examined interactions with race/ethnicity, Pell eligibility, and college generational status. In these analyses, the effect of interest is the three-way interaction between the demographic variable, time period, and faculty type. When that three-way interaction was significant, follow-up analyses were conducted that examined the interaction between the student demographic variable and time period within each faculty group to understand whether the three-way interaction was driven by the ACUE faculty or matched sections. When the two-way interaction between time period and student demographic was significant among students taught by ACUE faculty, analyses were conducted to examine change over time within each combination of student demographic and faculty type and to explore whether any gaps by student demographics were closed.

Because all of the analyses involve many effects, the results below focus on the primary effects of interest in each analysis, with all effects reported in tables in Appendix A.

Course Completion. The hierarchical logistic regression on course completion with baseline as the reference group showed a significant interaction between faculty type and the post-ACUE time point, $b = .19$, $SE = .04$, $OR = 1.21$, 95%

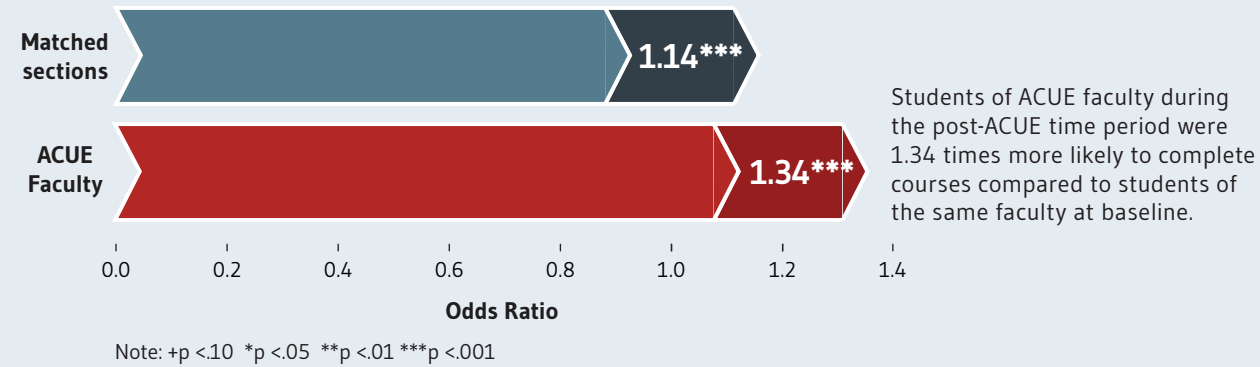
CI [1.11, 1.32], $p < .001$. The interaction between faculty type and the during-ACUE time point was not significant, $b = .00$, $SE = .05$, $OR = 1.00$, 95% CI [0.91, 1.10], $p = .960$. When the reference group was changed to during ACUE, the interaction between faculty type and post-ACUE time point was significant, $b = .19$, $SE = .05$, $OR = 1.21$, 95% CI [1.10, 1.33], $p < .001$, while the interaction between faculty type and baseline was not significant, $b = .00$, $SE = .05$, $OR = 1.00$, 95% CI [0.91, 1.10], $p = .960$, indicating that the effect of ACUE on change in course completion occurred after the ACUE course. Thus, follow-up analyses, including analyses on differences in effects by student demographics, focus specifically on exploring the interaction between faculty type and the post-ACUE time point, compared to baseline.

Follow-up analyses examining students of ACUE faculty and students of matched faculty separately shows likelihood of course completion improving over time for both groups, but the magnitude of that improvement was larger among students taught by ACUE faculty. Students taught by ACUE faculty were 1.34 times more likely to complete courses during the post-ACUE time period compared to the baseline time period, $b = .29$, $SE = .05$, $OR = 1.34$, 95% CI [1.23, 1.47], $p < .001$, while in matched sections, course completion was 1.14 times more likely during the post-ACUE time period compared to the baseline time period, $b = .13$, $SE = .01$, $OR = 1.14$, 95% CI [1.11, 1.16], $p < .001$ (see Figure 13).



Figure 13

Odds Ratios for Likelihood of Completing Courses During the Post-ACUE Time Period Compared to Baseline by Faculty Type for 2017-2018 Cohorts



Interactions With Race/Ethnicity. Analysis adding interactions with race/ethnicity found a marginally significant interaction between Black students, faculty type, and post-ACUE time point, $b = .22$, $SE = .13$, $OR = 1.25$, 95% CI [0.96, 1.62], $p = .097$. However, follow-up analyses showed that the interaction between Black students and post-ACUE time point was not significant within the ACUE faculty group, $b = .19$, $SE = .13$, $OR = 1.21$, 95% CI [0.94, 1.55], $p = .148$, or within the matched sections, $b = -.04$, $SE = .03$, $OR = 0.96$, 95% CI [0.89, 1.02], $p = .201$.

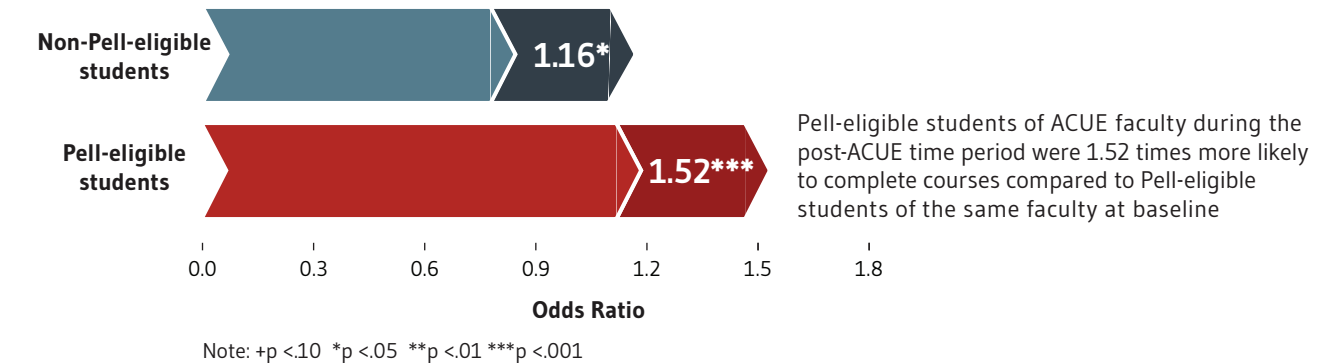
The interactions between Hispanic students, faculty type, and post-ACUE time point, $b = .13$, $SE = .14$, $OR = 1.14$, 95% CI [0.87, 1.49], $p = .341$, and between other race/ethnicity students, faculty type, and post-ACUE time point, $b = .22$, $SE = .20$, $OR = 1.24$, 95% CI [0.84, 1.84], $p = .277$, were not significant.

Interactions With Pell Eligibility. Analysis adding interactions with Pell eligibility found a significant interaction between Pell eligibility, faculty type, and post-ACUE time point, $b = .23$, $SE = .09$, $OR = 1.26$, 95% CI [1.06, 1.50], $p = .010$. Follow-up analyses showed that the interaction between Pell eligibility and post-ACUE time point was significant

within the ACUE faculty group, $b = .23$, $SE = .09$, $OR = 1.26$, 95% CI [1.06, 1.49], $p = .008$, but not within the matched sections, $b = .03$, $SE = .02$, $OR = 1.03$, 95% CI [0.99, 1.08], $p = .191$, indicating that the three-way interaction is driven by differences between Pell-eligible and non-Pell-eligible students within the ACUE faculty group. Thus, we then examined the post-ACUE time point effect among Pell-eligible and non-Pell-eligible students of ACUE faculty separately. Pell-eligible students of ACUE faculty, $b = .42$, $SE = .06$, $OR = 1.52$, 95% CI [1.35, 1.72], $p < .001$, and non-Pell-eligible students of ACUE faculty, $b = .15$, $SE = .07$, $OR = 1.16$, 95% CI [1.01, 1.32], $p = .030$, were both more likely to complete their courses at the post-ACUE time point compared to baseline, but the interaction indicates that the increase was significantly larger for Pell-eligible students compared to non-Pell-eligible students (see Figure 14).

Figure 14

Odds Ratios for Likelihood of Completing Courses During the Post-ACUE Time Period Compared to Baseline Among Students of ACUE Faculty in the 2017-2018 Cohorts by Pell Eligibility



Additional analyses were conducted to examine whether the greater improvement among Pell-eligible students may have decreased or closed any gaps in likelihood of course completion between Pell-eligible students and non-Pell-eligible students within the ACUE group. However, these analyses showed that there was not a significant gap in likelihood of course completion between Pell-eligible and non-Pell-eligible students of ACUE faculty at baseline, $b = -.04$, $SE = .06$, $OR = 0.96$, 95% CI [0.85, 1.08], $p = .500$.

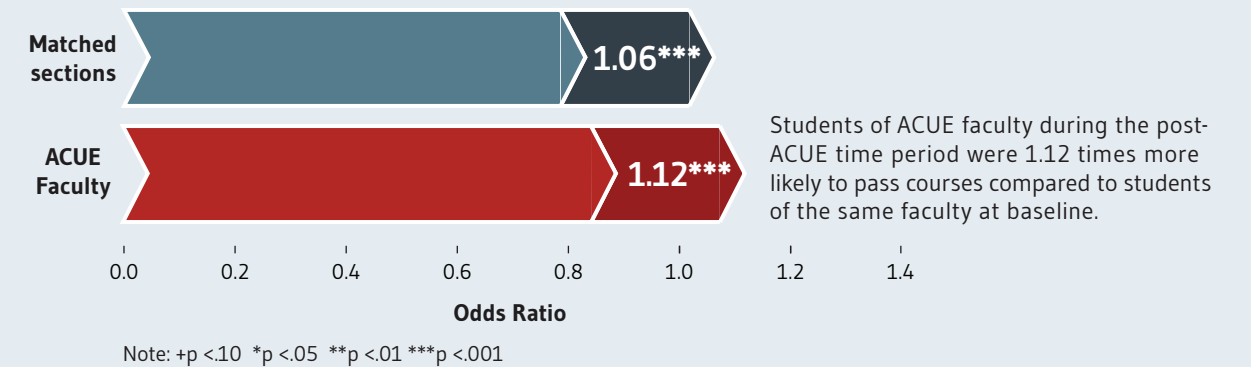
Interactions With College Generational Status. Analysis adding interactions with college generational status found a marginally significant interaction between first-generation students, faculty type, and post-ACUE time point, $b = .15$, $SE = .09$, $OR = 1.16$, 95% CI [0.98, 1.38], $p = .089$. However, follow-up analyses showed that this three-way interaction was driven by a significant interaction between first-generation students and post-ACUE time point within the matched sections, $b = -.05$, $SE = .02$, $OR = 0.95$, 95% CI [0.91, 1.00], $p = .041$, and the two-way interaction between first-generation students and post-ACUE time point was not significant among students of ACUE faculty, $b = .07$, $SE = .09$, $OR = 1.07$, 95% CI [0.91, 1.27], $p = .403$.

Passing. The hierarchical logistic regression on passing courses with baseline as the reference group showed a significant interaction between faculty type and the post-ACUE time point, $b = .12$, $SE = .03$, $OR = 1.13$, 95% CI [1.06, 1.20], $p < .001$. The interaction between faculty type and the during-ACUE time point was not significant, $b = .01$, $SE = .03$, $OR = 1.01$, 95% CI [0.94, 1.08], $p = .869$. When the reference group was changed to during ACUE, the interaction between faculty type and post-ACUE time point was significant, $b = .11$, $SE = .03$, $OR = 1.12$, 95% CI [1.05, 1.20], $p = .001$, while the interaction between faculty type and baseline was not significant, $b = -.01$, $SE = .03$, $OR = 0.99$, 95% CI [0.93, 1.06], $p = .869$, indicating that the effect of ACUE on change in likelihood of passing courses occurred after the ACUE course. Thus, follow-up analyses, including analyses on differences in effects by student demographics, focus specifically on exploring the interaction between faculty type and the post-ACUE time point, compared to baseline.

Follow-up analyses examining students of ACUE faculty and students of matched faculty separately shows likelihood of passing courses improving over time for both groups, but the magnitude of that improvement was larger among students taught by ACUE faculty. Students taught by ACUE faculty were 1.12 times more likely to complete courses during the post-ACUE time period compared to the baseline time period, $b = .12$, $SE = .03$, $OR = 1.12$, 95% CI [1.05, 1.20], $p < .001$, while in matched sections, course

Figure 15

Odds Ratios for Likelihood of Passing Courses During the Post-ACUE Time Period Compared to Baseline by Faculty Type for the 2017-2018 Cohorts



completion was 1.06 times more likely during the post-ACUE time period compared to the baseline time period, $b = .06$, $SE = .01$, $OR = 1.06$, 95% CI [1.04, 1.08], $p < .001$. (see Figure 15).

Interactions With Race/Ethnicity. Analysis adding interactions with race/ethnicity found that the interactions between Black students, faculty type, and post-ACUE time point, $b = .03$, $SE = .10$, $OR = 1.03$, 95% CI [0.86, 1.25], $p = .727$, Hispanic students, faculty type, and post-ACUE time point, $b = .00$, $SE = .10$, $OR = 1.00$, 95% CI [0.83, 1.22], $p = .979$, and between other race/ethnicity students, faculty type, and post-ACUE time point, $b = .07$, $SE = .14$, $OR = 1.08$, 95% CI [0.82, 1.41], $p = .601$, were not significant.

Interactions With Pell Eligibility. Analysis adding interactions with Pell eligibility found a significant interaction between Pell eligibility, faculty type, and post-ACUE time point, $b = .13$, $SE = .06$, $OR = 1.13$, 95% CI [1.00, 1.28], $p = .047$. Follow-up analyses showed that the interaction between Pell eligibility and post-ACUE time point was significant within the ACUE faculty group, $b = .12$, $SE = .06$, $OR = 1.13$, 95% CI [1.00, 1.27], $p = .045$, but not within the matched sections, $b = .03$, $SE = .02$, $OR = 1.03$, 95% CI [0.99, 1.06], $p = .127$, indicating that the three-way interaction is driven by differences between Pell-eligible and non-Pell-eligible students within the ACUE faculty group. Thus, we then

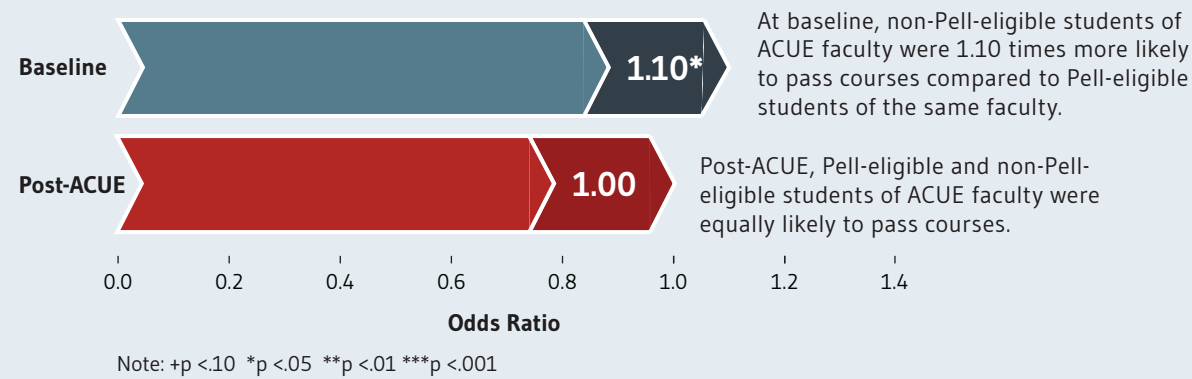
examined the post-ACUE time point effect among Pell-eligible and non-Pell-eligible students of ACUE faculty separately. Pell-eligible students of ACUE faculty, $b = .19$, $SE = .04$, $OR = 1.21$, 95% CI [1.11, 1.32], $p < .001$ were significantly more likely to pass their courses at the post-ACUE time point compared to baseline, while for non-Pell-eligible students of ACUE faculty, their likelihood of passing their courses did not increase significantly from baseline to the

post-ACUE time point, $b = .03$, $SE = .05$, $OR = 1.03$, 95% CI [0.94, 1.13], $p = .556$.

Additional analyses were conducted to examine whether the improvement among Pell-eligible students may have decreased or closed any gaps in likelihood of passing courses between Pell-eligible students and non-Pell-eligible students within the ACUE group. These analyses showed that although Pell-eligible students of ACUE faculty were

Figure 16

Odds Ratios for Likelihood of Passing Courses for Non-Pell-eligible Students of ACUE Faculty in the 2017-2018 Cohorts Compared to Pell-eligible Students of the Same Faculty by Time Point



less likely to pass their courses compared to non-Pell-eligible students of the same faculty at baseline, $b = -.10$, $SE = .05$, $OR = 0.91$, 95% CI [0.83, 1.00], $p = .042$, at the post-ACUE time point, there was no gap in likelihood of passing courses between Pell-eligible and non-Pell-eligible students of ACUE faculty, $b = .00$, $SE = .05$, $OR = 1.00$, 95% CI [0.91, 1.09], $p = .980$ (see Figure 16).

Interactions With College Generational Status.

Analysis adding interactions with

college generational status found a marginally significant interaction between first-generation students, faculty type, and post-ACUE time point, $b = .11$, $SE = .06$, $OR = 1.12$, 95% CI [0.99, 1.26], $p = .072$. However, follow-up analyses showed that the interaction between first-generation students and post-ACUE time point was not significant within the ACUE faculty group, $b = .09$, $SE = .06$, $OR = 1.09$, 95% CI [0.97, 1.23], $p = .146$, or within the matched sections, $b = -.01$, $SE = .02$, $OR = 1.00$, 95% CI [0.96, 1.03], $p = .780$.

2018–2019 Cohorts

Data Analysis Plan. Analyses were conducted using hierarchical logistic regression, which requires that all categorical variables be dummy coded. All faculty and student demographic variables were entered in Step 1. Faculty role was simplified to full-time faculty, part-time faculty, and all others, which combined temporary instructors and administrative staff, both of whom were represented in small numbers in the sample. Full-time faculty were used as the reference group because recruitment of ACUE faculty focused on that group. Because the vast majority of students were Hispanic, Black, or White, race/ethnicity was simplified to four categories, with the fourth category combining Asian, Pacific Islander, American Indian, and unknown/unreported race/ethnicity. Although the fourth category was the highest performing for both course completion and passing, it was not used as the reference group because it was a mix of several races/ethnicities, and therefore findings would be more difficult to interpret. Instead, White students, who were the second highest performing group, were used as the reference group. For gender, female was used as the reference group because the majority of students were female. College generational status was simplified to be first generation versus not first generation/unknown college generational status. International student status was simplified in the same way. Main effects for faculty type (ACUE versus match) and time point (baseline versus during ACUE) were entered in Step 2. Two-way interactions between faculty type and time point were entered in Step 3.

The primary effects of interest are the two-way interactions between faculty type and time period because this would indicate that the change over time was different for students taught by ACUE faculty compared to students in matched sections. When those interactions were significant, follow-up analyses were conducted to examine the main effect of time among students taught by ACUE faculty and separately among students taught by match faculty.

There was also a particular interest at Broward College in understanding whether impacts are larger for students from marginalized groups. Thus, when an interaction between faculty type and time period was significant, additional analyses were conducted that separately examined interactions with race/ethnicity, Pell eligibility, and college generational status. In these analyses, the effect of interest is the three-way interaction between the demographic variable, time period, and faculty type. When that three-way interaction was significant, follow-up analyses were conducted that examined the interaction between the student demographic variable and time period within each faculty group to understand whether the three-way interaction was driven by the ACUE faculty or matched sections. When the two-way interaction between time period and student demographic was significant among students taught by ACUE faculty, analyses were conducted to examine change over time within each combination of student demographic and faculty type and to explore whether any gaps by student demographics were closed.

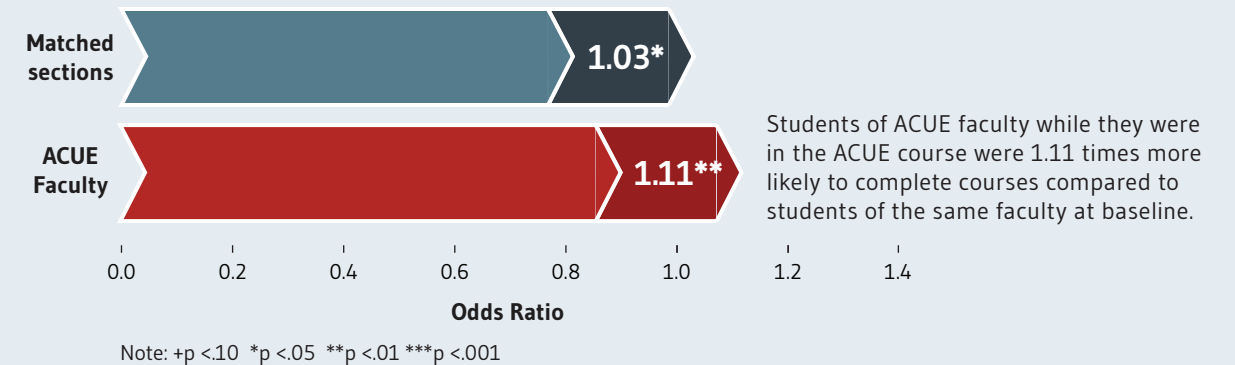
Because all of the analyses involve many effects, the results below focus on the primary effects of interest in each analysis, with all effects reported in tables in Appendix B.

Course Completion. The hierarchical logistic regression on course completion showed a marginally significant interaction between faculty type and the during-ACUE time point, $b = .07$, $SE = .04$, $OR = 1.07$, 95% CI [1.00, 1.15], $p = .063$. Follow-up analyses examining students of ACUE faculty and students of matched faculty separately shows likelihood of course completion improving over time for both groups, but the magnitude of that improvement was larger among students taught by ACUE faculty. Students taught by ACUE faculty were 1.11 times more likely to complete courses during the ACUE course time period compared to the baseline time period, $b = .11$, $SE = .04$, $OR = 1.11$, 95% CI [1.04, 1.19], $p = .003$, while in matched sections, course completion was 1.03 times more likely during the ACUE course time period compared to the baseline time period, $b = .03$, $SE = .01$, $OR = 1.03$, 95% CI [1.01, 1.05], $p = .014$ (see Figure 17).

Students taught by ACUE faculty were 1.11 times more likely to complete courses during the ACUE course time period compared to the baseline time period

Figure 17

Odds Ratios for Likelihood of Completing Courses During ACUE Compared to Baseline by Faculty Type for the 2018-2019 Cohorts



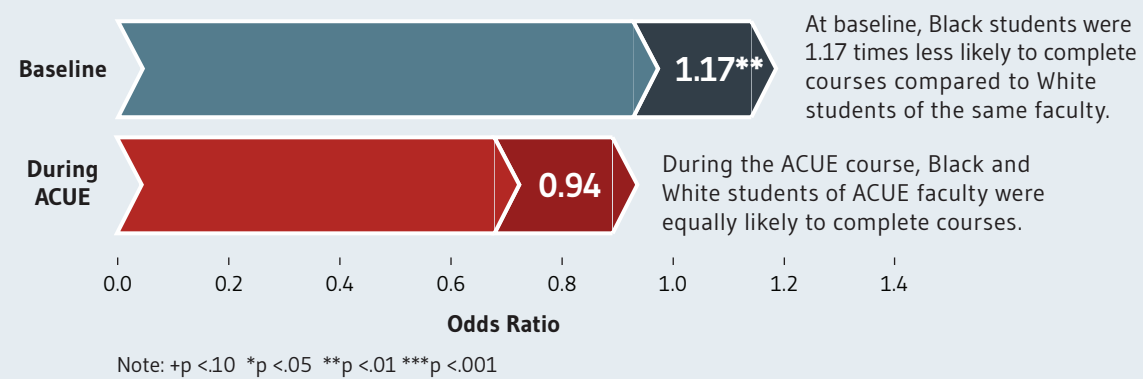
Interactions With Race/Ethnicity. Analysis adding interactions with race/ethnicity found a significant interaction between Black students, faculty type, and the during-ACUE time point, $b = .25$, $SE = .11$, $OR = 1.29$, 95% CI [1.04, 1.59], $p = .018$. Follow-up analyses showed that the interaction between Black students and the during-ACUE time point was marginally significant within the ACUE faculty group, $b = .19$, $SE = .10$, $OR = 1.21$, 95% CI [0.99, 1.47], $p = .061$, and was significant within the matched sections, $b = -.07$, $SE = .04$, $OR = 0.93$, 95% CI [0.87, 1.00], $p = .035$, indicating that the three-way interaction is due to differences between Black and White students in both faculty groups. Because the primary question this analysis seeks to answer is whether the effect of ACUE is larger for students who are historically underrepresented in higher education, we followed up on these interactions by examining the during-ACUE time point effect among Black and White students of ACUE faculty separately. Black students of ACUE faculty

were significantly more likely to complete their courses during the ACUE course compared to baseline, $b = .14$, $SE = .06$, $OR = 1.15$, 95% CI [1.03, 1.30], $p = .016$, while there was not significant effect of time period among White students of ACUE faculty, $b = -.03$, $SE = .08$, $OR = 0.97$, 95% CI [0.82, 1.14], $p = .685$.

Additional analyses were conducted to examine whether the improvement among Black students may have decreased or closed any gaps in likelihood of course completion between Black and White students within the ACUE group. These analyses showed that Black students of ACUE faculty were less likely to complete their courses compared to White students of the same faculty at baseline, $b = -.16$, $SE = .05$, $OR = 0.85$, 95% CI [0.77, 0.94], $p = .002$, but during the ACUE course, there was no gap in likelihood of course completion between Black and White students of ACUE faculty, $b = .01$, $SE = .09$, $OR = 1.07$, 95% CI [0.90, 1.28], $p = .454$ (see Figure 18).

Figure 18

Odds Ratios for Likelihood of Completing Courses for White Students of ACUE Faculty in the 2018-2019 Cohorts Compared to Black Students of the Same Faculty by Time Point



The interactions between Hispanic students, faculty type, and the during-ACUE time point, $b = .13$, $SE = .11$, $OR = 1.14$, 95% CI [0.93, 1.40], $p = .217$, and between other race/ethnicity students, faculty type, and the during-ACUE time point, $b = .17$, $SE = .15$, $OR = 1.18$, 95% CI [0.89, 1.57], $p = .252$, were not significant.

Interactions With Pell Eligibility. Analysis adding interactions with Pell eligibility found that the interaction between Pell eligibility, faculty type, and the during-ACUE time point was not significant, $b = -.03$, $SE = .07$, $OR = 0.97$, 95% CI [0.84, 1.12], $p = .665$.

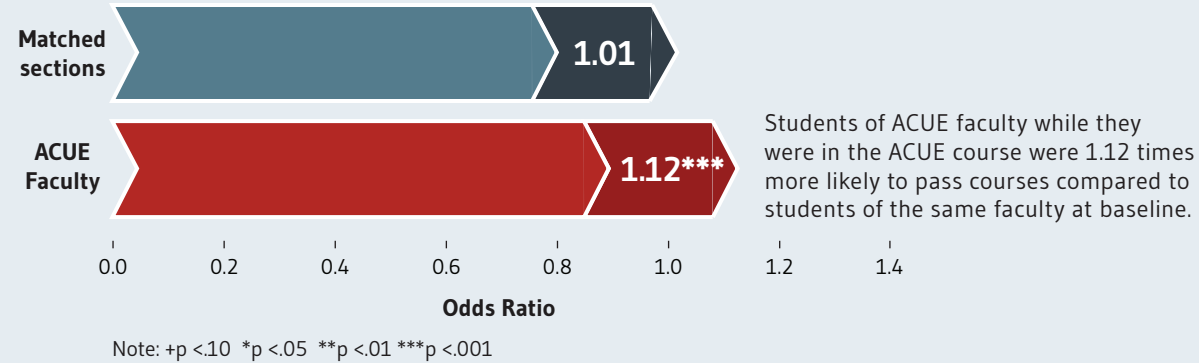
Interactions With College Generational Status. Analysis adding interactions with college generational status found that the interaction between first-generation students, faculty type, and the during-ACUE time point was not significant, $b = .01$, $SE = .07$, $OR = 1.01$, 95% CI [0.88, 1.17], $p = .872$.

Passing. The hierarchical logistic regression on course completion showed a significant interaction between faculty type and the during-ACUE time point, $b = .08$, $SE = .03$, $OR = 1.08$, 95% CI [1.03, 1.14], $p = .002$. Follow-up analyses examining students of ACUE faculty and students of matched faculty separately shows that students taught by ACUE faculty were significantly more likely to pass courses during the ACUE course time period compared to the baseline time period, $b = .11$, $SE = .03$, $OR = 1.12$, 95% CI [1.06, 1.17], $p < .001$, but there was no effect of time period for students in matched sections, $b = .01$, $SE = .01$, $OR = 1.01$, 95% CI [0.99, 1.03], $p = .247$ (see Figure 19).

Interactions With Race/Ethnicity. Analysis adding interactions with race/ethnicity found a significant interaction between Black students, faculty type, and the during-ACUE time point, $b = .17$, $SE = .08$, $OR = 1.19$, 95% CI [1.02, 1.39], $p = .027$. Follow-up analyses showed that the interaction between Black students and the during-ACUE time point was marginally significant within the ACUE faculty group, $b = .13$, $SE = .07$, $OR = 1.14$, 95% CI [0.99, 1.32], $p = .071$.

Figure 19

Odds Ratios for Likelihood of Passing Courses During ACUE Compared to Baseline by Faculty Type for the 2018-2019 Cohorts

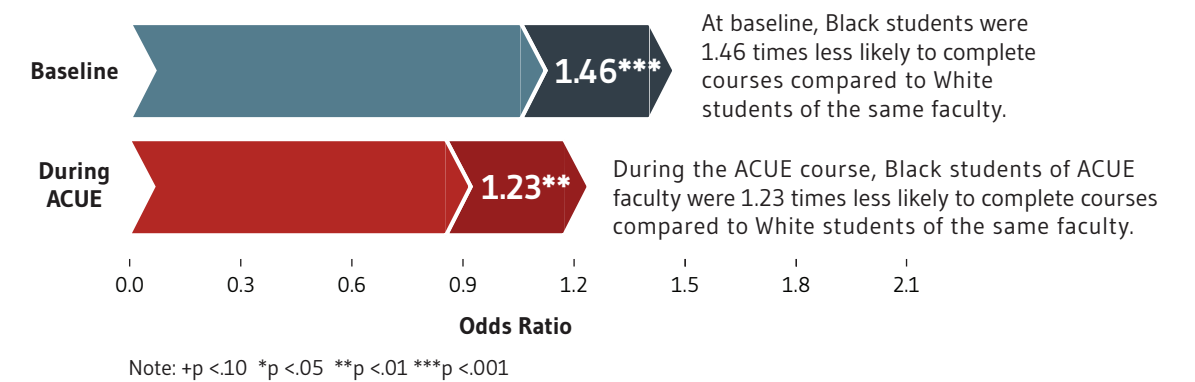


and marginally significant within the matched sections, $b = -.05$, $SE = .03$, $OR = 0.95$, 95% CI [0.91, 1.00], $p = .050$, indicating that the three-way interaction is due to differences between Black and White students in both faculty groups. Because the primary question this analysis seeks to answer is whether the effect of ACUE is larger for students who are historically underrepresented in higher education, we followed up on these interactions by examining the during-ACUE time point effect among Black and White students of ACUE faculty separately. Black students of ACUE faculty were significantly more likely to pass their courses during the ACUE course compared to baseline, $b = .13$, $SE = .04$, $OR = 1.14$, 95% CI [1.05, 1.24], $p = .002$, while White students of ACUE faculty were not significantly more likely to pass their courses during the ACUE course compared to baseline, $b = .01$, $SE = .06$, $OR = 1.01$, 95% CI [0.89, 1.15], $p = .853$.

Additional analyses were conducted to examine whether the improvement among Black students may have decreased or closed any gaps in likelihood of passing courses between Black and White students within the ACUE group. These analyses showed that Black students of ACUE faculty were 1.46 times less likely to pass their courses compared to White students of the same faculty at baseline, $b = -.38$, $SE = .04$, $OR = 0.69$, 95% CI [0.64, 0.74], $p < .001$, but during the ACUE course, Black students of ACUE faculty were 1.23 times less likely to pass their courses compared to White students of the same faculty, $b = -.21$, $SE = .07$, $OR = 0.81$, 95% CI [0.71, 0.92], $p = .001$ (see Figure 20).

Figure 20

Odds Ratios for Likelihood of Passing Courses for White Students of ACUE Faculty in the 2018-2019 Cohorts Compared to Black Students of the Same Faculty by Time Point



There was also a marginally significant interaction between Hispanic students, faculty type, and the during-ACUE time point, $b = .14$, $SE = .08$, $OR = 1.15$, 95% CI [0.99, 1.34], $p = .078$. Follow-up analyses showed that the interaction between Hispanic students and the during-ACUE time point was marginally significant within the ACUE faculty group, $b = .13$, $SE = .07$, $OR = 1.14$, 95% CI [0.98, 1.31], $p = .083$, but not within the matched sections, $b = -.02$, $SE = .03$, $OR = 0.98$, 95% CI [0.93, 1.03], $p = .464$, indicating that the marginal three-way interaction is driven by differences between Hispanic and White students within the ACUE faculty group. Thus, we then examined the during-ACUE time point effect among Hispanic and White students of

DISCUSSION

ACUE faculty separately. Hispanic students of ACUE faculty were significantly more likely to pass their courses during the ACUE course compared to baseline, $b = .14$, $SE = .04$, $OR = 1.15$, 95% CI [1.07, 1.25], $p < .001$, while White students of ACUE faculty were not significantly more likely to pass their courses during the ACUE course compared to baseline, $b = .01$, $SE = .06$, $OR = 1.01$, 95% CI [0.89, 1.15], $p = .853$.

Additional analyses were conducted to examine whether the improvement among Hispanic students may have decreased or closed any gaps in likelihood of passing courses between Hispanic and White students within the ACUE group. However, these analyses showed that there was not a significant gap in likelihood of course completion between Hispanic and White students of ACUE faculty at baseline, $b = -.05$, $SE = .04$, $OR = 0.95$, 95% CI [0.88, 1.02], $p = .173$.

The interaction between other race/ethnicity students, faculty type, and the during-ACUE time point was not significant, $b = .16$, $SE = .11$, $OR = 1.17$, 95% CI [0.95, 1.44], $p = .138$.

Interactions With Pell Eligibility. Analysis adding interactions with Pell eligibility found that the interaction between Pell eligibility, faculty type, and the during-ACUE time point was not significant, $b = -.07$, $SE = .05$, $OR = 0.93$, 95% CI [0.84, 1.04], $p = .192$.

Interactions With College Generational Status. Analysis adding interactions with college generational status found that the interaction between first-generation students, faculty type, and the during-ACUE time point was not significant, $b = -.08$, $SE = .05$, $OR = 0.92$, 95% CI [0.83, 1.02], $p = .117$.

Across five cohorts of faculty at Broward College, there was a significant impact of the ACUE course on students' likelihood of completing and passing their courses. The time period when these effects occurred differed between the earlier and later cohorts, with the impact on students occurring in the years after faculty completed the ACUE course for earlier cohorts and later cohorts experiencing an impact on their students while they were completing the ACUE course.

The coefficients from the regression equations, along with the number of students taught by ACUE faculty in the time period when the student impact occurred and the demographics of the ACUE faculty and their students, were used to estimate the number of additional students who completed and passed their courses due to the ACUE course. The calculations indicate that for the first set of cohorts, an additional 207 students completed their courses and an additional 258 students passed their courses than would have otherwise during the years after the faculty completed the ACUE course. For the second sets of cohorts, the calculations show that an additional 75 students completed their courses and an additional 177 students passed their courses than would have otherwise during the year in which the faculty completed the ACUE course.

In addition to the overall impacts on students broadly, these results demonstrated a larger impact on two historically underrepresented groups of students in higher education: low-income students and Black students. Furthermore, the greater impact for these groups led

to the closing or narrowing of several gaps in course outcomes: the gap in passing courses between Pell-eligible and non-Pell-eligible students of ACUE faculty in the initial cohorts closed, as did the gap in course completion between Black and White students of ACUE faculty in the later cohorts, and the gap in passing courses between Black and White students of ACUE faculty in the later cohorts was cut in half.

These results add to prior research finding an impact of the ACUE course on student course outcomes (Hecht, 2019; Lawner & Snow, 2018; Lawner & Snow, 2019; Lawner, Snow, & Burt, 2019; Lawner, Snow, MacCormack, & Waltje, 2019). However, this study extends the previous research by demonstrating a greater impact of the ACUE course on course completion and passing for multiple groups of students who have been historically underrepresented in higher education, thus furthering student equity goals. Although one previous study found a greater impact for Black students (Lawner, Snow, MacCormack, & Waltje, 2019), this is the first study to find such subgroup impacts at a diverse, associate-degree-granting institution. In addition, these results generally occurred in the context of overall improvements in student outcomes at Broward College, as can be seen in the significant improvements among students in the matched sections.

One limitation of the current study is that the analyses do not account for clustering of outcomes, such as within sections, courses, instructors, or individuals. This nonindependence of observations can affect the standard errors and thus statistical significance. However, given that instructors teach multiple courses and courses include some sections taught by ACUE faculty and others taught by matched faculty, it is unclear whether sections should be considered nested within instructors or vice versa. How data should be clustered is additionally complicated by students who are taught by both ACUE faculty and matched faculty.

This study extends the previous research by demonstrating a greater impact of the ACUE course on course completion and passing for multiple groups of students who have been historically underrepresented in higher education, thus furthering student equity goals.



In these cases, the interdependence of observations makes it more difficult to find significant differences because it means that the observations across the two groups are more similar to each other. Furthermore, the benefit of the ACUE course on students' growth mindset, for example, could carry over into those students' outcomes in their other courses. Therefore, the complicated nature of the data makes for a more conservative test of the ACUE impact in some ways, and a more liberal test in other ways, variations that could balance each other out. However, future research should account for at least one aspect of the clustered nature of the data.

Future research should also explore when student impacts occur in relation to faculty earning an ACUE credential. In addition, it is important to conduct follow-up studies to examine whether those impacts are sustained beyond the approximately three semesters post-course time frame that is examined in the current study for the initial cohorts.

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APPENDIX A

Results for 2017-2018 Cohorts

Table A1

Logistic Regression Predicting Course Completion in the Entire Sample, with Baseline as the Reference Group

	Step 1 OR	Step 2 OR	Step 3 OR
STEP 1			
Black	0.89***	0.88***	0.88***
Hispanic	1.00	1.00	1.00
Other race/ethnicity	1.16***	1.15***	1.15***
Pell-eligible	1.01	1.02+	1.02+
First generation	0.87***	0.87***	0.87***
International	2.10***	2.11***	2.11***
Age	0.98***	0.98***	0.98***
Male	0.87***	0.87***	0.87***
Unknown gender	1.11**	1.10*	1.10*
Credits earned	1.01***	1.01***	1.01***
Part-time faculty	1.05***	1.08***	1.08***
Other instructors	1.07*	1.05+	1.06*
STEP 2			
ACUE		1.16***	1.09**
During		1.17***	1.17***
Post		1.15***	1.14***
STEP 3			
ACUE x During			1.00
ACUE x Post			1.21***

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table A2

Logistic Regression Predicting Course Completion in the Entire Sample, with During-ACUE as the Reference Group

	Step 1 OR	Step 2 OR	Step 3 OR
Step 1			
Black	0.89***	0.88***	0.88***
Hispanic	1.00	1.00	1.00
Other race/ethnicity	1.16***	1.15***	1.15***
Pell-eligible	1.01	1.02+	1.02+
First generation	0.87***	0.87***	0.87***
International	2.10***	2.11***	2.11***
Age	0.98***	0.98***	0.98***
Male	0.87***	0.87***	0.87***
Unknown gender	1.11**	1.10*	1.10*
Credits earned	1.01***	1.01***	1.01***
Part-time faculty	1.05***	1.08***	1.08***
Other instructors	1.07*	1.05+	1.06*
Step 2			
ACUE		1.16***	1.08*
Baseline		0.86***	0.86***
Post		0.99	0.97+
Step 3			
ACUE x Baseline			1.00
ACUE x Post			1.21***

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table A3

Logistic Regression Predicting Course Completion by Faculty Type, with Baseline as the Reference Group

	ACUE		Match	
	Step 1 OR	Step 2 OR	Step 1 OR	Step 2 OR
Step 1				
Black	0.80***	0.79***	0.89***	0.89***
Hispanic	0.92	0.92	1.01	1.00
Other race/ethnicity	1.20*	1.19*	1.15***	1.15***
Pell-eligible	1.04	1.05	1.01	1.02+
First generation	0.85***	0.85***	0.87***	0.87***
International	2.42***	2.44***	2.09***	2.10***
Age	0.99**	0.99**	0.98***	0.98***
Male	0.84***	0.84***	0.87***	0.87***
Unknown gender	0.93	0.92	1.12**	1.12**
Credits earned	1.02***	1.02***	1.01***	1.01***
Part-time faculty	0.73***	0.84**	1.09***	1.09***
Other instructors	1.10	1.14	1.08**	1.06*
Step 2				
During		1.15**		1.17***
Post		1.34***		1.14***

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table A4

Logistic Regression Predicting Course Completion in the Entire Sample, Including Interactions with Race/Ethnicity

	Step 1 OR	Step 2 OR	Step 3 OR	Step 4 OR
Step 1				
Black	0.89***	0.88***	0.91***	0.92***
Hispanic	1.00	1.00	1.00	1.01
Other race/ethnicity	1.16***	1.15***	1.17***	1.17***
Pell-eligible	1.01	1.02+	1.02+	1.02+
First generation	0.87***	0.87***	0.87***	0.87***
International	2.10***	2.11***	2.11***	2.11***
Age	0.98***	0.98***	0.98***	0.98***
Male	0.87***	0.87***	0.87***	0.87***
Unknown gender	1.11**	1.10*	1.10*	1.10*
Credits earned	1.01***	1.01***	1.01***	1.01***
Part-time faculty	1.05***	1.08***	1.08***	1.08***
Other instructors	1.07*	1.05+	1.06*	1.06*
Step 2				
ACUE		1.16***	1.20**	1.33***
During		1.17***	1.23***	1.25***
Post		1.15***	1.14***	1.14***
Step 3				
ACUE x During			1.00	0.81+
ACUE x Post			1.21***	1.04
Black x ACUE			0.87*	0.75**
Black x During			0.94	0.93*
Black x Post			0.97	0.96
Hispanic x ACUE			0.89*	0.80*
Hispanic x During			0.93+	0.91*
Hispanic x Post			1.05	1.04
Other race/ethnicity x ACUE			0.98	0.91
Other race/ethnicity x During			0.97	0.97
Other race/ethnicity x Post			0.98	0.96
Step 4				
Black x ACUE x During				1.32*
Black x ACUE x Post				1.25+
Hispanic x ACUE x During				1.29+
Hispanic x ACUE x Post				1.14
Other race/ethnicity x ACUE x During				1.05
Other race/ethnicity x ACUE x Post				1.24

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table A5

Logistic Regression Predicting Course Completion by Faculty Type, Including Interactions with Race/Ethnicity

	ACUE			Match		
	Step 1 OR	Step 2 OR	Step 3 OR	Step 1 OR	Step 2 OR	Step 3 OR
Step 1						
Black	0.80***	0.79***	0.70***	0.89***	0.89***	0.92***
Hispanic	0.92	0.92	0.83*	1.01	1.00	1.01
Other race/ethnicity	1.20*	1.19*	1.12	1.15***	1.15***	1.17***
Pell-eligible	1.04	1.05	1.05	1.01	1.02+	1.02+
First generation	0.85***	0.85***	0.85***	0.87***	0.87***	0.87***
International	2.42***	2.44***	2.45***	2.09***	2.10***	2.09***
Age	0.99**	0.99**	0.99**	0.98***	0.98***	0.98***
Male	0.84***	0.84***	0.84***	0.87***	0.87***	0.87***
Unknown gender	0.93	0.92	0.92	1.12**	1.12**	1.12**
Credits earned	1.02***	1.02***	1.02***	1.01***	1.01***	1.01***
Part-time faculty	0.73***	0.84**	0.84**	1.09***	1.09***	1.09***
Other instructors	1.10	1.14	1.14	1.08**	1.06*	1.06*
Step 2						
During		1.15**	0.99		1.17***	1.25***
Post		1.34***	1.15		1.14***	1.14***
Step 3						
Black x During			1.24			0.92*
Black x Post			1.21			0.96
Hispanic x During			1.18			0.91*
Hispanic x Post			1.19			1.04
Other race/ethnicity x During			1.03			0.97
Other race/ethnicity x Post			1.20			0.96

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table A6

Logistic Regression Predicting Course Completion in the Entire Sample, Including Interactions with Pell Eligibility

	Step 1 OR	Step 2 OR	Step 3 OR	Step 4 OR
Step 1				
Black	0.89***	0.88***	0.88***	0.88***
Hispanic	1.00	1.00	1.00	1.00
Other race/ethnicity	1.16***	1.15***	1.15***	1.15***
Pell-eligible	1.01	1.02+	0.99	0.99
First generation	0.87***	0.87***	0.87***	0.87***
International	2.10***	2.11***	2.11***	2.11***
Age	0.98***	0.98***	0.98***	0.98***
Male	0.87***	0.87***	0.87***	0.87***
Unknown gender	1.11**	1.10*	1.10*	1.10*
Credits earned	1.01***	1.01***	1.01***	1.01***
Part-time faculty	1.05***	1.08***	1.08***	1.08***
Other instructors	1.07*	1.05+	1.06*	1.06*
Step 2				
ACUE		1.16***	1.10*	1.17**
During		1.17***	1.12***	1.12***
Post		1.15***	1.11***	1.12***
Step 3				
ACUE x During			1.00	0.94
ACUE x Post			1.21***	1.07
Pell-eligible x ACUE			0.98	0.88*
Pell-eligible x During			1.08**	1.07**
Pell-eligible x Post			1.05*	1.03
Step 4				
Pell-eligible x ACUE x During				1.11
Pell-eligible x ACUE x Post				1.26*

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table A7

Logistic Regression Predicting Course Completion by Faculty Type, Including Interactions with Pell Eligibility

	ACUE			Match		
	Step 1 OR	Step 2 OR	Step 3 OR	Step 1 OR	Step 2 OR	Step 3 OR
Step 1						
Black	0.80***	0.79***	0.79***	0.89***	0.89***	0.89***
Hispanic	0.92	0.92	0.92	1.01	1.00	1.00
Other race/ethnicity	1.20*	1.19*	1.19*	1.15***	1.15***	1.15***
Pell-eligible	1.04	1.05	0.94	1.01	1.02+	0.99
First generation	0.85***	0.85***	0.85***	0.87***	0.87***	0.87***
International	2.42***	2.44***	2.44***	2.09***	2.10***	2.10***
Age	0.99**	0.99**	0.99**	0.98***	0.98***	0.98***
Male	0.84***	0.84***	0.84***	0.87***	0.87***	0.87***
Unknown gender	0.93	0.92	0.92	1.12**	1.12**	1.12**
Credits earned	1.02***	1.02***	1.02***	1.01***	1.01***	1.01***
Part-time faculty	0.73***	0.84**	0.84**	1.09***	1.09***	1.09***
Other instructors	1.10	1.14	1.14	1.08**	1.06*	1.06*
Step 2						
During		1.15**	1.06		1.17***	1.12***
Post		1.34***	1.19**		1.14***	1.12***
Step 3						
Pell-eligible x During			1.16			1.08**
Pell-eligible x Post			1.26**			1.03

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table A8

Logistic Regression Predicting Course Completion by Pell Eligibility for Students of ACUE Faculty

	Pell-eligible		Non-Pell-eligible	
	Step 1 OR	Step 2 OR	Step 1 OR	Step 2 OR
Step 1				
Black	0.75**	0.74**	0.86*	0.85*
Hispanic	0.92	0.91	0.92	0.91
Other race/ethnicity	1.17	1.16	1.20	1.20
First generation	0.91+	0.92+	0.78***	0.78***
International	1.67	1.71	2.59***	2.59***
Age	0.99*	0.99*	0.99*	0.99+
Male	0.88*	0.88*	0.80***	0.80***
Unknown gender	0.92	0.91	0.93	0.92
Credits earned	1.02***	1.02***	1.02***	1.02***
Part-time faculty	0.74***	0.89	0.72***	0.77**
Other instructors	1.15	1.20	1.04	1.07
Step 2				
During		1.23**		1.05
Post		1.52***		1.16*

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table A9

Logistic Regression Predicting Course Completion by Time Point among Students of ACUE faculty

	Baseline OR	During ACUE OR	Post-ACUE OR
Black	0.73***	0.84	0.82*
Hispanic	0.85+	0.95	0.97
Other race/ethnicity	1.11	1.12	1.35+
Pell-eligible	0.96	1.06	1.17*
First generation	0.86*	0.81**	0.88*
International	2.27***	2.75***	2.42***
Age	1.00	0.98***	1.00
Male	0.94	0.76***	0.81**
Unknown gender	1.17	0.81	0.80
Credits earned	1.02***	1.02***	1.02***
Part-time faculty	0.75***	1.22	-
Other instructors	1.43+	1.15	0.92

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table A10

Logistic Regression Predicting Course Completion in the Entire Sample, Including Interactions with College Generational Status

	Step 1 OR	Step 2 OR	Step 3 OR	Step 4 OR
Step 1				
Black	0.89***	0.88***	0.88***	0.88***
Hispanic	1.00	1.00	1.00	1.00
Other race/ethnicity	1.16***	1.15***	1.15***	1.15***
Pell-eligible	1.01	1.02+	1.02+	1.02
First generation	0.87***	0.87***	0.89***	0.90***
International	2.10***	2.11***	2.11***	2.11***
Age	0.98***	0.98***	0.98***	0.98***
Male	0.87***	0.87***	0.87***	0.87***
Unknown gender	1.11**	1.10*	1.10*	1.10*
Credits earned	1.01***	1.01***	1.01***	1.01***
Part-time faculty	1.05***	1.08***	1.08***	1.08***
Other instructors	1.07*	1.05+	1.06*	1.06*
Step 2				
ACUE		1.16***	1.09*	1.12**
During		1.17***	1.21***	1.22***
Post		1.15***	1.16***	1.17***
Step 3				
ACUE x During			1.00	0.97
ACUE x Post			1.21***	1.12+
First generation x ACUE			1.00	0.94
First generation x During			0.93**	0.92**
First generation x Post			0.96+	0.95*
Step 4				
First generation x ACUE x During				1.05
First generation x ACUE x Post				1.16+

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table A11

Logistic Regression Predicting Course Completion by Faculty Type, Including Interactions with College Generational Status

	Step 1 OR	ACUE Step 2 OR	Step 3 OR	Match Step 1 OR	Step 2 OR	Step 3 OR
Step 1						
Black	0.80***	0.79***	0.79***	0.89***	0.89***	0.89***
Hispanic	0.92	0.92	0.92	1.01	1.00	1.00
Other race/ethnicity	1.20*	1.19*	1.19*	1.15***	1.15***	1.15***
Pell-eligible	1.04	1.05	1.05	1.01	1.02+	1.02+
First generation	0.85***	0.85***	0.84**	0.87***	0.87***	0.90***
International	2.42***	2.44***	2.44***	2.09***	2.10***	2.10***
Age	0.99**	0.99**	0.99**	0.98***	0.98***	0.98***
Male	0.84***	0.84***	0.84***	0.87***	0.87***	0.87***
Unknown gender	0.93	0.92	0.92	1.12**	1.12**	1.11**
Credits earned	1.02***	1.02***	1.02***	1.01***	1.01***	1.01***
Part-time faculty	0.73***	0.84**	0.84**	1.09***	1.09***	1.09***
Other instructors	1.10	1.14	1.14	1.08**	1.06*	1.06*
Step 2						
During		1.15**	1.18*		1.17***	1.21***
Post		1.34***	1.30**		1.14***	1.16***
Step 3						
First generation x During			0.95			0.93**
First generation x Post			1.07			0.95*

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table A12

Logistic Regression Predicting Passing Courses in the Entire Sample, with Baseline as the Reference Group

	Step 1 OR	Step 2 OR	Step 3 OR
Step 1			
Black	0.74***	0.73***	0.73***
Hispanic	0.92***	0.92***	0.92***
Other race/ethnicity	1.12***	1.11***	1.11***
Pell-eligible	0.89***	0.89***	0.89***
First generation	0.87***	0.87***	0.87***
International	1.73***	1.74***	1.74***
Age	0.99***	0.99***	0.99***
Male	0.78***	0.78***	0.78***
Unknown gender	1.01	1.00	1.00
Credits earned	1.02***	1.02***	1.02***
Part-time faculty	1.17***	1.20***	1.20***
Other instructors	1.07*	1.04*	1.04*
Step 2			
ACUE		1.20***	1.15***
During		1.07***	1.07***
Post		1.07***	1.06***
Step 3			
ACUE x During			1.01
ACUE x Post			1.13***

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table A13

Logistic Regression Predicting Passing Courses in the Entire Sample, with During-ACUE as the Reference Group

	Step 1 OR	Step 2 OR	Step 3 OR
Step 1			
Black	0.74***	0.73***	0.73***
Hispanic	0.92***	0.92***	0.92***
Other race/ethnicity	1.12***	1.11***	1.11***
Pell-eligible	0.89***	0.89***	0.89***
First generation	0.87***	0.87***	0.87***
International	1.73***	1.74***	1.74***
Age	0.99***	0.99***	0.99***
Male	0.78***	0.78***	0.78***
Unknown gender	1.01	1.00	1.00
Credits earned	1.02***	1.02***	1.02***
Part-time faculty	1.17***	1.20***	1.20***
Other instructors	1.07*	1.04*	1.04*
Step 2			
ACUE		1.20***	1.16***
Baseline		0.94***	0.94***
Post		1.00	1.00
Step 3			
ACUE x Baseline			0.99
ACUE x Post			1.12**

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table A14

Logistic Regression Predicting Passing Courses by Faculty Type, with Baseline as the Reference Group

	ACUE		Match	
	Step 1 OR	Step 2 OR	Step 1 OR	Step 2 OR
Step 1				
Black	0.62***	0.62***	0.75***	0.74***
Hispanic	0.87**	0.86***	0.92***	0.92***
Other race/ethnicity	1.01	1.01	1.12***	1.12***
Pell-eligible	0.95+	0.95+	0.89***	0.89***
First generation	0.90***	0.90***	0.87***	0.87***
International	1.72***	1.73***	1.74***	1.74***
Age	1.01***	1.01***	0.98***	0.98***
Male	0.77***	0.78***	0.78***	0.78***
Unknown gender	0.98	0.97	1.01	1.00
Credits earned	1.02***	1.02***	1.02***	1.02***
Part-time faculty	0.76***	0.80***	1.22***	1.22***
Other instructors	1.14*	1.17*	1.05*	1.04+
Step 2				
During		1.03		1.07***
Post		1.12***		1.06***

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table A15

Logistic Regression Predicting Passing Courses in the Entire Sample, Including Interactions with Race/Ethnicity

	Step 1 OR	Step 2 OR	Step 3 OR	Step 4 OR
Step 1				
Black	0.74***	0.73***	0.75***	0.75***
Hispanic	0.92***	0.92***	0.94***	0.94***
Other race/ethnicity	1.12***	1.11***	1.18***	1.18***
Pell-eligible	0.89***	0.89***	0.89***	0.89***
First generation	0.87***	0.87***	0.87***	0.87***
International	1.73***	1.74***	1.74***	1.74***
Age	0.99***	0.99***	0.99***	0.99***
Male	0.78***	0.78***	0.78***	0.78***
Unknown gender	1.01	1.00	1.00	1.00
Credits earned	1.02***	1.02***	1.02***	1.02***
Part-time faculty	1.17***	1.20***	1.20***	1.20***
Other instructors	1.04*	1.04*	1.04*	1.04*
Step 2				
ACUE		1.20***	1.27***	1.31***
During		1.07***	1.09***	1.10***
Post		1.07***	1.10***	1.10***
Step 3				
ACUE x During			1.01	0.93
ACUE x Post			1.13***	1.11
Black x ACUE			0.84***	0.81**
Black x During			1.00	0.99
Black x Post			0.97	0.96
Hispanic x ACUE			0.94	0.91
Hispanic x During			0.96	0.95+
Hispanic x Post			0.98	0.98
Other race/ethnicity x ACUE			0.89*	0.88
Other race/ethnicity x During			0.94	0.95
Other race/ethnicity x Post			0.90**	0.90
Step 4				
Black x ACUE x During				1.11
Black x ACUE x Post				1.03
Hispanic x ACUE x During				1.13
Hispanic x ACUE x Post				1.00
Other race/ethnicity x ACUE x During				0.96
Other race/ethnicity x ACUE x Post				1.08

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table A16

Logistic Regression Predicting Passing Courses in the Entire Sample, Including Interactions with Pell Eligibility

	Step 1 OR	Step 2 OR	Step 3 OR	Step 4 OR
Step 1				
Black	0.74***	0.73***	0.74***	0.73***
Hispanic	0.92***	0.92***	0.92***	0.92***
Other race/ethnicity	1.12***	1.11***	1.11***	1.11***
Pell-eligible	0.89***	0.89***	0.86***	0.86***
First generation	0.87***	0.87***	0.87***	0.87***
International	1.73***	1.74***	1.73***	1.73***
Age	0.99***	0.99***	0.99***	0.99***
Male	0.78***	0.78***	0.78***	0.78***
Unknown gender	1.01	1.00	1.00	1.00
Credits earned	1.02***	1.02***	1.02***	1.02***
Part-time faculty	1.17***	1.20***	1.20***	1.20***
Other instructors	1.04*	1.04*	1.04*	1.04*
Step 2				
ACUE		1.20***	1.13***	1.17***
During		1.07***	1.02	1.02
Post		1.07***	1.04**	1.05***
Step 3				
ACUE x During			1.01	0.98
ACUE x Post			1.13***	1.05
Pell-eligible x ACUE			1.03	0.97
Pell-eligible x During			1.09**	1.09***
Pell-eligible x Post			1.03*	1.02
Step 4				
Pell-eligible x ACUE x During				1.04
Pell-eligible x ACUE x Post				1.13*

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table A17

Logistic Regression Predicting Passing Courses by Faculty Type, Including Interactions with Pell Eligibility

	Step 1 OR	ACUE Step 2 OR	Step 3 OR	Step 1 OR	Match Step 2 OR	Step 3 OR
Step 1						
Black	0.62***	0.62***	0.62***	0.75***	0.74***	0.74***
Hispanic	0.87**	0.86***	0.87***	0.92***	0.92***	0.92***
Other race/ethnicity	1.01	1.01	1.01	1.12***	1.12***	1.12***
Pell-eligible	0.95+	0.95+	0.89**	0.89***	0.89***	0.86***
First generation	0.90***	0.90***	0.90***	0.87***	0.87***	0.87***
International	1.72***	1.73***	1.73***	1.74***	1.74***	1.74***
Age	1.01***	1.01***	1.01**	0.98***	0.98***	0.98***
Male	0.77***	0.78***	0.77***	0.78***	0.78***	0.78***
Unknown gender	0.98	0.97	0.97	1.01	1.00	1.00
Credits earned	1.02***	1.02***	1.02***	1.02***	1.02***	1.02***
Part-time faculty	0.76***	0.80***	0.80**	1.22***	1.22***	1.22***
Other instructors	1.14*	1.17*	1.17*	1.05*	1.04+	1.04+
Step 2						
During		1.03	0.97		1.07***	1.02
Post		1.12***	1.05		1.06***	1.04***
Step 3						
Pell-eligible x During			1.11			1.09***
Pell-eligible x Post			1.13*			1.03

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table A18

Logistic Regression Predicting Passing Courses by Pell Eligibility for Students ACUE Faculty

	Pell-eligible		Non-Pell-eligible	
	Step 1 OR	Step 2 OR	Step 1 OR	Step 2 OR
Step 1				
Black	0.66***	0.65***	0.62***	0.62***
Hispanic	0.98	0.98	0.80***	0.80***
Other race/ethnicity	1.04	1.04	1.01	1.01
First generation	0.97	0.97	0.82***	0.82***
International	1.65*	1.66*	1.76***	1.76***
Age	1.01*	1.01**	1.01**	1.01**
Male	0.86***	0.86***	0.68***	0.68***
Unknown gender	1.21	1.21	0.78+	0.78+
Credits earned	1.03***	1.03***	1.02***	1.02***
Part-time faculty	0.77***	0.84**	0.75***	0.76***
Other instructors	1.21*	1.24**	1.05	1.08
Step 2				
During		1.07		0.97
Post		1.21***		1.03

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table A19

Logistic Regression Predicting Passing courses by Time Point Among Students of ACUE Faculty

	Baseline OR	During ACUE OR	Post-ACUE OR
Black	0.61***	0.65***	0.59***
Hispanic	0.85*	0.91	0.84*
Other race/ethnicity	1.04	0.94	1.02
Pell-eligible	0.91*	0.96	1.00
First generation	0.88**	0.89*	0.93
International	2.04***	1.44**	1.68***
Age	1.01***	1.00	1.01*
Male	0.87**	0.70***	0.75***
Unknown gender	1.11	1.02	0.84
Credits earned	1.02***	1.02***	1.03***
Part-time faculty	0.76***	0.88	-
Other instructors	1.28+	1.15+	1.14

Note: ***p < .001, **p < .01, *p < .05, +p < .10. The dummy code for part-time faculty was dropped from the regression for the post-ACUE time point because none of part-time faculty in the 2017-2018 cohorts taught courses at Broward College during the post-ACUE time period.

Table A20

Logistic Regression Predicting Completing Courses in the Entire Sample, Including Interactions with College Generational Status

	Step 1 OR	Step 2 OR	Step 3 OR	Step 4 OR
Step 1				
Black	0.74***	0.73***	0.73***	0.73***
Hispanic	0.92***	0.92***	0.92***	0.92***
Other race/ethnicity	1.12***	1.11***	1.11***	1.11***
Pell-eligible	0.89***	0.89***	0.89***	0.89***
First generation	0.87***	0.87***	0.87***	0.87***
International	1.73***	1.74***	1.74***	1.74***
Age	0.99***	0.99***	0.99***	0.99***
Male	0.78***	0.78***	0.78***	0.78***
Unknown gender	1.01	1.00	1.00	1.00
Credits earned	1.02***	1.02***	1.02***	1.02***
Part-time faculty	1.17***	1.20***	1.20***	1.20***
Other instructors	1.04*	1.04*	1.04*	1.04*
Step 2				
ACUE		1.20***	1.11***	1.14***
During		1.07***	1.08***	1.08***
Post		1.07***	1.06***	1.06***
Step 3				
ACUE x During			1.01	0.97
ACUE x Post			1.13***	1.07
First generation x ACUE			1.07**	1.01
First generation x During			0.98	0.97
First generation x Post			1.00	0.99
Step 4				
First generation x ACUE x During				1.07
First generation x ACUE x Post				1.12+

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table A21

Logistic Regression Predicting Passing Courses by Faculty Type, Including Interactions with College Generational Status

	Step 1 OR	ACUE Step 2 OR	Step 3 OR	Step 1 OR	Match Step 2 OR	Step 3 OR
Step 1						
Black	0.62***	0.62***	0.62***	0.75***	0.74***	0.74***
Hispanic	0.87**	0.86***	0.87***	0.92***	0.92***	0.92***
Other race/ethnicity	1.01	1.01	1.01	1.12***	1.12***	1.12***
Pell-eligible	0.95+	0.95+	0.95+	0.89***	0.89***	0.89***
First generation	0.90***	0.90***	0.87**	0.87***	0.87***	0.87***
International	1.72***	1.73***	1.73***	1.74***	1.74***	1.74***
Age	1.01***	1.01***	1.01***	0.98***	0.98***	0.98***
Male	0.77***	0.78***	0.78***	0.78***	0.78***	0.78***
Unknown gender	0.98	0.97	0.97	1.01	1.00	1.00
Credits earned	1.02***	1.02***	1.02***	1.02***	1.02***	1.02***
Part-time faculty	0.76***	0.80***	0.80***	1.22***	1.22***	1.22***
Other instructors	1.14*	1.17*	1.17*	1.05*	1.04+	1.04+
Step 2						
During		1.03	1.01		1.07***	1.08***
Post		1.12***	1.08		1.06***	1.06***
Step 3						
First generation x During			1.03			0.98
First generation x Post			1.09			1.00

Note: ***p < .001, **p < .01, *p < .05, +p < .10

APPENDIX B

Results for 2018-2019 Cohorts

Table B1

Logistic Regression Predicting Course Completion in the Entire Sample

	Step 1 OR	Step 2 OR	Step 3 OR
Step 1			
Black	0.87***	0.87***	0.87***
Hispanic	1.01	1.01	1.01
Other race/ethnicity	1.15***	1.14***	1.14***
Pell-eligible	1.03*	1.03**	1.03**
First generation	0.87***	0.87***	0.87***
International	2.18***	2.18***	2.18***
Age	0.98***	0.98***	0.98***
Male	0.85***	0.85***	0.85***
Unknown gender	1.16***	1.16***	1.16***
Credits earned	1.01***	1.01***	1.01***
Part-time faculty	1.10***	1.11***	1.11***
Other instructors	1.10***	1.09**	1.09**
Step 2			
ACUE		1.03+	1.02
During		1.04**	1.03*
Step 3			
ACUE x During			1.07+

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table B2

Logistic Regression Predicting Course Completion by Faculty Type

	ACUE		Match	
	Step 1 OR	Step 2 OR	Step 1 OR	Step 2 OR
Step 1				
Black	0.90***	0.90*	0.87***	0.87***
Hispanic	1.04	1.03	1.00	1.00
Other race/ethnicity	1.05	1.05	1.16***	1.16***
Pell-eligible	1.06+	1.07*	1.02*	1.02*
First generation	0.83***	0.83***	0.87***	0.87***
International	2.47***	2.47***	2.14***	2.14***
Age	0.98***	0.98***	0.98***	0.98***
Male	0.83***	0.83***	0.85***	0.86***
Unknown gender	1.23+	1.23+	1.16***	1.16***
Credits earned	1.01***	1.01***	1.01***	1.01***
Part-time faculty	1.39***	1.39***	1.10***	1.10***
Other instructors	1.07	1.04	1.10**	1.10**
Step 2				
During		1.11**		1.03*

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table B3

Logistic Regression Predicting Course Completion in the Entire Sample, Including Interactions with Race/Ethnicity

	Step 1 OR	Step 2 OR	Step 3 OR	Step 4 OR
Step 1				
Black	0.87***	0.87***	0.87***	0.88***
Hispanic	1.01	1.01	0.99	0.99
Other race/ethnicity	1.15***	1.14***	1.18***	1.18***
Pell-eligible	1.03*	1.03**	1.03**	1.03**
First generation	0.87***	0.87***	0.87***	0.87***
International	2.18***	2.18***	2.17***	2.18***
Age	0.98***	0.98***	0.98***	0.98***
Male	0.85***	0.85***	0.85***	0.85***
Unknown gender	1.16***	1.16***	1.17***	1.17***
Credits earned	1.01***	1.01***	1.01***	1.01***
Part-time faculty	1.10***	1.11***	1.11***	1.11***
Other instructors	1.10***	1.09**	1.09**	1.09**
Step 2				
ACUE		1.03+	0.99	1.03
During		1.04**	1.04	1.06+
Step 3				
ACUE x During			1.07+	0.92
Black x ACUE			1.05	0.98
Black x During			0.95	0.93*
Hispanic x ACUE			1.04	1.00
Hispanic x During			1.04	1.03
Other race/ethnicity x ACUE			0.92	0.88+
Other race/ethnicity x During			0.92+	0.91+
Step 4				
Black x ACUE x During				1.29*
Hispanic x ACUE x During				1.14
Other race/ethnicity x ACUE x During				1.18

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table B4

Logistic Regression Predicting Course Completion by Faculty Type, Including Interactions with Race/Ethnicity

	Step 1 OR	ACUE Step 2 OR	Step 3 OR	Match Step 1 OR	Step 2 OR	Step 3 OR
Step 1						
Black	0.90*	0.90*	0.86**	0.87***	0.87***	0.88***
Hispanic	1.04	1.03	0.99	1.00	1.00	1.00
Other race/ethnicity	1.05	1.05	1.03	1.16***	1.16***	1.18***
Pell-eligible	1.06+	1.07*	1.07*	1.02*	1.02*	1.02*
First generation	0.83***	0.83***	0.83***	0.87***	0.87***	0.87***
International	2.47***	2.47***	2.47***	2.14***	2.14***	2.14***
Age	0.98***	0.98***	0.98***	0.98***	0.98***	0.98***
Male	0.83***	0.83***	0.83***	0.85***	0.86***	0.85***
Unknown gender	1.23+	1.23+	1.23+	1.16***	1.16**	1.16***
Credits earned	1.01***	1.01***	1.01***	1.01***	1.01***	1.01***
Part-time faculty	1.39***	1.39***	1.40***	1.10***	1.10***	1.10***
Other instructors	1.07	1.04	1.04	1.10**	1.10**	1.10**
Step 2						
During		1.11**	0.97		1.03*	1.06+
Step 3						
Black x During			1.21+			0.93*
Hispanic x During			1.18+			1.03
Other race/ethnicity x During			1.07			0.91+

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table B5

Logistic Regression Predicting Course Completion Among Black and White students of ACUE Faculty

	Black students		White students	
	Step 1 OR	Step 2 OR	Step 1 OR	Step 2 OR
Step 1				
Pell-eligible	0.95	0.96	1.11	1.11
First generation	0.79***	0.79***	0.82*	0.82*
International	2.46***	2.47***	3.89***	3.89***
Age	0.98***	0.98***	0.99***	0.99***
Male	0.87**	0.87**	0.77***	0.77***
Unknown gender	2.12+	2.12+	0.96	0.96
Credits earned	1.01***	1.01***	1.02***	1.02***
Part-time faculty	1.32**	1.32**	1.65***	1.65***
Other instructors	1.10	1.07	1.04	1.05
Step 2				
During		1.15*		0.97

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table B6

Logistic Regression Predicting Course Completion by Time Point Among Students of ACUE Faculty

	Baseline OR	During ACUE OR
Black	0.85**	1.07
Hispanic	0.99	1.19*
Other race/ethnicity	1.04	1.09
Pell-eligible	1.09*	1.00
First generation	0.83***	0.82**
International	2.40***	2.68***
Age	0.98***	0.99***
Male	0.83***	0.83**
Unknown gender	1.14	1.51+
Credits earned	1.01***	1.01***
Part-time faculty	1.34***	1.63***
Other instructors	0.89	1.23**

Note: ***p < .001, **p < .01, *p < .05, +p < .10.

Table B7

Logistic Regression Predicting Course Completion in the Entire Sample, Including Interactions with Pell Eligibility

	Step 1 OR	Step 2 OR	Step 3 OR	Step 4 OR
Step 1				
Black	0.87***	0.87***	0.87***	0.87***
Hispanic	1.01	1.01	1.01	1.01
Other race/ethnicity	1.15***	1.14***	1.14***	1.14***
Pell-eligible	1.03*	1.03**	1.03*	1.03*
First generation	0.87***	0.87***	0.87***	0.87***
International	2.18***	2.18***	2.18***	2.18***
Age	0.98***	0.98***	0.98***	0.98***
Male	0.85***	0.85***	0.85***	0.85***
Unknown gender	1.16***	1.16***	1.16***	1.16***
Credits earned	1.01***	1.01***	1.01***	1.01***
Part-time faculty	1.10***	1.11***	1.11***	1.11***
Other instructors	1.10***	1.09**	1.09**	1.09**
Step 2				
ACUE		1.03+	1.00	0.99
During		1.04**	1.04*	1.04*
Step 3				
ACUE x During			1.07+	1.09+
Pell-eligible x ACUE			1.03	1.04
Pell-eligible x During			0.98	0.98
Step 4				
Pell-eligible x ACUE x During				0.97

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table B8

Logistic Regression Predicting Course Completion in the Entire Sample, Including Interactions with College Generational Status

	Step 1 OR	Step 2 OR	Step 3 OR	Step 4 OR
Step 1				
Black	0.87***	0.87***	0.87***	0.87***
Hispanic	1.01	1.01	1.01	1.01
Other race/ethnicity	1.15***	1.14***	1.14***	1.14***
Pell-eligible	1.03*	1.03**	1.03**	1.03**
First generation	0.87***	0.87***	0.88***	0.88***
International	2.18***	2.18***	2.18***	2.18***
Age	0.98***	0.98***	0.98***	0.98***
Male	0.85***	0.85***	0.85***	0.85***
Unknown gender	1.16***	1.16***	1.16***	1.16***
Credits earned	1.01***	1.01***	1.01***	1.01***
Part-time faculty	1.10***	1.11***	1.11***	1.11***
Other instructors	1.10***	1.09**	1.09**	1.09**
Step 2				
ACUE		1.03+	1.04	1.04
During		1.04**	1.04*	1.04*
Step 3				
ACUE x During			1.07+	1.06
First generation x ACUE			0.96	0.96
First generation x During			0.98	0.98
Step 4				
First generation x ACUE x During				1.01

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table B9

Logistic Regression Predicting Passing Course in the Entire Sample

	Step 1 OR	Step 2 OR	Step 3 OR
Step 1			
Black	0.73***	0.73***	0.73***
Hispanic	0.93***	0.92***	0.92
Other race/ethnicity	1.11***	1.11***	1.11***
Pell-eligible	0.91***	0.91***	0.91***
First generation	0.87***	0.87***	0.87***
International	1.83***	1.83***	1.83***
Age	0.99***	0.99***	0.99***
Male	0.76***	0.76***	0.76***
Unknown gender	1.01	1.01	1.01
Credits earned	1.02***	1.02***	1.02***
Part-time faculty	1.20***	1.22***	1.22***
Other instructors	1.07***	1.07***	1.07**
Step 2			
ACUE		1.09***	1.07***
During		1.02*	1.01
Step 3			
ACUE x During			1.08**

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table B10

Logistic Regression Predicting Passing Courses by Faculty Type

	ACUE		Match	
	Step 1 OR	Step 2 OR	Step 1 OR	Step 2 OR
Step 1				
Black	0.72***	0.71***	0.73***	0.73***
Hispanic	0.99	0.98	0.92***	0.92***
Other race/ethnicity	1.08	1.07	1.12***	1.12***
Pell-eligible	1.00	1.01	0.90***	0.90***
First generation	0.84***	0.84***	0.87***	0.87***
International	2.26***	2.26***	1.79***	1.79***
Age	0.99***	0.99***	0.99***	0.99***
Male	0.74***	0.74***	0.76***	0.76***
Unknown gender	0.99	0.99	1.01	1.01
Credits earned	1.02***	1.02***	1.02***	1.02***
Part-time faculty	1.41***	1.41***	1.21***	1.21***
Other instructors	0.95	0.92+	1.10***	1.10***
Step 2				
During		1.12***		1.01

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table B11

Logistic Regression Predicting Passing Courses in the Entire Sample, Including Interactions with Race/Ethnicity

	Step 1 OR	Step 2 OR	Step 3 OR	Step 4 OR
Step 1				
Black	0.73***	0.73***	0.73***	0.73***
Hispanic	0.93***	0.92***	0.92***	0.92***
Other race/ethnicity	1.11***	1.11***	1.14***	1.14***
Pell-eligible	0.91***	0.91***	0.91***	0.91***
First generation	0.87***	0.87***	0.87***	0.87***
International	1.83***	1.83***	1.83***	1.83***
Age	0.99***	0.99***	0.99***	0.99***
Male	0.76***	0.76***	0.76***	0.76***
Unknown gender	1.01	1.01	1.01	1.01
Credits earned	1.02***	1.02***	1.02***	1.02***
Part-time faculty	1.20***	1.22***	1.22***	1.22***
Other instructors	1.07***	1.07***	1.06**	1.06**
Step 2				
ACUE		1.09***	1.03	1.06+
During		1.02*	1.03	1.05*
Step 3				
ACUE x During			1.08**	0.95
Black x ACUE			1.02	0.97
Black x During			1.00	0.95+
Hispanic x ACUE			1.10**	1.06
Hispanic x During			1.00	0.98
Other race/ethnicity x ACUE			0.98	0.94
Other race/ethnicity x During			0.90**	0.89**
Step 4				
Black x ACUE x During				1.19*
Hispanic x ACUE x During				1.14+
Other race/ethnicity x ACUE x During				1.17

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table B12

Logistic Regression Predicting Passing Courses by Faculty Type, Including Interactions with Race/Ethnicity

	ACUE			Match		
	Step 1 OR	Step 2 OR	Step 3 OR	Step 1 OR	Step 2 OR	Step 3 OR
Step 1						
Black	0.72***	0.71***	0.69***	0.73***	0.73***	0.74***
Hispanic	0.99	0.98	0.95	0.92***	0.92***	0.92***
Other race/ethnicity	1.08	1.07	1.06	1.12***	1.12***	1.15***
Pell-eligible	1.00	1.01	1.01	0.90***	0.90***	0.90***
First generation	0.84***	0.84***	0.84***	0.87***	0.87***	0.87***
International	2.26***	2.26***	2.26***	1.79***	1.79***	1.79***
Age	0.99***	0.99***	0.99***	0.99***	0.99***	0.99***
Male	0.74***	0.74***	0.74***	0.76***	0.76***	0.76***
Unknown gender	0.99	0.99	0.99	1.01	1.01	1.01
Credits earned	1.02***	1.02***	1.02***	1.02***	1.02***	1.02***
Part-time faculty	1.41***	1.41***	1.41***	1.21***	1.21***	1.21***
Other instructors	0.95	0.92+	0.92+	1.10***	1.10***	1.10***
Step 2						
During		1.12***	1.01		1.01	1.05*
Step 3						
Black x During			1.14+			0.95+
Hispanic x During			1.14+			0.98
Other race/ethnicity x During			1.05			0.89**

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table B13

Logistic Regression Predicting Passing Courses Among Black, Hispanic, and White Students of ACUE Faculty

	Black students		Hispanic students		White students	
	Step 1 OR	Step 2 OR	Step 1 OR	Step 2 OR	Step 1 OR	Step 2 OR
Step 1						
Pell-eligible	0.88**	0.89**	1.15***	1.16***	1.04	1.04
First generation	0.81***	0.81***	0.88***	0.88***	0.80***	0.80***
International	2.38***	2.39***	2.06***	2.06***	2.80***	2.80***
Age	0.99***	0.99***	1.00	1.00	0.99*	0.99*
Male	0.79***	0.79***	0.75***	0.75***	0.67***	0.67***
Unknown gender	1.73*	1.73*	1.60+	1.59+	0.90	0.90
Credits earned	1.02***	1.02***	1.02***	1.02***	1.02***	1.02***
Part-time faculty	1.30***	1.31***	1.44***	1.45***	1.49***	1.49***
Other instructors	0.94	0.91	0.97	0.94	0.89	0.88
Step 2						
During		1.14**		1.15***		1.01

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table B14

Logistic Regression Predicting Course Completion by Time Point Among Students of ACUE Faculty

	Baseline OR	During ACUE OR
Black	0.69***	0.81**
Hispanic	0.95	1.10
Other race/ethnicity	1.06	1.14
Pell-eligible	1.03	0.94
First generation	0.86***	0.81***
International	2.37***	2.02***
Age	0.99***	1.00
Male	0.76***	0.69***
Unknown gender	1.01	0.94
Credits earned	1.02***	1.02***
Part-time faculty	1.36***	1.61***
Other instructors	0.79***	1.12+

Note: ***p < .001, **p < .01, *p < .05, +p < .10.

Table B15

Logistic Regression Predicting Passing Courses in the Entire Sample, Including Interactions with Pell Eligibility

	Step 1 OR	Step 2 OR	Step 3 OR	Step 4 OR
Step 1				
Black	0.73***	0.73***	0.73***	0.73***
Hispanic	0.93***	0.92***	0.92***	0.92***
Other race/ethnicity	1.11***	1.11***	1.11***	1.11***
Pell-eligible	0.91***	0.91***	0.90***	0.90***
First generation	0.87***	0.87***	0.87***	0.87***
International	1.83***	1.83***	1.83***	1.83***
Age	0.99***	0.99***	0.99***	0.99***
Male	0.76***	0.76***	0.76***	0.76***
Unknown gender	1.01	1.01	1.01	1.01
Credits earned	1.02***	1.02***	1.02***	1.02***
Part-time faculty	1.20***	1.22***	1.22***	1.22***
Other instructors	1.07***	1.07***	1.07**	1.07**
Step 2				
ACUE		1.09***	1.01	1.00
During		1.02*	1.01	1.01
Step 3				
ACUE x During			1.09**	1.13**
Pell-eligible x ACUE			1.10***	1.12***
Pell-eligible x During			1.00	1.01
Step 4				
Pell-eligible x ACUE x During				0.93

Note: ***p < .001, **p < .01, *p < .05, +p < .10

Table B16

Logistic Regression Predicting Passing Courses in the Entire Sample, Including Interactions with College Generational Status

	Step 1 OR	Step 2 OR	Step 3 OR	Step 4 OR
Step 1				
Black	0.73***	0.73***	0.73***	0.73***
Hispanic	0.93***	0.92***	0.92***	0.92***
Other race/ethnicity	1.11***	1.11***	1.11***	1.11***
Pell-eligible	0.91***	0.91***	0.91***	0.91***
First generation	0.87***	0.87***	0.87***	0.87***
International	1.83***	1.83***	1.83***	1.83***
Age	0.99***	0.99***	0.99***	0.99***
Male	0.76***	0.76***	0.76***	0.76***
Unknown gender	1.01	1.01	1.01	1.01
Credits earned	1.02***	1.02***	1.02***	1.02***
Part-time faculty	1.20***	1.22***	1.22***	1.22***
Other instructors	1.07***	1.07***	1.07**	1.07**
Step 2				
ACUE		1.09***	1.07***	1.06**
During		1.02*	1.00	1.00
Step 3				
ACUE x During			1.08**	1.13**
First generation x ACUE			1.00	1.02
First generation x During			1.02	1.03
Step 4				
First generation x ACUE x During				0.92

Note: ***p < .001, **p < .01, *p < .05, +p < .10



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