

High School GPA as a Predictor of College GPA

ASUMS Institutional Research

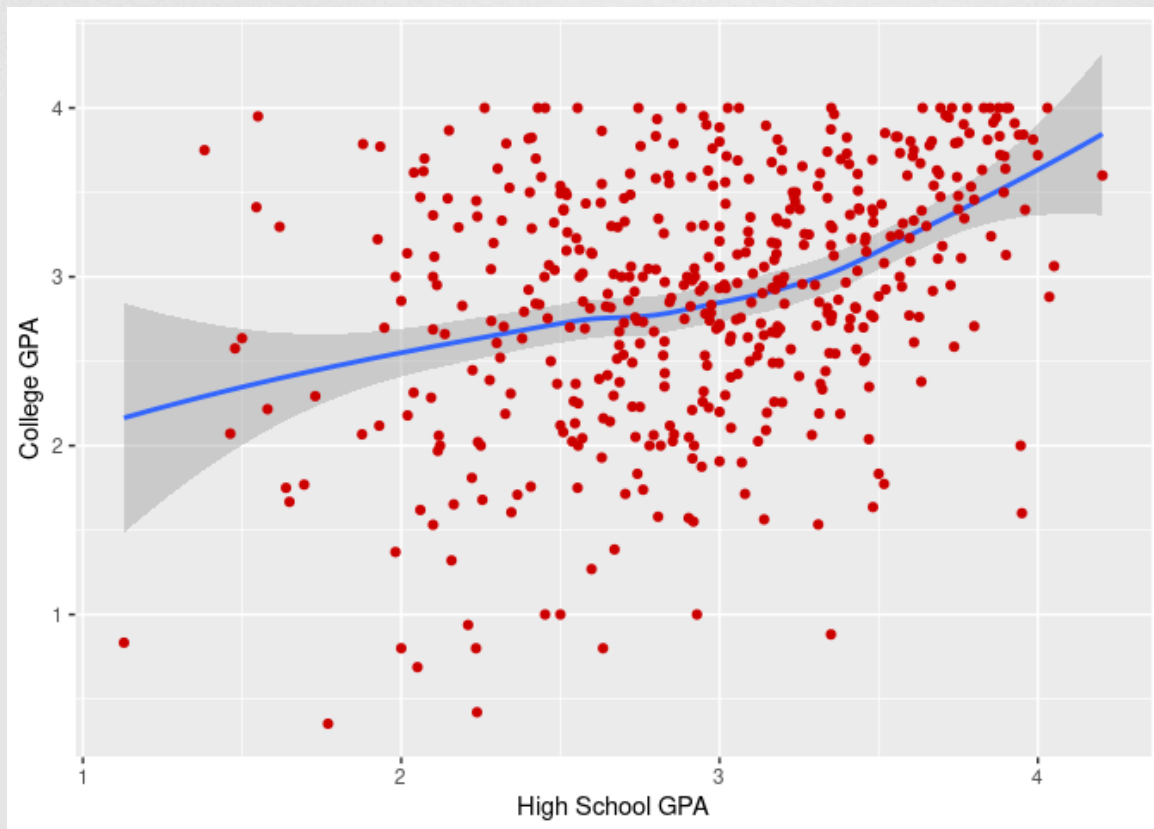
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Introduction

An ongoing question in higher education is the extent to which various measures of high school performance or standardized test scores are predictive of college performance and completion.¹

Regardless of their efficacy, ASU Mid-South's use of multiple placement tests makes it difficult to study the correlation between scores and performance. Moreover, targeted supports are in place for those who do not test college-level in Math or English through the growing use of co-requisite models and interest in multiple measures for placement.

However, High School GPA data is a readily available measure if evidence indicates it correlates to college success for an institution. For the 2020 Fall semester, 70% of non-concurrent students had a HS GPA on file.



The data in this study represents a cohort of 474 degree-seeking students who had attempted 15 or more credits by the end of the Fall 2020 semester.

The above chart plots each student's High School GPA on the x axis with their college Cumulative GPA on the y axis. The blue line surrounded by a gray field provides a weighted average. The gray area is bigger where there are fewer data points because there the trend is more ambiguous.

Here, as HS GPA increases, so does college GPA, with a significant upward trend as HS GPA crosses 3.0 and 3.5. While omitted here for space, Fall 2019 produces a similar trend line.

We can confirm this inflection point by comparing the performance of students with a HS GPA of 3.0 or higher to those with a HS GPA under 3.0.

High School GPA under 3.0

High School GPA 3.0 or Higher

College GP 3.0 or Higher: 40%

College GPA 3.0 or higher: 60%

College GPA under 2.5: 37%

College GPA under 2.5: 14%

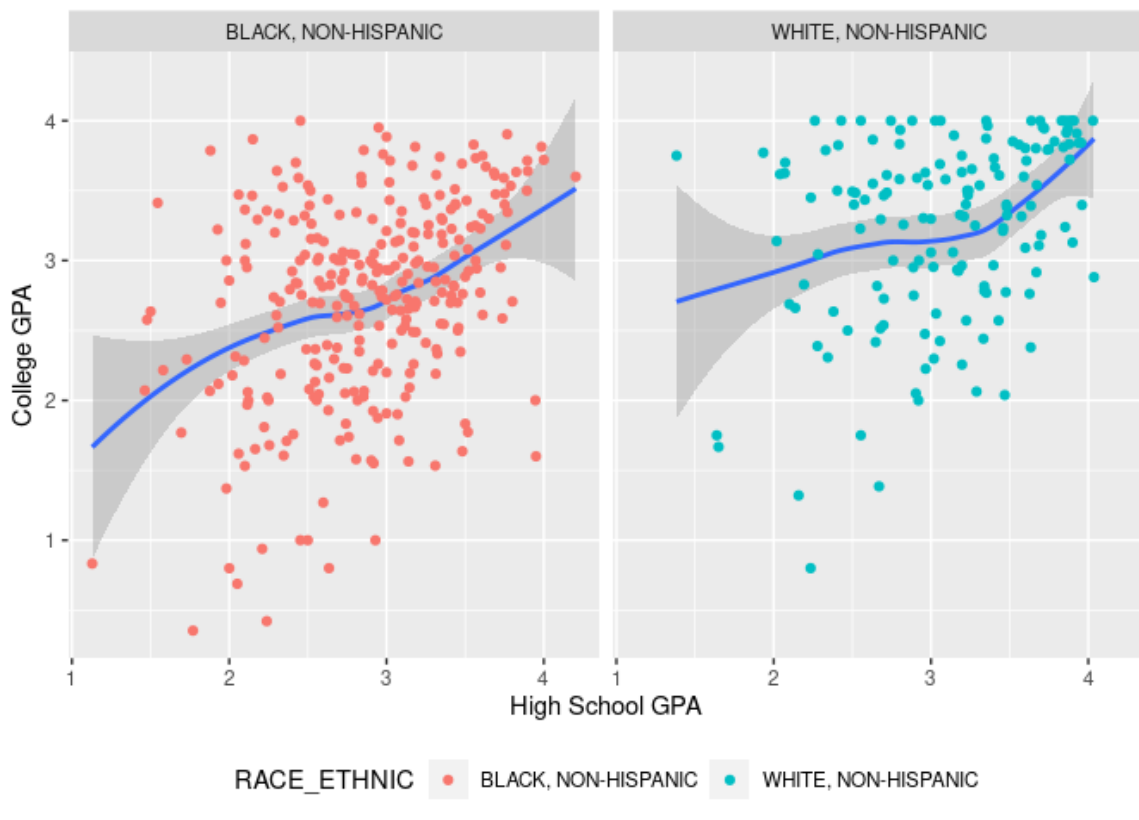
For the this Mid-South cohort, we see significant difference simply by looking at HS GPAs above or below a 3.0 inflection point. While large institutions can look at extremely high or low HS GPAs to micro-target, ¹ this would reduce our sample size drastically.

With two large populations the difference in College GPA between cohorts, with between 1 in 7 struggling versus 1 in 2.7 struggling, is significant and actionable. ²

Plotting GPA by Ethnicity

An important question for any analysis is the extent to which factors like race, gender, of financial aid status tell a different story than the overall metric.

In this comparison, College GPA for African-American students is generally lower, however the relationship between high school and college GPA is similar for both populations.

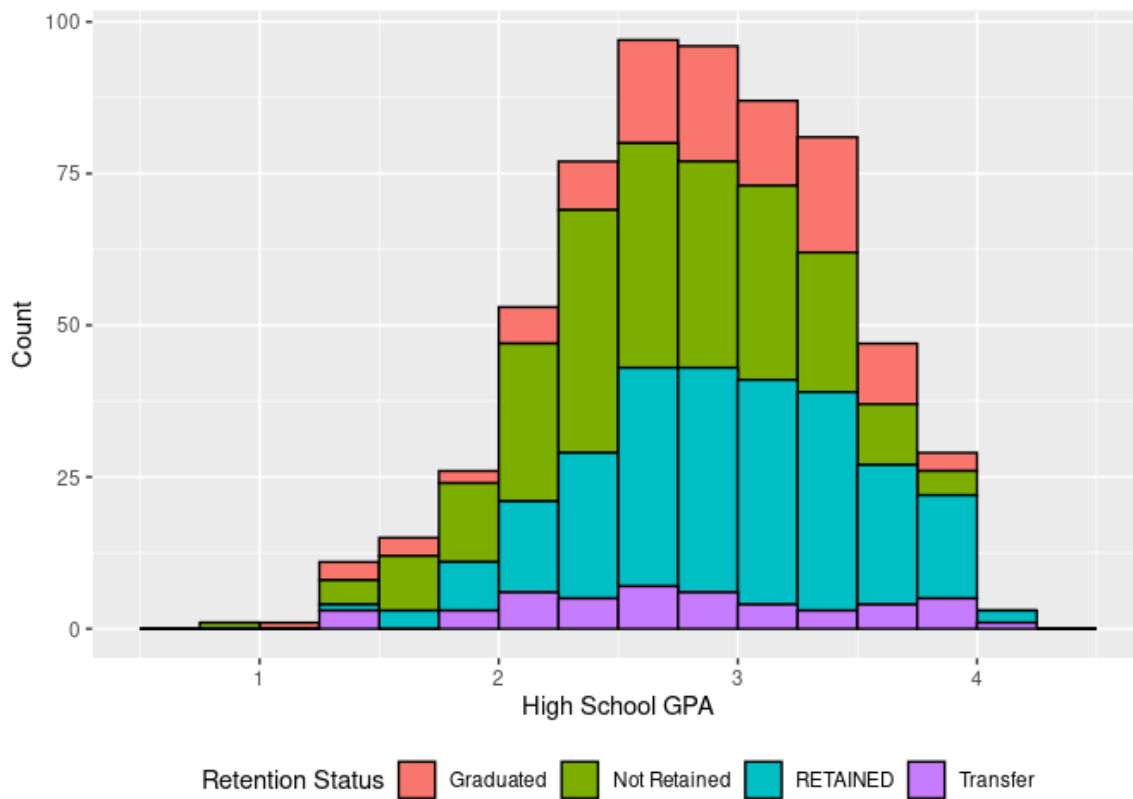


Conclusions and Future Research

- For students who attain 15+ credits, High School GPA is a strong predictor of College GPA with an inflection point at HS GPA = 3.0.
- That the correlation is similar for African-American and Caucasian students helps support the idea that non-academic factors play a key role in the College GPA disparity between these groups.
- Examining a correlation between HS GPA and Retention is a logical next step not only to assess how well HS GPA correlates to retention and completion, but also to capture students who attempt fewer than 15 credits before ending their enrollment.

The chart below represents all 2019 Fall enrolled degree-seeking students segmented by HS GPA and retention status.

Possible applications for Retention



References:

¹ Allensworth, E. M., & Clark, K. (2020). High school GPAs and ACT scores as predictors of college completion: Examining assumptions about consistency across high schools. *Educational Researcher*, 49(3), 198-211.

² A comparison of College GPA using English Placement Status (Remedial vs College ready) predicted high GPA at a similar rate. However neither Remedial or College Ready status were as predictive of low College GPA.