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# 15 to Finish: A Good Fit For Georgia College?

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**T**he nationwide “15 to Finish” movement intends to increase collegiate graduation rates by encouraging academic momentum vis-a-vis a higher course load. Research has found that a higher course load ensures students are more engaged in academics and are, therefore, more likely to be successful and graduate. OIRE conducted a statistical study to predict what the effect of a conservative implementation of “15 to Finish” would have on Georgia College students who took lower course loads independent of academic ability and other confounding student characteristics. The study suggests that approximately 11% of students who took lower course loads and did not graduate within six years would have graduated if “15 to Finish” was implemented. However, the marginal increase to the 6 year graduation rate would amount to less than one percent as the majority of non-completing students transfer rather than fail to graduate.

## Background

The “15 to Finish” campaign has gained momentum in recent years, becoming a centerpiece retention and graduation initiative of higher education institutions nationwide. Within the University System of Georgia, a number of institutions have been enthusiastic supporters of “15 to Finish”, including the University of North Georgia, Georgia Perimeter College and East Georgia State College. “15 to Finish” programs broadly aim to increase graduation rates by encouraging academic momentum vis-a-vis a higher course load. While it is obvious that taking units is requisite for graduation, the insight of “15 to Finish” is that a course load of at least 15 units may keep at risk students engaged in their academics and thereby increase the likelihood of their graduation. Research

into the effect of academic momentum has largely corroborated this phenomena [1, 2, 3, 4, 5, 6, 7, 8, 9]. The purpose of our statistical study is to assess the degree to which a “15 to Finish” campaign would benefit Georgia College students currently taking less than 15 units in a majority of enrolled semesters.

## Methods

Our study utilizes a statistical approximation of a randomized trial known as propensity score analysis. Using the 2007 class of first time full time (FTF) freshman, we modeled the change in the 6 year graduation resulting from taking more units than the students actually took. We controlled for confounding characteristics such as academic ability and demography. The goal of using this approach is to reveal the independent effect of taking more units on the six year graduation rate. We used 14 units as our treatment baseline, following the recommendation of the Academic Advising Center; in many cases, 14 units can be essentially equivalent to 15 units in terms of normal progress toward graduation at Georgia College.

Two treatment scenarios were modeled. The first treatment model assessed the effect of all students taking at least 14 units in 75% of their enrolled semesters. The second treatment model assessed the change in graduation rate if students who took at least 14 units in 50% of their enrolled semesters had instead taken at least 14 units in 75% of their enrolled semesters. The former treatment imagines a full population application of “15 to Finish”, while the latter assesses the effect on only academically engaged students.

The model specifically controlled for academic ability (SAT scores, high school GPA), major, major changes, gender, race, HOPE scholarship and Pell grants. Students who transferred, double majored or had accommodations were left out of the analy-

**Scenario 1: Full Cohort**

Grouping	Percent Change	Additional Graduates	Significant?
Full Population	11%	10	Yes
Arts & Sciences	11%	8	Yes
Business Col.	12%	2	No
Nursing Col.	4%	0	No
Education Col.	0%	1	No
Men	7%	4	Borderline
Women	9%	6	Yes
HOPE	6%	6	Yes
No HOPE	8%	4	No
PELL	6%	3	Borderline
No PELL	8%	7	Yes
STEM Major	9%	2	Yes
Not STEM Major	9%	8	Yes

**Scenario 2: >50% 14 Unit Semesters**

Grouping	Percent Change	Additional Graduates	Significant?
Full Population	11%	8	Yes
Arts & Sciences	10%	6	Yes
Business Col.	8%	1	No
Nursing Col.	0%	0	No
Education Col.	0%	0	No
Men	10%	3	Yes
Women	8%	4	Yes
HOPE	6%	3	Yes
No HOPE	8%	2	No
PELL	6%	1	No
No PELL	10%	5	Yes
STEM Major	13%	2	Yes
Not STEM Major	11%	6	Yes

sis since these students have fundamentally different behavior than the other members of the 2007 FTF freshman cohort. After these exclusions, 715 students out of the full 1198 cohort were ultimately included in the analysis.

The propensity score analysis was conducted in R using the MatchIt package. Slightly different models were used depending on each subgroup characteristics and data limitations. Missing data was imputed with a bootstrapped EM algorithm using the Amelia package. Bootstrapped BCa confidence intervals were calculated using the boot package.

## Results

The results for the two scenarios below are split into two tables. The first table includes the predictions for the change in the six year graduation if the students had taken 14 or more units in 75% or more of enrolled semesters. The second table includes the predictions for the change in the six year graduation rate if students who had taken 14 or more units in 50% or more semesters took 14 or more units in 75% or more of enrolled semesters. The "significance" columns in the tables refer to whether we can be 95% or more confident that the predicted value is greater than 0.

In the first scenario, 10% of the 98 out of 715 students who did not graduate within 6 years would have graduated if they took 14 or more units in 75% or more of their semesters. This change would increase the overall 6 year graduation rate in this subpopulation of students from 86.3% to 87.7%. Smaller sample sizes make the estimates for the narrower classifications less precise, but the estimates are suggestive of their being certain groups that would benefit more from the treatment than others.

In the second scenario, we find a similar 11% decrease in students who would not graduate in 6 years. The similar behavior of the full cohort and the more academically engaged subpopulation suggests that

the policy of taking 14 or more units should not only be targeted to those who are consistently taking less than 14 units a semester as even higher performing students put themselves at greater risk of not graduating if they enroll in fewer than 14 units.

## Recommendations

Our headline recommendation is that students taking 14 or more units per semester should be a priority. Potentially decreasing the population of FTF freshman who do not go on to graduation by 11% is large percentage-wise even though it is not large numerically (11 in this sample). The small numerical number stems from the fact that about 85% of FTF freshmen who do not transfer already graduate, so even a significant reduction in the 15% of students who do not graduate is still just a fraction of 15%. The following implementation strategies for a "15 to Finish" initiative are largely drawn from existing efforts at other universities that have been found to be successful.

### Conduct an awareness campaign of the benefits of enrolling in 14+ units

The University of Hawai'i System, after identifying that many freshman failed to complete 30 units within the first year, found that, controlling for academic preparation and demographic characteristics, those students who at least enrolled in 15 or more units a semester were more academically successful[10, 11]. The decision was made to make taking 15 units the institutional norm in the University of Hawai'i System. A massive public awareness campaign was conducted that promulgated the importance and benefits of taking 15 units per semester. Academic maps for each major were also created to make it clear to students how to structure a 15 unit schedule. Over the first three years, the number

of freshman taking 15 units per semester increased from 14.8% to 41.5%. Georgia College could undertake a similar campaign to further ingrain into students, faculty and staff that 14 units per semester should almost categorically be expected.

### **Mandatory advising meeting and/or approval for students to enroll in less than 14 credits**

Apropos of the benefits of institutionalizing a culture of 14 or more units, it may be beneficial for advisors to be involved in a student's decision to take less than 14 units. This would both emphasize the expectation of taking 14 or more units to the students and advisors and give advisors a chance to provide direction and support to students whose circumstances have led them to consider taking less units.

### **Incentivize higher unit enrollment through financial aid**

Financial aid could be a strong motivator for enrolling in 14 or more units. The University of New Mexico's VISTA scholarship, \$1000 per semester for four semesters, requires students to enroll in 15 units. Research has found that recipients of the VISTA scholarship are more likely than similarly academically able students to attempt and complete 15 units per semester with no significant negative impact on academic performance [12]. Similar results have been observed for West Virginia's PROMISE Scholarship which provides full tuition and fees for up to four years at public two- and four-year colleges in West Virginia for students. PROMISE scholars must also enroll in 15 or more units. Research suggests the PROMISE scholarship, like the VISTA scholarship, independently improves graduation rates [13].

Given this evidence, there is reason to believe the HOPE and other state or institutional scholarships should require or provide additional support for enrolling in 15 units or more units. While changing the criteria for HOPE and other state scholarships is not something Georgia College can do unilaterally, Georgia College can advocate for the change within the University System of Georgia community and the public arena.

### **Not for students with significant competing life responsibilities**

Research suggests students who have to work over 30 hours a week or have other major life obligations outside of academics do not benefit from enrolling in 15 credits [14]. Any implementation of "15 to

Finish" needs to be conscious of these factors in order to prevent these students from becoming less academically successful due to an untenable schedule of responsibilities.

### **Not a solution for substantially increasing the 6-year FTF freshmen graduation rate**

The predicted 11% decrease in the non-graduation rate, while a significant percentage-wise reduction, is small in absolute terms since about 85% of students who stay at Georgia College already graduate within 6 years. While moving the graduation rate from approximately 85% to 86.5% is meaningful, it will not have a large impact on Georgia College's FTF freshman completion rate. Nearly three times as many non-completers transfer to other institutions as drop out. Therefore, in order to significantly increase Georgia College's overall 6-year graduation rate, the number of transfers out of the college would have to be reduced. "15 to Finish" and other policies intended to help students graduate cannot be relied upon to have a substantial impact on the overall 6-year graduation rate.

## References

- [1] Clifford Adelman. Answers in the tool box. academic intensity, attendance patterns, and bachelor's degree attainment. 1999.
- [2] Clifford Adelman. Principal indicators of student academic histories in postsecondary education, 1972-2000. *US Department of Education*, 2004.
- [3] Clifford Adelman. Moving into town—and moving on: The community college in the lives of traditional-age students. *US Department of Education*, 2005.
- [4] Clifford Adelman. The toolbox revisited: Paths to degree completion from high school through college. *US Department of Education*, 2006.
- [5] Paul Attewell, Scott Heil, and Liza Reisel. What is academic momentum? and does it matter? *Educational Evaluation and Policy Analysis*, 34(1):27–44, 2012.
- [6] Lutz Berkner, Shirley He, and Emily Forrest Cataldi. Descriptive summary of 1995-96 beginning postsecondary students: Six years later. statistical analysis report. 2002.
- [7] C Dennis Carroll. College persistence and degree attainment for 1980 high school graduates: Hazards for transfers, stopouts, and part-timers. survey report. 1989.
- [8] Peter M Crosta. Intensity and attachment: How the chaotic enrollment patterns of community college students relate to educational outcomes. *Community College Review*, page 0091552113518233, 2014.
- [9] Alexander C McCormick and C Dennis Carroll. *Credit production and progress toward the bachelor's degree: An analysis of postsecondary transcripts for beginning students at 4-year institutions*. DIANE Publishing, 1999.
- [10] J. Itano. 15 to finish. Presentation given at the Indiana Commission for Higher Education Strengthening Guided Pathways to Student Success Summit, 2013.
- [11] University of Hawai'i System Institutional Research and Analysis Office. Impact of enrolling in 15 or more credits on selected performance measures: First-time freshmen at the UH four-year campuses. [http://15tofinish.com/reference/15\\_to\\_Finish\\_4-Yr\\_Combined\\_Report-September\\_2013.pdf](http://15tofinish.com/reference/15_to_Finish_4-Yr_Combined_Report-September_2013.pdf), 2013.
- [12] Cynthia Miller, Melissa Binder, Vanessa Harris, and Kate Krause. Staying on track: Early findings from a performance-based scholarship program at the university of new mexico. *Staying on Track: Early Findings from a Performance-Based Scholarship Program at the University of New Mexico*, Cynthia Miller, Melissa Binder, Vanessa Harris, and Kate Krause, 2011.
- [13] Judith Scott-Clayton. On money and motivation a quasi-experimental analysis of financial incentives for college achievement. *Journal of Human Resources*, 46(3):614–646, 2011.
- [14] D. Monaghan and P. Atwell. Academic momentum at the gate: Does first-semester credit load affect postsecondary completion? Presented at the meeting of the American Education Research Association, 2014.