The Consequences of a Low First-Year Grade Point Average on Later College Outcomes

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Abstract

Traditionally, a college grade point average (GPA) of 2.00 or higher has signified that a student has made acceptable academic progress and avoided academic probation. However, having a 3.00 or higher has signified a level of success that is often required for admission to graduate school, maintaining a scholarship or enrollment in an honors program, and for consideration by corporate recruiters. Focusing on students with a first-year GPA (FYGPA) between 2.00 and 2.99, often known as the murky middle at colleges and universities, this study examined degree completion rates and fourth-year cumulative grade point average (CGPA) across a sample of 97,282 students enrolled at 73 four-year institutions. Results showed that for students with FYGPAs between 2.50 and 2.99, just 48% graduated within four years and only 45% had a fourth-year CGPA of 3.00 or higher. For students with FYGPAs between 2.00 and 2.49, just 28% graduated within four years and only 18% had a fourth-year CGPA of 3.00 or higher. These students with a 2.00 to 2.99 FYGPA were also more likely to be first-generation college students, underrepresented minority students, and students from more challenging neighborhood environments. Logistic regression analyses showed that students' chances of graduating within four years and pulling their CGPAs above 3.00 given a FYGPA below 3.00 were quite low. Given the implications of a low but acceptable FYGPA, early identification of students who may benefit from particular academic advising initiatives as they transition to college may be key to keeping all doors open for as many students as possible, doors encountered both throughout and after college.

Introduction

The expression "two point oh and go" has two meanings. It refers to a letter grade of "C," the equivalent of a 2.00 on a 4.00 grading scale, the lowest passing grade in a required course. Earning a letter grade below a "C" in a course required for a degree often means that a student must retake the course and earn at least a "C." It also applies to the more general grade point average (GPA), with a 2.00 being the minimum required for a student to be in good academic standing. Traditionally, a GPA below 2.00 meant that a student was placed on academic probation. Poor but acceptable academic performance in one college course may not derail a student. However, poor but acceptable academic performance overall, as measured by GPA, often limits students' future opportunities.

Not every student can earn perfect grades, and "getting by" may be the best that some students can do, but the implications of poor but acceptable academic performance are often ignored. Undergraduate GPA is an imperfect measure of academic performance, as course difficulty and grading standards vary across courses, programs of study, and institutions (Berry & Sackett, 2009; Pascarella & Terenzini, 2005; Westrick, Marini, & Shaw, 2021). However, "Grade point averages are the lingua franca of the academic instructional world, the keys to students' standing and continued enrollment, to admission to majors with enrollment caps, to program and degree completion, to admission to graduate and professional schools, and to employment opportunities (Pascarella & Terenzini, 2005, p. 396)."

Of all student outcomes, degree completion stands out as the foremost measure of student success in college. Though other goals, such as citizenship and the pure pursuit of knowledge are often considered highly important outcomes, degree completion generally tops the list (Miller, 2016; Zwick, 2006). A college degree opens the door to employment opportunities, and it is required for admission to law, medical, and graduate school programs.

Another outcome of interest, fourth-year cumulative GPA (CGPA), should be recognized as being nearly as important as degree completion. Employers seek applicants with strong academic credentials, and though many look for recent graduates with at least a 3.00 GPA, many seek graduates with at least a 3.50 (Adams, 2015). Though admission requirements vary across graduate programs, law schools, and medical schools, mean undergraduate GPAs between 3.50 and 3.75 are common (Association of American Medical Colleges, 2022; Law School Admission Council, 2023; University of California, Berkeley, 2013), well above a 2.00.

Students who stumble or struggle in their first year of college may recover in the following years and earn higher grades, but it would be beneficial to better understand students' chances of pulling their GPAs up to be competitive with other graduates or even being able to graduate on time within four years. For this reason, the current study focused on the relationships between first-year GPA (FYGPA), specifically low but acceptable FYGPA, and two long-term outcomes for students: graduation within four years and fourth-year CGPA.

Research Question 1. Given students' FYGPAs, what were their probabilities of graduating within four years at the college or university that they had initially enrolled?

Research Question 2. Given students' FYGPAs, what were their probabilities of having a fourth-year CGPA of 3.00 or higher at the college or university that they had initially enrolled?

Methods

Data

Each of the 73 four-year institutions in the study sample provided FYGPA and fourth-year CGPA for their fall 2017 first-time, first-year students. Student records were matched to SAT scores and students self-reported HSGPA data collected by College Board when students registered for the SAT. Graduation data came from the National Student Clearinghouse and was matched to students records at the institution where the students had initially enrolled. Inclusion in the study required that each student have a valid SAT score, a self-reported HSGPA, and a FYGPA. Students who did not complete the first year of undergraduate study were excluded. The final sample had 97,282 students.

Student Subgroupings

For this study, we conducted additional analyses for three subgroups of interest: first generation students, students from high-challenge environments, and underrepresented minority students.

First Generation. We defined first generation students as students whose parents' highest reported level of education was less than a bachelor's degree. In the current study, 22,550 students (23%) were categorized as being first-generation students.

High-Challenge. We defined high-challenge students using College Board's Landscape data. Landscape is based on six indicators—college attendance, crime, education level, household structure, housing stability, and median family income—with neighborhood and high school percentiles for each indicator. Each indicator is reported on a 1—100 scale, with a higher score indicator greater challenge. Using the six indicators, we calculated neighborhood and high school averages, and then calculated the average of the two averages. Using this final average from the national 2017 cohort of students, we defined students in the top 40% as having come from high-challenge environments. In the current study, 16,922 students (17%) were considered to have come from high challenge environments.

Underrepresented Minority. Using students' self-reported race/ethnicity, we considered who reported themselves as being an American Indian or Native Alaskan, Black or African American, Hispanic or Latino, or Native Hawaiian or Other Pacific Islander as being an underrepresented minority. In the current study, 26,079 students (27%) were categorized as being underrepresented minority students.

Institution Subgroupings

For this study, we subdivided colleges and universities based on control (public/private) and admission selectivity as reported in the Integrated Postsecondary Education Data System (IPEDS) from the National Center for Education Statistics (NCES, 2018). We classified institutions that admitted less than 50% of applicants as being more selective, and institutions that admitted 50% or more of applicants as being less selective. The number of higher education institutions (k) and students (n) across the institutional

subgroupings were: private, more selective, k=13, n=9,607; private, less selective, k=20, n=6,715; public, more selective, k=8, n=21,637; and public, less selective, k=32, n=59,323.

Measures

FYGPA. Institutions reported FYGPA on a scale of 0 to 4. The mean (SD) for FYGPA was 3.06 (0.79) for the full sample (N=97,282).

Fourth-Year CGPA. Institutions reported fourth-year CGPA on a scale of 0 to 4. Of the 97,282 students who had earned a FYGPA, 75,986 persisted at the institution where they had initially enrolled and earned a fourth-year CGPA. Final CGPAs for the students who graduated in less than four years were carried forward and included as fourth-year CGPA. The mean (SD) for fourth-year CGPA was 3.34 (0.47). For the current study, a competitive fourth-year CGPA was defined as 3.00 or higher, and 60,382 students, 62% of the full sample, met this cut off.

Graduation within Four Years. Using data from the National Student Clearinghouse, we determined if students had graduated with a bachelor's degree within four years from the institution where they had enrolled in the fall term of the 2017-2018 academic year. Students who had transferred to another institution and had graduated within four years from the second institution were not considered as having graduated in this study.[1] Overall, 53,667 students (55%) graduated from the institution where they had initially enrolled within four years.

High School GPA (HSGPA). College Board collects students' self-reported HSGPA from the SAT Questionnaire when students register for the SAT. This measure of high school academic performance was reported on a 12-point interval scale, and it ranged from 0.00 (F) to 4.33 (A+). The mean (SD) for HSGPA was 3.69 (0.47) for the full sample (*N*=97,282).

SAT Total Score. College Board provided students' SAT Total scores, which are reported on a 400 to 1600 scale. The total score is the combination of students' SAT Math and SAT Evidence-Based Reading and Writing sections scores, both reported on a 200 to 800 scale. The mean (SD) SAT Total score for the full sample was 1196 (155).

Descriptive Statistics

Table 1 contains the descriptive statistics for the overall sample, the student subgroups, and the institution subgroups. Students at the more selective institutions—both public and private—tended to have higher mean HSGPAs and SAT Total scores when compared with the students at the less selective institutions. The highest mean SAT Total scores and FYGPAs were generally found at the private, more selective institutions, which also had the highest four-year graduation rates and the highest percentage of students with a fourth-year CGPA of 3.00 or higher. The public, less selective institutions tended to have the lowest mean SAT Total scores, FYGPAs, four-year graduation rates, and percentage of students

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[1] A total of 4,893 students graduated with a bachelor's degree from an institution other than the one where they had initially enrolled, and 75% of these students had FYGPAs of 3.00 or higher, above the focal range of FYGPAs (2.00 to 2.99) for this study.

earning a fourth-year CGPA of 3.00 or higher. Not all students persisted through the end of the fourth year, which is reflected in the second to last column, but the average fourth-year CGPA for those who did persist exceeded the mean FYGPA for the full first-year samples. Finally, it is worth noting that in the overall study sample and in the institution-level groupings, the three student subgroups had lower undergraduate GPAs than did the overall group, but the gaps between fourth-year CGPA were smaller than the FYGPA gaps.

Table 1. Descriptive Statistics

Student Group	n	SAT Total Score M (SD)	HSGPA M (SD)	FYGPA M (SD)	Graduated within Four Years (%)	Fourth-Year CGPA ≥3.00 (%)	Fourth-Year CGPA (n)	Fourth-Year CGPA M (SD)
							Persisted to Fourth Year*	
				Completed First Year				
				Full Study Sample k=73				
Overall	97,282	1196 (155)	3.69 (0.47)	3.06 (0.79)	55%	62%	75,986	3.34 (0.47)
First Generation	22,550	1126 (148)	3.59 (0.51)	2.83 (0.88)	45%	50%	15,607	3.23 (0.50)
High Challenge	16,992	1120 (152)	3.66 (0.51)	2.81 (0.88)	46%	50%	12,060	3.21 (0.51)
URM	26,070	1143 (156)	3.61 (0.50)	2.86 (0.84)	49%	52%	19,352	3.21 (0.50)
				Private, More-Selective Institutions k=13				
Overall	9,607	1291 (146)	3.81 (0.40)	3.25 (0.61)	75%	76%	8,346	3.45 (0.40)
First Generation	1,522	1222 (146)	3.75 (0.43)	3.05 (0.71)	67%	65%	1,223	3.32 (0.43)
High Challenge	861	1238 (150)	3.86 (0.40)	3.03 (0.68)	72%	66%	729	3.29 (0.45)
URM	2,677	1254 (138)	3.78 (0.41)	3.07 (0.65)	74%	71%	2,314	3.33 (0.42)
				Private, Less-Selective Institutions k=20				
Overall	6,715	1138 (150)	3.57 (0.51)	3.07 (0.75)	59%	59%	4,956	3.36 (0.45)
First Generation	1,561	1081 (140)	3.49 (0.53)	2.90 (0.79)	51%	49%	1,041	3.26 (0.48)
High Challenge	866	1080 (152)	3.61 (0.56)	2.91 (0.81)	50%	49%	577	3.27 (0.49)
URM	1,589	1091 (151)	3.48 (0.54)	2.87 (0.80)	51%	49%	1,088	3.23 (0.48)
				Public, More-Selective Institutions k=8				
Overall	21,637	1240 (140)	3.82 (0.39)	3.08 (0.74)	56%	65%	18,331	3.31 (0.47)
First Generation	5,295	1181 (135)	3.78 (0.40)	2.86 (0.77)	53%	56%	4,235	3.19 (0.46)
High Challenge	4,253	1156 (136)	3.80 (0.42)	2.78 (0.80)	49%	52%	3,379	3.14 (0.48)
URM	6,991	1187 (138)	3.77 (0.42)	2.89 (0.77)	51%	56%	5,724	3.19 (0.48)
				Public, Less-Selective Institutions k=32				
Overall	59,323	1171 (153)	3.63 (0.49)	3.02 (0.83)	51%	59%	44,353	3.34 (0.49)
First Generation	14,172	1101 (144)	3.52 (0.53)	2.79 (0.93)	40%	46%	9,108	3.23 (0.52)
High Challenge	11,012	1101 (152)	3.60 (0.53)	2.80 (0.93)	42%	48%	7,375	3.23 (0.52)
URM	14,813	1108 (152)	3.52 (0.52)	2.81 (0.90)	43%	48%	10,226	3.20 (0.53)

Note. * Persisted to the fourth year or graduated early; URM=Underrepresented minority; k=number of higher education institutions.

A clear pattern in Table 1 is that the first generation, high challenge, and underrepresented minority students tended to have lower mean SAT scores, HSGPAs, and FYGPAs for the full sample and within the four institution types. These student subgroups also had lower four-year graduation rates and lower percentages of students earning a fourth-year CGPA of 3.00 or higher, with gaps of roughly 10% versus the overall sample analyses. However, after taking FYGPA into account, the gaps between the overall results and those for first generation, high challenge, and underrepresented minority students in the full sample and the institution-type analyses are smaller when looking at the percentage of students graduating within four years and earning a fourth-year CGPA of 3.00 or higher, as seen in Table 2.

Table 2. Fourth-Year Outcomes by FYGPA Categories, Overall and by Student Subgroups

Student Group	n	Graduated	Still Enrolled	Departed	CGPA of 3.00 or Higher
Overall Study Sample					
Overall	97,282	55%	23%	22%	62%
First Generation	22,550	45%	24%	31%	50%
High Challenge	16,992	46%	25%	29%	50%
Underrepresented Minority	26,070	49%	25%	26%	52%
FYGPA: 3.00 or Higher					
Overall	61,495	69%	19%	12%	82%
First Generation	11,621	63%	21%	17%	76%
High Challenge	8,520	64%	22%	14%	78%
Underrepresented Minority	13,637	67%	20%	13%	79%
FYGPA: 2.50 to 2.99					
Overall	17,484	48%	31%	21%	45%
First Generation	4,670	43%	31%	26%	40%
High Challenge	3,568	43%	33%	24%	39%
Underrepresented Minority	5,462	46%	33%	21%	41%
FYGPA: 2.00 to 2.49					
Overall	9,244	28%	37%	36%	18%
First Generation	2,936	26%	34%	40%	15%
High Challenge	2,266	27%	35%	38%	16%
Underrepresented Minority	3,418	28%	37%	36%	16%
FYGPA: Below 2.00					
Overall	9,059	6%	19%	75%	4%
First Generation	3,323	4%	17%	79%	3%
High Challenge	2,638	5%	16%	78%	3%
Underrepresented Minority	3,553	6%	20%	74%	4%

Note. CGPA=cumulative grade point average.

The key finding presented in Table 2 is that students with low but acceptable FYGPAs have poor long-term academic outcomes. To highlight the importance of first year academic performance and its relationship with degree completion, we present fourth-year outcomes for students broken out by

FYGPA levels in Table 2. By the end of their fourth year, students had either graduated from the first institution where they had enrolled, were enrolled for the full four years but had not graduated, or had departed that institution, having either dropped out of higher education or having transferred to another institution. The clear pattern is that as FYGPA levels decrease, graduation rates decrease, and departure rates increase. For students with a FYGPA between 2.50 and 2.99, less than half graduate within four years—45% overall—indicating that they earned fewer academic credits than did the students who earned FYGPAs of 3.00 or higher and had an overall graduation rate of 69%. For students with FYGPAs between 2.00 and 2.49, only 28% (overall) completed enough course credits to graduate within four years, a graduation rate less than half that for students who earned a FYGPA of 3.00 or higher.

Turning to fourth-year cumulative GPA, the gaps between the student FYGPA groups were even larger than those for graduation within four years. Less than half of the students with FYGPAs between 2.50 and 2.99 were able to pull their CGPA above 3.00 by the end of the fourth year, and less than 20% of the students with FYGPAs between 2.00 and 2.49 were able to pull their CGPAs above a 3.00 by the end of the fourth year. Though these are only descriptive statistics, these findings highlight the long-term academic effects of starting college with a low FYGPA.

Methods

To get a firmer understanding of the relationship between FYGPA and long-term college outcomes, we used logistic regression to estimate students' probabilities of graduating within four years and earning a fourth-year CGPA of 3.00 or higher at the institution level given students' FYGPAs. Institution-level results were then weighted by the number of students included in the analysis at the institution. We then aggregated the weighted intercept and parameter estimates and divided them by the total number of students aggregated across institutions. With the weighted intercept and parameter estimate for FYGPA, we could then enter any FYGPA and calculate the estimated probability of success for both outcome measures, graduation within four years and earning a fourth-year CGPA of 3.00 or higher.

Given that larger institutions heavily influence the mean estimates and that students' probabilities of success vary across institutions, we calculated the probabilities of success for both outcome measures using a FYGPA of 2.00 and 2.50 at each institution. We then determined the interquartile ranges and median probabilities across institutions. Institution-level results were aggregated overall and then within the four institution subgroupings (control x admission selectivity).

For student subgroup analyses at the institution level, we required at least 15 students to be in a subgroup. Consequently, the number of institutions included in the subgroup analyses was often less than the number of institutions included in the overall analyses. If every student had the same outcome (e.g., did not graduate within four years), there were no logistic regression results to report for that subgroup as there was nothing to model. Additionally, if the logistic regression model did not converge for a subgroup at an institution—typically due to nearly every student in the subgroup having the same outcome—there were no results to include.

Results

The results of the logistic regression analyses further demonstrate the importance of FYGPA on degree completion and having a competitive fourth-year CGPA. Figure 1 illustrates the estimated mean probabilities of graduating within four years given students FYGPA. The results for all students are represented by the blue line. Results for first generation students are represented by the red line. Results for students from high challenge environments are represented by the green line, and results for underrepresented minority students are represented by the purple line. As students' FYGPAs increase, so do their chances of graduating within four years. Overall, students with a FYGPA of 2.00 have a 20% chance of graduating within four years. For first generation, high challenge, and underrepresented minority students with a FYGPA of 2.00, their chances of graduating within four years are 15%, 15%, and 18%, respectively. Moving up to a FYGPA of 2.50, students overall have a 34% chance of graduating within four years, and for first generation, high challenge, and underrepresented minority students, their chances of graduating within four years are 28%, 29%, and 32%, respectively. At the high end of the FYGPA scale, the gaps are minimal, and the probability of success estimates for URM students exceed those of the overall sample.

Figure 1: Mean Probability of Graduating Within Four Years, Given Students' FYGPAs, Overall and by Subgroups
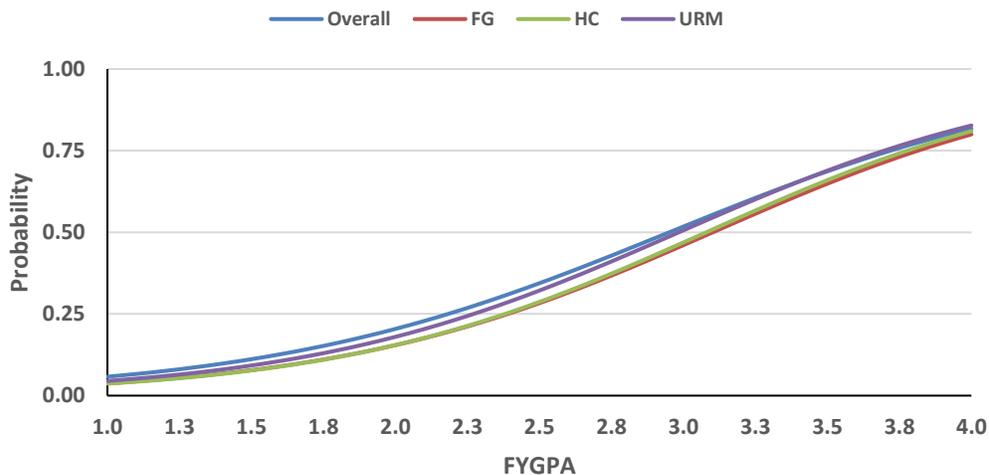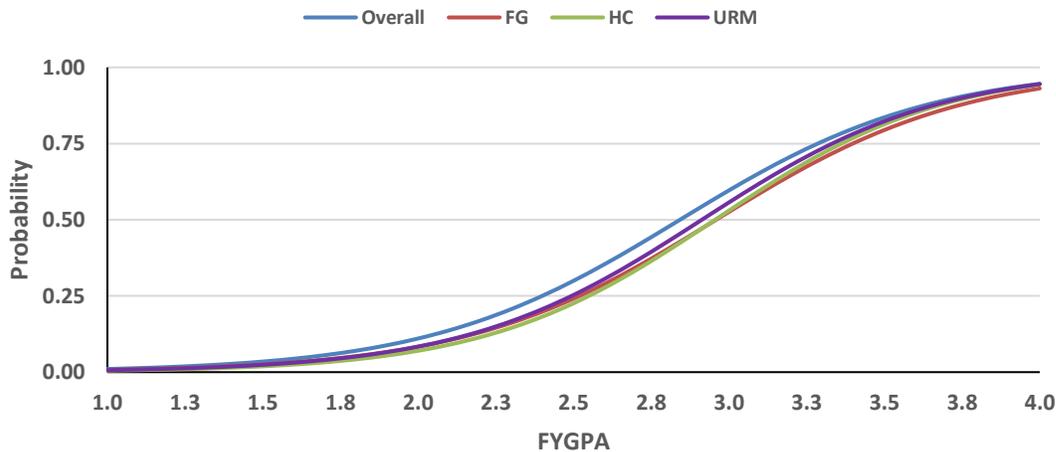

Note. FG=first generation; HC=high challenge; URM=underrepresented minority.

Figure 2 illustrates the estimated mean probabilities of earning a fourth-year CGPA of 3.00 or higher given students' FYGPAs. The probability curves in Figure 2 are much steeper than those seen in Figure 1 as FYGPA is a component of fourth-year CGPA and poor academic performance in the first year makes it difficult for students to pull their cumulative GPA up above a 3.00 over the following three years. For students with a FYGPA of 2.00, the estimated chance of students pulling their fourth-year CGPA to a 3.00 or higher is only 11%. For first generation, high challenge, and underrepresented minority students

with a FYGPA of 2.00, their chances of are 8%, 7%, and 8%, respectively. For all students with a FYGPA of 2.50, their chance of earning a fourth-year CGPA of 3.00 or higher is 30%, and for first generation, high challenge, and underrepresented minority students with a FYGPA of 2.00, their chances of are 24%, 23%, and 25%, respectively. Continuing up the FYGPA scale, as students' FYGPAs increase so do their chances of earning a fourth-year CGPA of 3.00 or higher.

Figure 2: Mean Probability of Earning a Fourth-Year Cumulative GPA Of 3.00 or Higher, Given Students' FYGPAs, Overall and by Subgroups
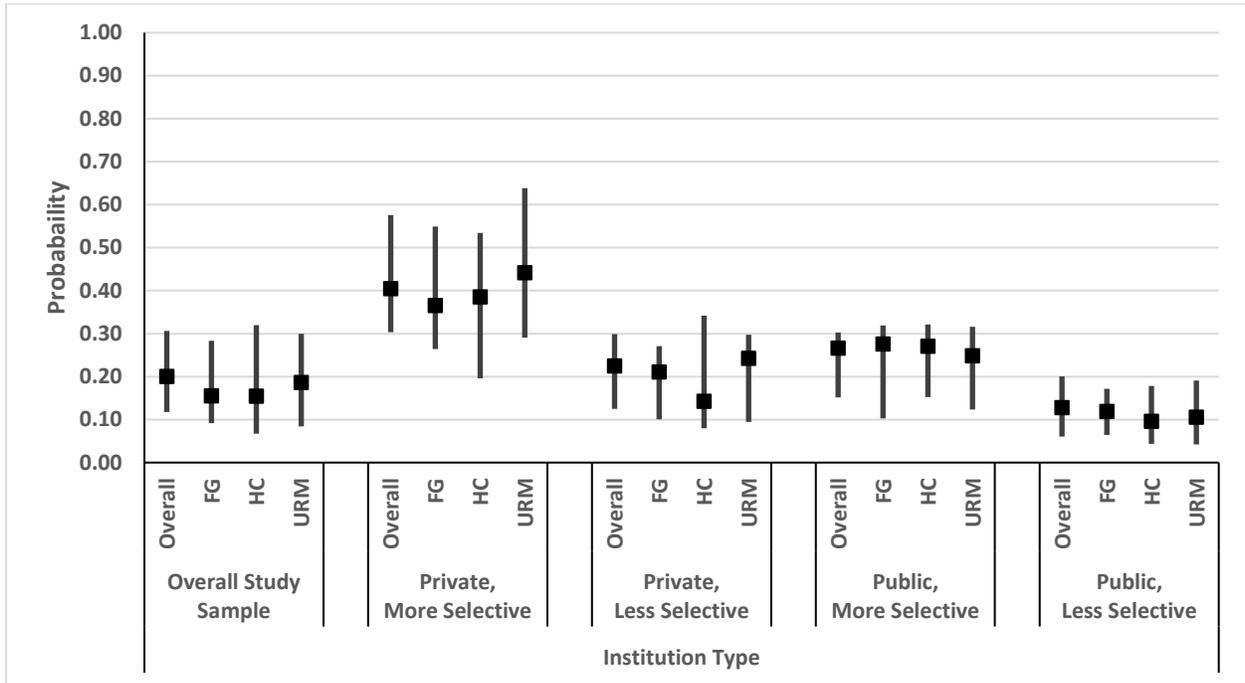

Note. FG=first generation; HC=high challenge; URM=underrepresented minority.

Figures 1 and 2 provide high-level views of students' chances of success given their FYGPAs, but as discussed earlier, large institutions have an outsized impact on the average estimates, and Figures 1 and 2 do not capture the variability in results across institutions. To demonstrate this variability across institutions, we decided to pick two FYGPA points, 2.00 and 2.50, and use the probability estimates for students overall and by subgroup at those two points at every institution. Using these institution-level probability estimates, we determined the interquartile ranges and median probability estimates across institutions overall and by institution subgroupings.

Figure 3 shows the interquartile ranges across all institutions and by control/admission selectivity for the overall sample and by student subgroups, when estimating students' probabilities of graduating within four years given a FYGPA of 2.00. For the overall study sample of 73 institutions and students overall, the institution median probability estimate was .20, or approximately a 20% chance of success. The lower bound of the interquartile range (25% tile) was .12, or a 12% chance of success, and the upper bound of the interquartile range (75% tile) was .31, or a 31% chance of success. For first generation, high challenge, and underrepresented minority students, the median probability estimates across all institutions were 16%, 15%, and 19%, respectively, and their interquartile ranges overlapped the interquartile range for the overall sample.
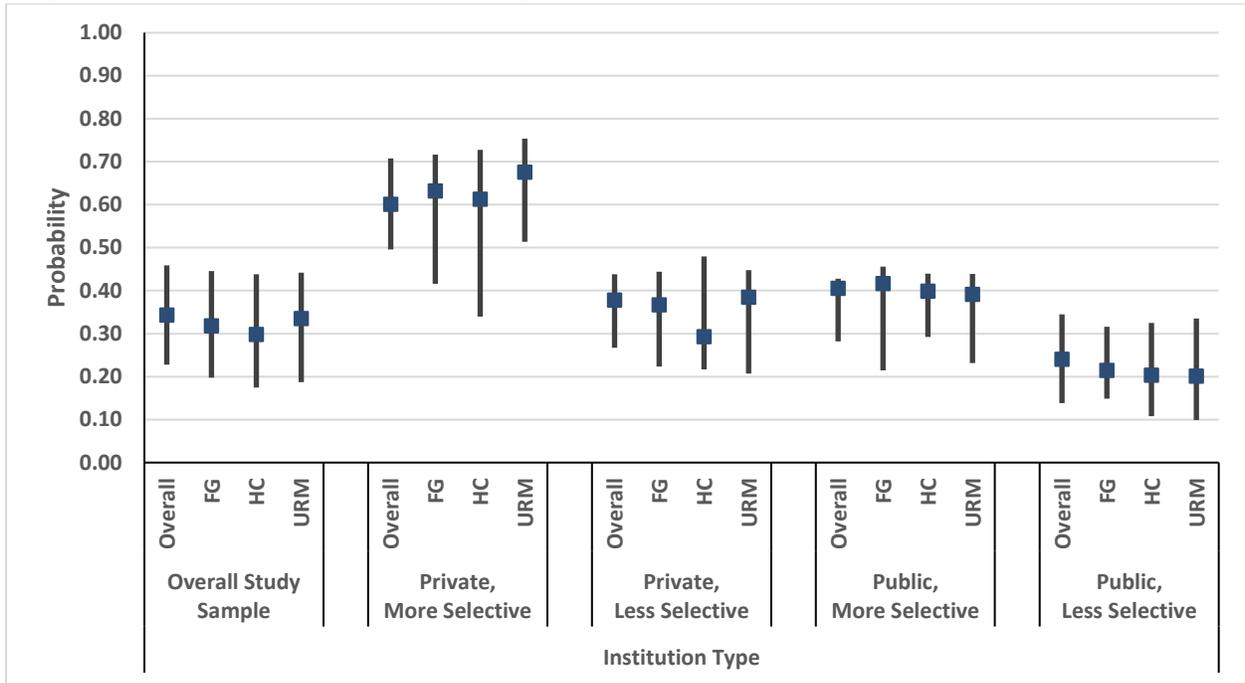
Figure 3: Probability of Graduating Within Four Years Given a FYGPA of 2.00, Overall and by Student Subgroups, Medians and Interquartile Ranges Across Institutions

Note. FG=first generation; HC=high challenge; URM=underrepresented minority.

To the right of the overall sample results are the results disaggregated by institutional characteristics. Within each institutional subgrouping, the medians and interquartile ranges for the students overall and by subgroups show a high degree of similarity and overlap. However, what stands out are the results at the private, more selective institutions as students at these institutions had the highest estimated chances of graduating within four years. Moreover, the interquartile ranges for the students overall and by subgroups at the private, more selective institutions barely overlap (if at all) with the interquartile ranges found for the three other institutional subgroupings. Similar patterns are seen in Figure 4 when using a FYGPA of 2.50, though students' chances of graduating within four years are notably higher than those seen in Figure 3 for students with a FYGPA of 2.00.
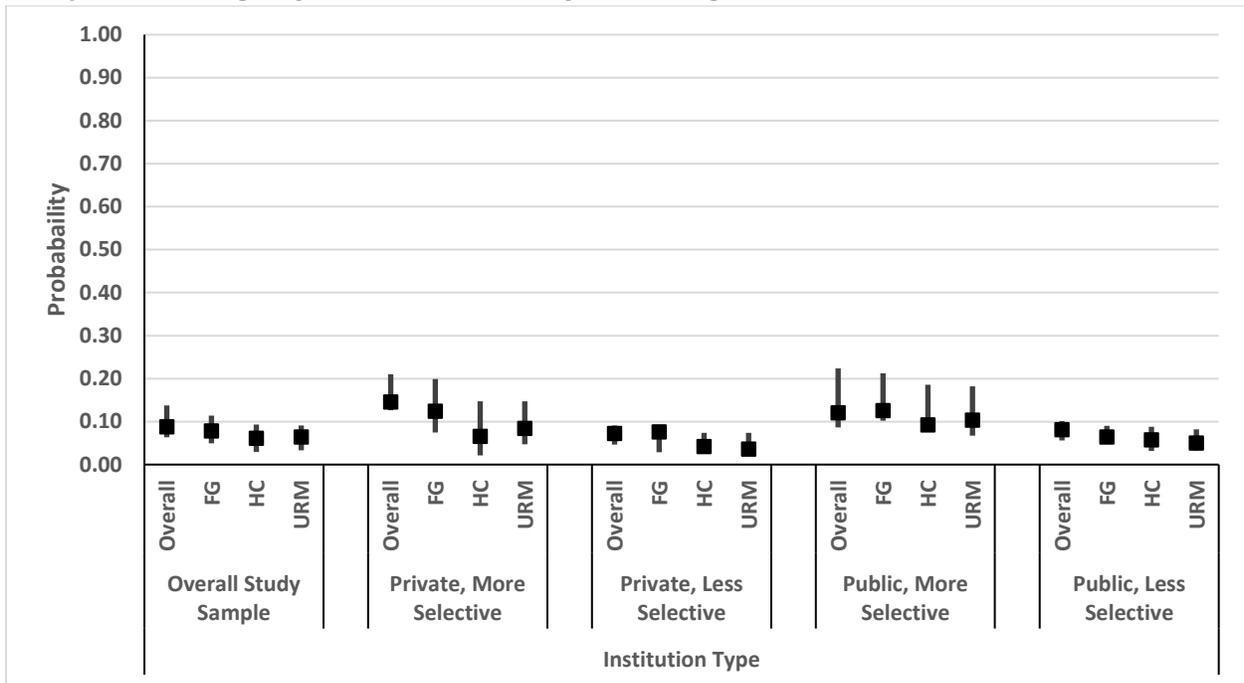
Figure 4: Probability of Graduating Within Four Years Given a FYGPA of 2.50, Overall and by Student Subgroups, Medians and Interquartile Ranges Across Institutions

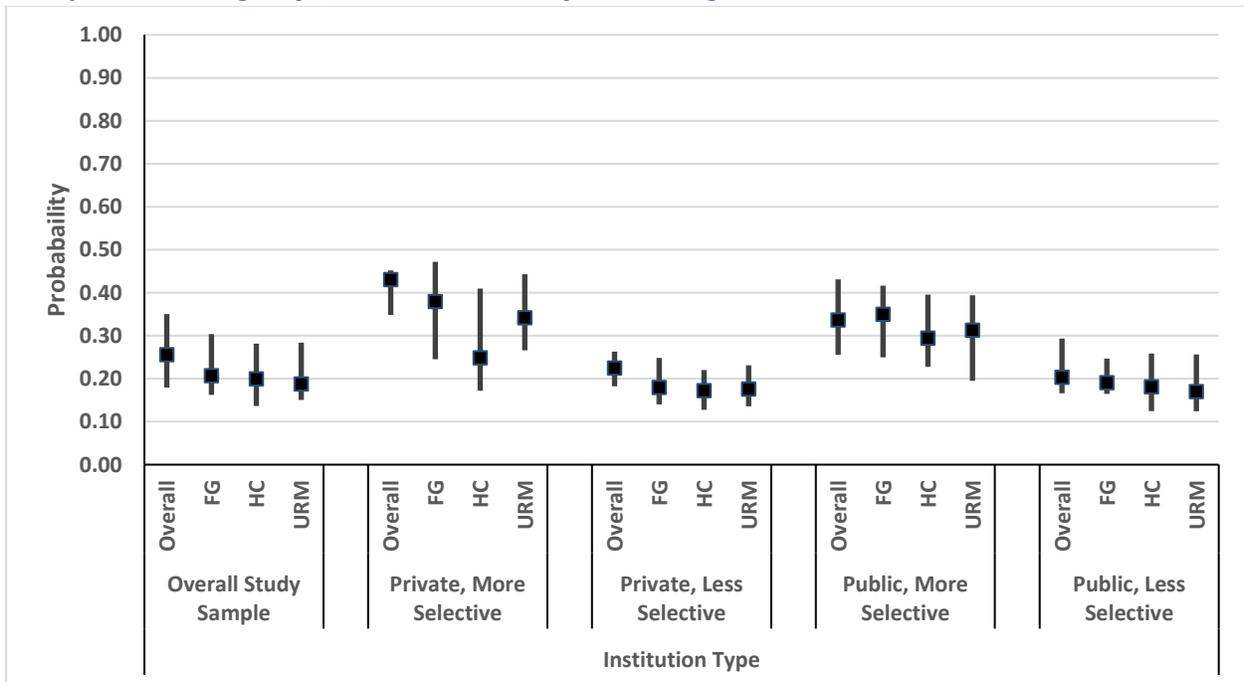Note. FG=first generation; HC=high challenge; URM=underrepresented minority.

Turning to fourth-year CGPA, Figure 5 displays the interquartile ranges across institutions overall and by control/admission selectivity, for all students and by student subgroups, when estimating students' probabilities of earning a fourth-year CGPA of 3.00 or higher given a FYGPA of 2.00. For the overall study sample of 73 institutions and students overall, the institution median probability estimate was .09, or approximately a 9% chance of success. The lower bound of the interquartile range (25%ile) was .06, or a 6% chance of success, and the upper bound of the interquartile range (75%ile) was .14, or a 14% chance of success. For the overall study sample and within each of the four institution-level samples, the median estimates for the student subgroups tended to be lower than did the median estimates for the overall group, though the interquartile ranges did overlap. Figure 6 illustrates the results for students given a FYGPA of 2.50. Their chances of earning a fourth-year CGPA of 3.00 or higher were better than those for the students with a FYGPA of 2.00, but their estimated probabilities were still quite low. Notably, the chances for students at more selective institutions were higher than those for students at less selective institutions.

Figure 5: Probability of Earning a Fourth-Year CGPA Of 3.00 or Higher Given a FYGPA of 2.00, Overall and by Student Subgroups, Medians And Interquartile Ranges Across Institutions

Note. FG=first generation; HC=high challenge; URM=underrepresented minority.

Figure 6: Probability of Earning a Fourth-Year CGPA of 3.00 or Higher Given a FYGPA of 2.50, Overall and by Student Subgroups, Medians and Interquartile Ranges Across Institutions

Note. FG=first generation; HC=high challenge; URM=underrepresented minority.

Discussion

Our findings indicate that students with low but acceptable FYGPAs have much weaker long-term academic outcomes. For students with a FYGPA between 2.50 and 2.99 and for students with FYGPAs between 2.00 and 2.49, their four-year graduation rates (overall) were 48% and 28%, respectively, well below the 69% for students whose FYGPAs were 3.00 or higher. This suggests that the students not only earn lower course grades but they also complete fewer course credits, which supports past research that found that students taking a lighter academic course load do not necessarily earn higher grades (Szafran, 2001). Turning to fourth-year CGPA, 45% of the students with FYGPAs between 2.50 and 2.99 were able to pull their CGPA above a 3.00 by the end of the fourth year, and only 18% of students with FYGPAs between 2.00 and 2.49 had a fourth-year CGPA of 3.00 or higher. The results strongly suggest that students who start off with a low FYGPA will struggle over the next three years, and most do not graduate on time or pull their CGPAs up to a competitive level.

The analyses for first generation, high challenge, and underrepresented minority students highlight the difficulties that these students often face in higher education. On average, these students tended to have lower mean FYGPAs and consequently had lower graduation rates and were less likely to have a fourth-year CGPA of 3.00 or higher. However, these students also entered college with lower SAT scores and HSGPAs. The positive relationships between these pre-college measures of academic performance and first-year undergraduate academic performance are well established (Zwick, 2006, 2019). Higher education institutions can use this information to identify students who may need academic support as they transition from high school to college (Mattern, Shaw, & Kobrin, 2010), and help these students start off with the appropriate resources identified to increase their chances of graduating within four years and having cumulative GPAs that make them competitive applicants for graduate and professional schools, as well as for on-campus corporate recruiting and the workplace. Though higher education institutions have made great strides in expanding access for different student groups, differences in terms of later wealth gaps and upward mobility persist, and the findings of the current study may be related to our understanding of this issue (Bastedo & Jaquette, 2011; Chetty, Friedman, Saez, Turner, & Yagan, 2020; James, Alsalam, Conaty, & To, 1989).

Finally, our analyses disaggregated by institutional admission selectivity and control (public/private) showed that although there was variation across institution types, first-year academic performance had a strong effect on degree completion within four years and fourth-year CGPA. The most salient difference across institution types was that the four-year graduation rates for students at private, more selective institutions were generally higher than the rates for students at other types of institutions, as was the percentage of their students with a fourth-year CGPA of 3.00 or higher.

Conclusion

These findings underscore the critically important work of the academic advising profession, and in particular the need for the early identification of students who may struggle in their first year of college, as well as the vital role of thoughtfully implemented supports and scaffolds to promote early student success. Understanding how students are expected to perform in the first year of college, and not just

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identifying the very lowest performers, but early performance along the full spectrum, can help institutions plan for the academic advising work ahead to be sure that all students embark on their first year of college prepared for the rigors of college and aware of the academic supports and services available when struggling. This can help keep all doors open throughout and after college for students, instead of inadvertently setting early constraints on students' academic trajectories.

References

Adams, S. (2015, July 8). Do employers care about college grades? *Forbes*. Retrieved from https://www.forbes.com/sites/susanadams/2015/07/08/do-employers-care-about-college-grades/?sh=575a075a4b07.

Association of American Medical Colleges (2022). *Table A-16: MCAT Scores and GPAs for Applicants and Matriculants to U.S. MD-Granting Medical Schools, 2018-2019 through 2022-2023*. Retrieved from https://www.aamc.org/media/6056/download?attachment.

Bastedo, M. N., & Jaquette, O. (2011). Running in place: Low-income students and the dynamics of higher education stratification. *Educational Evaluation and Policy Analysis, 33* (3), 318–339.

Berry, C. M., & Sackett, P. R. (2009). Individual differences in course choice result in underestimation of the validity of college admissions systems. *Psychological Science, 20*, 822–830.

Chetty, R., Friedman, J. N., Saez, E., Turner, N., & Yagan, D. (2020). Income segregation and intergenerational mobility across colleges in the United States. *The Quarterly Journal of Economics*, *135*(3), 1567-1633.

James, E., Alsalam, N., Conaty, J. C., & To, D. L. (1989). College quality and future earnings: Where should you send your child to college? *American Economic Review, 79* (2), 247–252.

Law School Admission Council (2023). *Admission Trends: Applicants, Admitted Students, Matriculants & Applications.* Retrieved from Law School Admission Council | Admission Trends ABA Applicants, Admits & Apps (lsac.org).

Mattern, K. D., Shaw, E. J., & Kobrin, J. L. (2010). Academic fit: Is the right school the best school or is the best school the right school? *Journal of Advanced Academics, 21*(3), 368–391.

Miller, T. (2016). *Higher Education Outcomes-Based Funding Models and Academic Quality* (Lumina Issue Papers. Indianapolis: Lumina Foundation. Retrieved from https://www.luminafoundation.org/files/resources/ensuring-quality-1.pdf.

National Center for Education Statistics (NCES). (2018). *Integrated postsecondary education data system (IPEDS)*. Retrieved from https://nces.ed.gov/ipeds/use-the-data.

Pascarella, E. T., & Terenzini, P. T. (2005). *How College Affects Students: A Third Decade of Research. Volume 2*. Jossey-Bass, An Imprint of Wiley. 10475 Crosspoint Blvd, Indianapolis, IN 46256.

Szafran, R. F. (2001). The effect of academic load on success for new college students: Is lighter better? *Research in Higher Education*, *42*, 27-50.

University of California, Berkeley (2013). *PLAN B: How to Get Into Graduate School with a "Low" G.P.A.* Retrieved from http://diversity.berkeley.edu/sites/default/files/plan-b-revised-2013.pdf

Westrick, P. A., Marini, J. P., & Shaw, E. J. (2021). *Using SAT Scores to Inform Academic Major-Related Decisions and Planning on Campus* (College Board Research Report). New York, NY: College Board.

Zwick, R. (2006). Higher education admission testing. In R. Brennan (Ed.), *Educational measurement* (4th ed., pp. 647–679). Westport, CT: American Council on Education, Praeger.

Zwick, R. (2019). Assessment in American higher education: The role of admissions tests. *The ANNALS of the American Academy of Political and Social Science*, *683*(1), 130–148.