Academic Coaching Outcome Analysis [1]

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September 10, 2020

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Overview

Introduction and Demographics

This analysis includes results for two different sets of treatment and comparison groups: those in a small pilot that occurred in the Fall 2019 term and a larger coaching initiative implemented in the Spring 2020 term. These initiatives used different criteria to identify eligible students so similar analysis of each are included in the report. Numbers of students treated (treatment group) and eligible but not participating (comparison group) as well as selection factors. In some cases, the 2019 Freshmen cohort is used as a larger comparison group with population size of 2,295

Cohort Numbers and Characteristics

Coaching Cohort	Treatment Group	Comparison Group	Selection Criteria
Fall 2019 Pilot	16	145	• High school GPA of 3.25 or lower • ACT score of 23 or lower • Registered 12-15 credit hours • Not in other programs[2] • Excluded Business and Education majors
Spring 2020 Implementation	171	486	• Fall 2019 GPA of 2.75 or lower • Registered for 12-15 credit hours

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[2] Students participating in Student Success Services (SSS), student athletes, Gateway scholars, Honor students, and first-generation students placed with mentors were excluded because these programs already provide support.

Fall 2019 Coaching Pilot

Student Demographics

The Fall 2019 pilot group was comprised of a greater proportion of students of color, especially Asian and Black/African American students, than the comparison group or the overall 2019 Freshmen Cohort as shown in the first figure to the right

Fall 2019 Pilot participants were identical to the comparison group by gender but were less likely to be first generation and more likely to be from Hamilton County. A greater representation of male students was in the pilot and comparison groups compared to the overall Freshmen cohort.
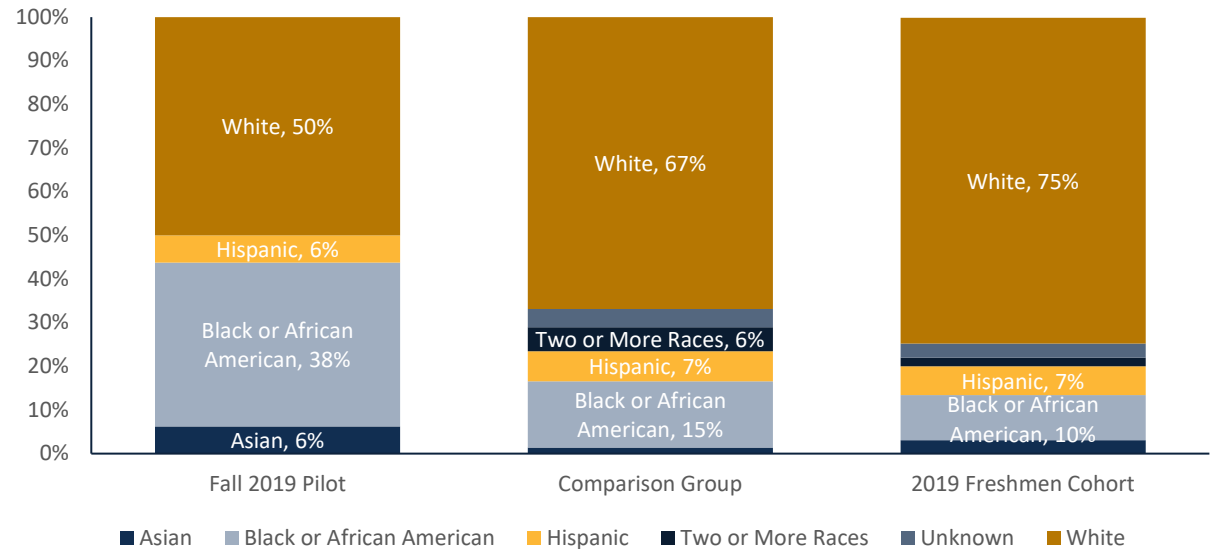
Incoming Academic Indicators

The standard incoming academic indicators are shown below. Overall, the pilot and comparison groups are very similar other than average Math ACT score. However, given the small number of students in the pilot group this may be due to a very small number of students.
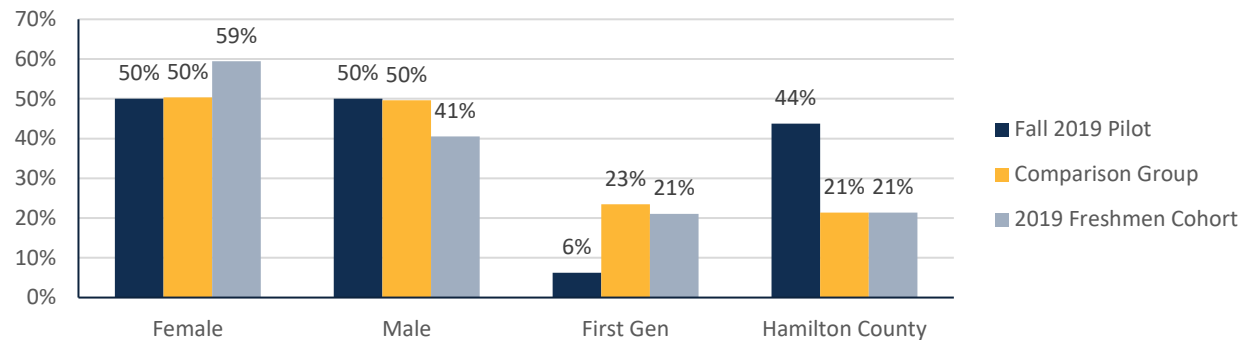
Incoming Academic Indicators for Fall 2019 Pilot and Comparison Groups

Population	Average High School GPA	Average ACT Composite Score	Average ACT Math Score
Fall 2019 Pilot	2.80	18.8	17.3
Comparison Group	2.86	18.6	16.6
2019 Freshmen Cohort	3.58	23.9	22.1

Race and Ethnicity of Fall 2019 Pilot and Comparison Groups

Demographic Factors for Fall 2019 Pilot and Comparison Groups

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Outcomes During Treatment Term

Coaching Outcomes

Students receiving coaching services were enrolled in University Studies courses and earned grades based on their participation in coaching sessions. In the pilot, 14 of the 16 participants earned an A grade in their coaching course, signaling full participation. One student withdrew, and one student earned a C. Based on these grades, we assume a full participation rate of 88% for these coaching students. Attendance at coaching sessions was tracked but there were inconsistencies between tracking reports and coaching grades, so grades were used as a participation metric in this analysis.

Grades Earned in University Studies Course
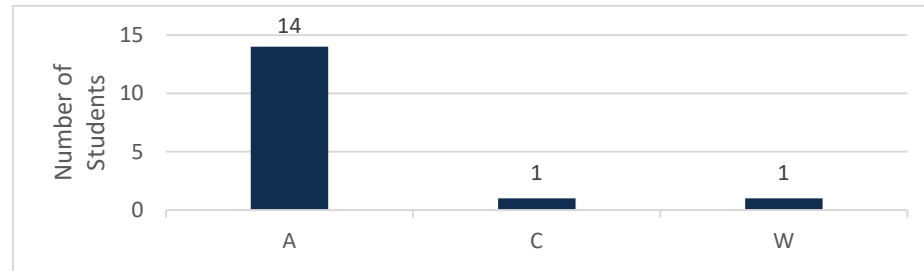
Academic Outcomes

The table to the right depicts average attempted and earned hours for the Fall 2019 term. Pilot coaching students earned the same number of credits as members of the Freshmen cohort despite much lower incoming high school GPAs and ACT scores. In contrast, the comparison group earned significantly fewer hours. Pilot participants had average cumulative GPAs lower than those of all 2019 Freshmen Cohort members.

At the end of the Fall 2019 term, 13% of pilot coaching students, 41% of comparison group students, and 15% of all 2019 Freshmen cohort members were on academic probation.

Academic Performance Indicators During Fall 2019 Term

Population	Average Attempted Credit Hours	Average Earned Credit Hours	Average Cumulative GPA
Fall 2019 Pilot	15.6	13.2	2.47
Comparison Group	14.3	10.4	1.93
2019 Freshmen Cohort	15.2	13.3	2.87

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Outcomes for Spring 2020 Term and Summer Enrollment

Retention

Fall 2019 pilot students were retained to the next semester at high rates; only one student did not re-enroll (94% retention). In comparison, 78% of comparison group members and 91% of all 2019 Freshmen cohort members were retained. The student who did not re-enroll is the student who earned a C in their coaching course, indicating less than full participation.

Attainment of 30 Credit Hour Benchmark

Credit accumulation signals increased likelihood of on-time degree completion and is a performance funding benchmark for UTC. While two thirds (67%) of pilot students earned at least 30 credit hours by the end of the Spring 2020 term, only 25% of the comparison group did the same.

Enrollment During Summer 2020 Term

Pilot participants were more likely to enroll in courses during the Summer 2020 term than either comparison group. One in four coaching students took summer courses (25%), compared to 10% of the comparison group and 15% of the freshmen cohort.
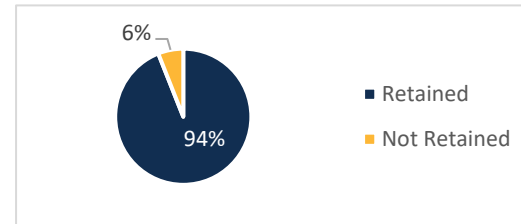
Retention to Fall 2020 Term

Three out of four pilot participants were retained to the Fall 2020 term (75%), a similar proportion to the overall freshmen cohort (77%). In contrast, only 54% of the comparison group returned. In addition to the one student who did not reenroll in the Spring 2020 term, three additional pilot students were not retained. All three students earned A grades in their coaching course, indicating full participation.

Discussion

Despite low incoming academic indicators, fall pilot participants have academic performance consistent with that of the overall freshmen cohort. The effects of coaching appear to be durable beyond the treatment term. Majority of participants are meeting key indicators around credit accumulation and first year retention. This early intervention appears to be very effective.

Retention to Spring 2020 Percentages Fall 2019 Pilot Cohort

30 Credit Hour Attainment by Percentages Fall 2019 Pilot Cohort
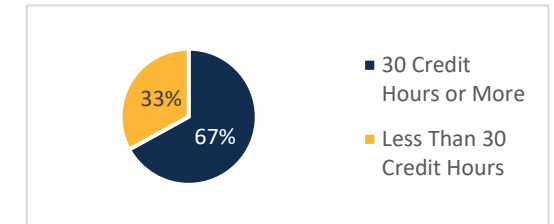
Summer Enrollment by Percentages Fall 2019 Pilot Cohort
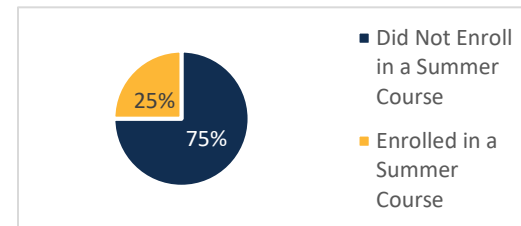
Retention to Fall 2020 Percentages Fall 2019 Pilot Cohort
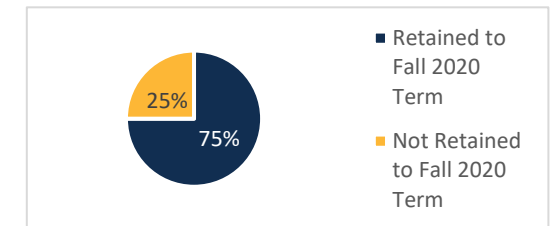
Academic Performance Indicators During Spring 2020 Term

Population	Average Attempted Credit Hours	Average Earned Credit Hours	Average Cumulative GPA
Fall 2019 Pilot	14.7	12.1	2.85
Comparison Group	13.9	10.5	2.32
2019 Freshmen Cohort	14.8	13.0	3.10

Spring 2020 Coaching Cohort

Student Demographics

Students of color were overrepresented in the students who participated in and were eligible for coaching. Unlike the Fall 2019 pilot and comparison groups, the spring coaching cohort and comparison groups are very racially and ethnically similar.
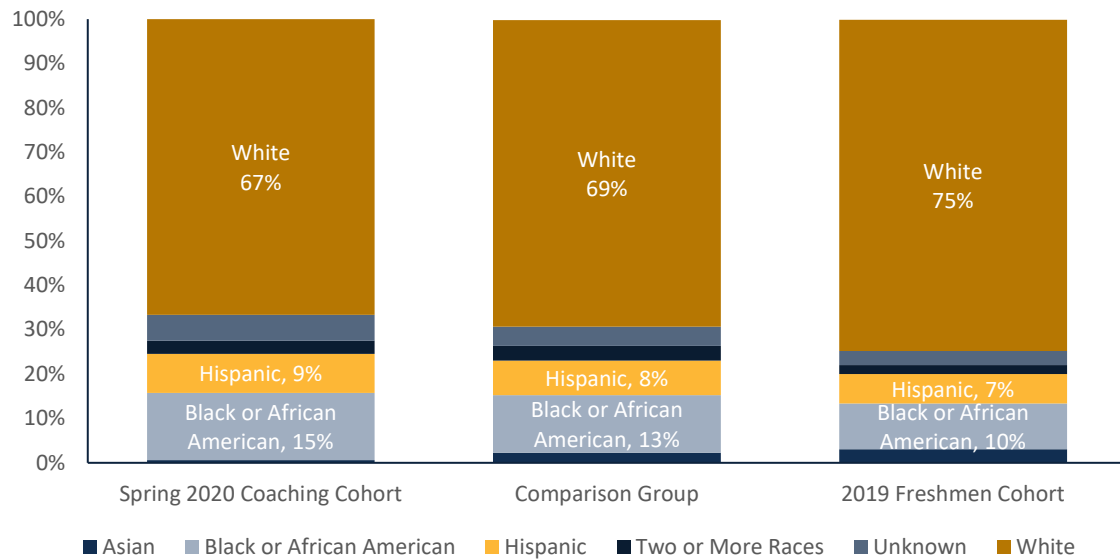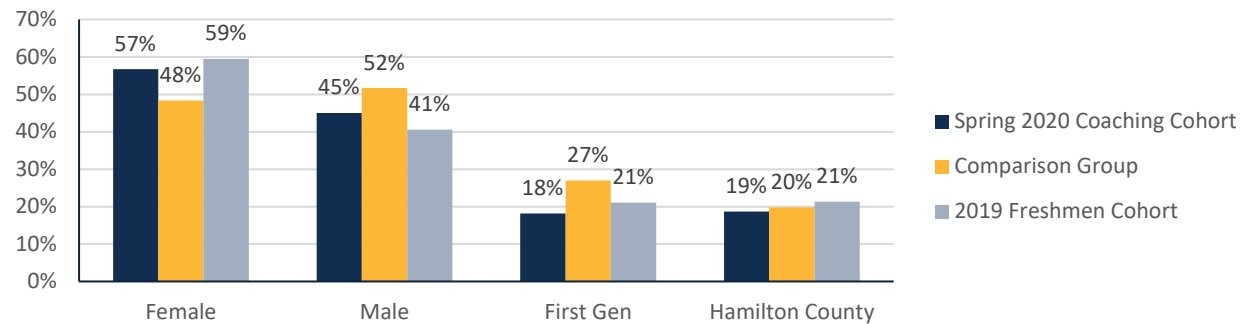
Coaching and comparison group students are similar across gender and other dimensions as well. It is notable that coaching participants skewed more female and less first generation than the comparison group. It is possible that future coaching initiatives may need to do additional outreach to encourage commitment among male and first-generation students.

Race and Ethnicity of Spring 2020 Coaching and Comparison Groups

Spring 2020 Coaching Cohort: White 67%, Hispanic 9%, Black or African American 15%
Comparison Group: White 69%, Hispanic 8%, Black or African American 13%
2019 Freshmen Cohort: White 75%, Hispanic 7%, Black or African American 10%

Legend: Asian, Black or African American, Hispanic, Two or More Races, Unknown, White

Demographic Factors for Spring 2020 Coaching and Comparison Groups

	Female	Male	First Gen	Hamilton County
Spring 2020 Coaching Cohort	57%	45%	18%	19%
Comparison Group	48%	52%	27%	20%
2019 Freshmen Cohort	59%	41%	21%	21%

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Incoming Academic Indicators

Coaching and comparison group students had similar incoming academic indicators. Average high school GPA and ACT scores were lower than the overall freshmen cohort.

Academic Performance in Fall 2019 Term

Coaching students experienced challenges in their first term that led to lower academic indicators like earned credits and GPA; this resulted in selection for coaching. The population that received coaching support had lower average credit accumulation and grade point averages than the comparison group. Due to these differences, we would expect the comparison group to have better academic outcomes than the coaching group.

Incoming Academic Indicators for Spring 2020 Pilot and Comparison Groups

Population	Average High School GPA	Average ACT Composite Score	Average ACT Math Score
Spring 2020 Coaching Cohort	3.19	22.3	20.5
Comparison Group	3.23	21.6	19.9
2019 Freshmen Cohort	3.58	23.9	22.1

Academic Performance in Fall 2019 Term

Population	Average Attempted Credit Hours	Average Earned Credit Hours	Average Cumulative GPA
Spring 2020 Coaching Cohort	15.1	10.9	1.80
Comparison Group	15.1	12.5	2.16
2019 Freshmen Cohort	15.2	13.3	2.87

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Outcomes During Treatment Term

Coaching Outcomes

Coaching cohort members were also enrolled in University Studies courses, and 121 earned grades of A or S in those courses, for a full participation rate of 73%. Grade distribution in coaching courses is shown in the first figure to the right. The Spring 2020 term was highly unusual given the COVID-19 pandemic and tornadoes in Nashville, Cookeville, and Chattanooga. Perhaps as a result, this is a lower rate of full participation than demonstrated by the Fall 2019 pilot.

Academic Outcomes

Coaching student outcomes lagged those of the comparison group. However, while the coaching group saw increased average credit accumulation compared to the previous term, average credit accumulation for the comparison group declined compared to the previous term.
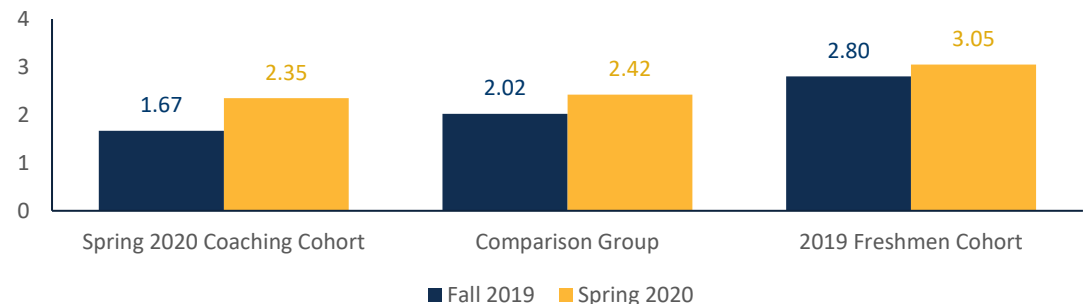
While all groups of students experienced higher average term GPAs during the Spring 2020 term than the Fall 2019 term, coaching students saw the largest jump in term GPAs from Fall to Spring.

At the end of the treatment term, 25% of the coaching group was on academic probation compared to 17% of the comparison group and 15% of the 2019 freshmen cohort. Since academic standing is calculated by cumulative GPA and coaching students had much lower average GPAs in the fall term than the comparison group, this is unsurprising.

Attainment of 30 Credit Hour Benchmark

Both coaching and comparison group students were much less likely to reach 30 cumulative credit hours by the end of the Spring 2020 term than the freshmen cohort overall. Thirty six percent of coaching students and 39% of comparison group students reached this benchmark compared to 62% of the overall freshmen cohort.

Grade Distribution in Academic Coaching Courses

Academic Performance Indicators During Spring 2020 Term

Population	Average Attempted Credit Hours	Average Earned Credit Hours	Average Cumulative GPA	Average Term GPA
Spring 2020 Coaching Cohort	15.3	11.5	2.19	2.35
Comparison Group	14.4	11.1	2.39	2.42
2019 Freshmen Cohort	14.8	13.0	3.10	3.05

Average Term GPAs for Spring 2020 Coaching and Comparison Groups

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Post-Coaching Outcomes

Enrollment During Summer 2020 Term

Coaching students were more likely to enroll in the Summer 2020 term than comparison group or freshmen cohort students. Eighteen percent of coaching students enrolled, while 14% of comparison group members and 15% of the overall freshmen cohort did the same.
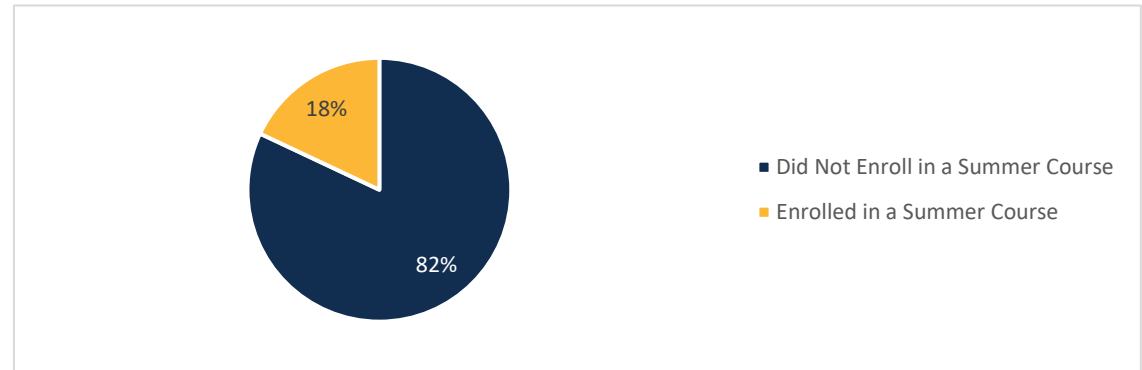
Retention to Fall 2020

Coaching students were retained to the Fall 2020 term at lower rates than the comparison group and overall freshmen cohort. Seventy-two percent of all coaching students were retained, compared to 75% of the comparison group and 77% of the freshmen cohort. However, 81% of students who fully participated in coaching were retained.
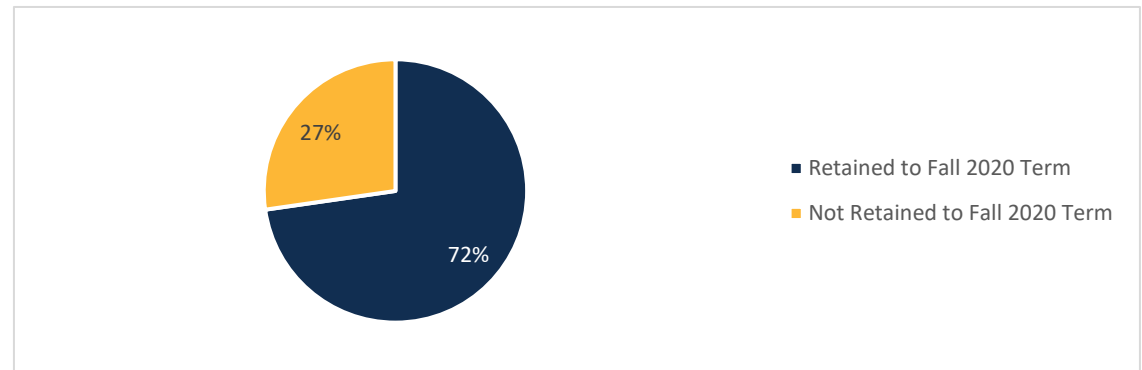
Discussion

There are some encouraging indicators for coaching students that suggest coaching will positively affect students' long-term academic outcomes. Credit accumulation was slightly higher during the treatment term for coaching students. Term GPAs between fall and spring terms saw huge growth. Coaching students were also more likely to participate in summer courses. Given the upheaval of the Spring 2020 term, academic performance at the end of the Fall 2020 term will be important to examine to fully understand the impact of coaching.

Summer Enrollment by Percentages Spring 2020 Coaching Cohort

- Did Not Enroll in a Summer Course
- Enrolled in a Summer Course

82%
18%

Retention to Fall 2020 Percentages Fall 2019 Pilot Cohort

- Retained to Fall 2020 Term
- Not Retained to Fall 2020 Term

72%
27%

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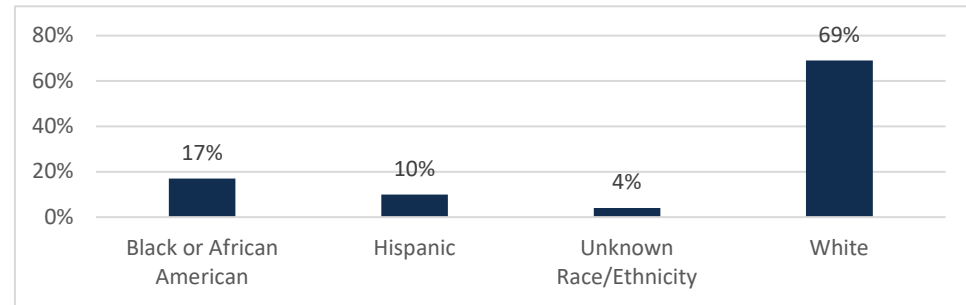Office of Planning, Evaluation, and Institutional Research

Coaching Students Not Retained

Demographics

This section separately analyzes students who were selected for academic coaching in the Spring 2020 term and were not retained in Fall 2020.

Students who were not retained are slightly more likely to be students of color. Students not retained were 17% Black or African American, 10% Hispanic, 4% of unknown race/ethnicity, and 69% white. The gender split was the same as for coaching students overall, but students not retained were slightly less likely to be first generation and more likely to hail from Hamilton County – 29% had a permanent address here.

Incoming Major

Students who were not retained were clustered in some majors as their incoming program of study at the 14th day census of the fall term. Determining when students declared which majors can be difficult in UTC's reporting system. Top majors included the BSN Nursing program (17% of students not retained) as well as Psychology (13%), Management (8%) and Biology (6%). Only two students not retained were undecided majors.

Academic Performance in Spring 2020

Students who were not retained did not experience academic success in the Spring 2020 term on average. At the end of the term, average term GPA was 1.67 and average earned credits was 8.2 (out of an average of 15.3 attempted). Only 50% of the students not retained fully participated in academic coaching.

Students from the Spring 2020 Coaching Cohort Not Retained Race/Ethnicity

Top 4 Majors of Students Not Retained

Major	Percentage
Nursing	17%
Psychology	13%
Management	8%
Biology	6%

Brief Academic Overview of Students Not Retained

Average Term GPA	1.67
Average Earned Credit Hours	8.2
Full Participation in Academic Coaching	50%

Conclusion

Performance of Pilot and Coaching Groups Compared

Pilot and coaching participants are distinct populations. These groups were chosen using separate criteria and they differ from each other in significant ways. This comparison is meant to shed light on outcomes from what is essentially two different coaching interventions – one based on academic performance in high school, and one based on college performance. It is to be expected that these groups would have divergent outcomes due to their incoming characteristics as well as their differing time since coaching treatment occurred. Since pilot students participated in an intervention almost one year ago, the long-term effects of that intervention are clearer than for the spring 2020 coaching students.

Despite much lower incoming academic indicators, students who participated in the academic coaching pilot performed very similarly to the overall freshmen cohort. While we would expect lower rates of academic performance, instead most of these students have met key academic progression benchmarks including 30 credit hour credit accumulation by the end of the first year and retention to the second year.

In contrast, coaching students experienced academic setbacks in their first semester that have continued to affect academic performance. There are indicators that coaching positively affected credit attainment in the treatment term and that coaching students experienced greater growth in GPA from the fall to the spring term. It is difficult to tease apart the effect of coaching on these differences because unlike the pilot comparison group, the coaching comparison group performed better academically in the first semester of college than the treatment group.

It seems that the coaching intervention in the pilot, in which students at risk of academic challenge were provided additional supports, was extremely successful in the treatment term and has had durable effects on academic performance. This earlier intervention may be a promising model to implement more widely in addition to coaching support for students who, despite higher incoming academic indicators, experience academic challenges in their first college term.

Academic Indicator Comparison for Pilot, Coaching, and Comparison Groups

Academic Indicators		Fall 19 Pilot		2019 Freshmen Cohort	Spring 20 Implementation	
		Coaching	Comp.		Coaching	Comp.
Number of Students		16	145	2,295	171	486
Incoming Academics	Avg. HS GPA	2.80	2.86	3.58	3.19	3.23
	Avg. ACT	18.8	18.6	23.9	22.3	21.6
	Avg. ACT Math	17.3	16.6	22.1	20.5	19.9
Fall 2019 Term	Avg. Attempted Credits	15.6	14.3	15.2	15.1	15.1
	Avg. Earned Credits	13.2	10.4	13.3	10.9	12.5
	Avg. Cum. GPA	2.47	1.93	2.87	1.80	2.16
	Academic Probation	13%	41%	15%	53%	28%
Retention to Spring Term		94%	78%	91%	n/a	n/a
Full Coaching Participation		88%	n/a	n/a	73%	n/a
Spring 2020 Term	Avg. Attempted Credits	14.7	13.9	14.8	15.3	14.4
	Avg. Earned Credits	12.1	10.5	13.0	11.5	11.1
	Avg. Cum. GPA	2.85	2.32	3.10	2.19	2.35
	Academic Probation	6%	23%	15%	25%	17%
30+ Credit Hours by End of 1st Year		67%	25%	62%	36%	39%
Enrolled in Summer 2020 Course(s)		25%	10%	15%	18%	14%
Retention to Fall 2020		75%	54%	77%	72%	75%

▮ = Treatment Term

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