What do Midterm Grades and Frosh 2016 New Student Survey Responses Tell Us about End of Term Academic Standing and Retention?

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This analysis looked at variables associated with undergraduate "frosh" students' first semester academic performance and their retention to the second semester. The variables considered include student background information, midterm grade performance in the first semester, and responses on the campus' New Student Survey. Two variables most robustly predicted first semester academic performance and retention to the second semester: (1) receiving at least one failing grade at midterm and (2) the student's expectation that s/he would receive poor grades (C's or lower) at the end of the first semester. An understanding of how new frosh experience their first term can help our campus best support the success of our new students.

Overview

Each fall, new students are invited to complete the UC Merced New Student Survey, which focuses on student success, and specifically, student educational plans, transition to college, and utilization of campus services. This brief focuses on the new frosh who completed the survey in the fall of 2016 (n = 991; 48% response rate) and considers three outcomes, including end of first term Academic Probation status, end of first term Subject to Academic Dismissal (SAD) status, and second term retention.

We combined student background information (e.g., academic preparation such as High School GPA) with midterm grade performance (i.e., receiving at least 1 D/F grade at midterm) and survey responses (e.g., self-reported academic habits such as scheduling). We next examined whether these variables were associated with academic standing at the end of the first term and retention to the second term at UC Merced. Regarding academic standing, we compared students who ended the term in Good Standing (GPA ≥ 2.0) to those placed on Academic Probation (GPA < 2.0 but ≥ 1.5) and to those Subject to Academic Dismissal (SAD; GPA < 1.5).

We considered many variables in the analysis, including academic preparation, demographic characteristics, midterm grade performance, and student self-reported behaviors and beliefs on the survey. However, in a regression analysis that considered all of the key variables together, only a few were robustly related to first term academic standing and second term retention and thus may represent the best targets for intervention. These variables are described below. The complete list of variables, associations, and analysis details can be found in the full report.

Academic Probation

In fall 2016, 12% of new frosh were placed on academic probation at the end of their first term, a relatively consistent trend over time (Fig1).

Fig1: Percent First-Time Full-Time Frosh Placed on Academic Probation in Semester 01 by Cohort
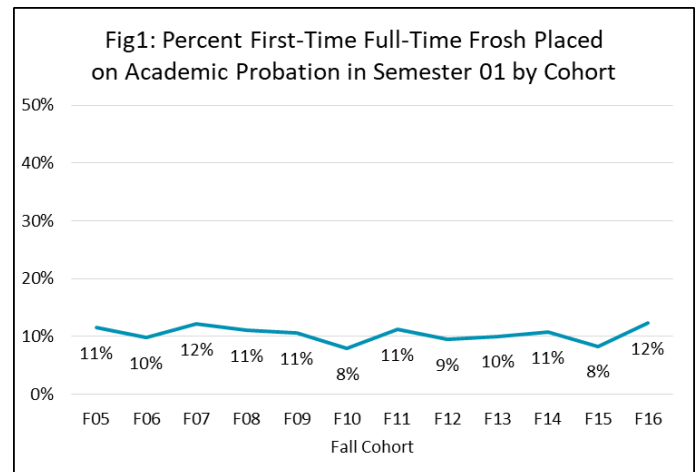
From Table1, students with higher SAT-R total scores and who used Library Services were less likely to be placed on academic probation. In contrast, students who received 1 D/F grade at midterm and those who expected their final course grades to be C's or lower were more likely to be placed on academic probation.

Table 1: Key Variables that Predict Academic Probation

Less **Likely to be on Probation**

Category	Variable
Academic Preparation	SAT-R total (higher scores)
Behavior	Resource use: Library services

More **Likely to be on Probation**

Category	Variable
Grades	Received at least one D/F at Midterm
Perceived Performance	Expected final course grades C's or lower

Subject to Academic Dismissal (SAD)

In fall 2016, 10% of new frosh were SAD at the end of their first term, a relatively consistent trend over time (Fig2).

Fig2: Percent First-Time Full-Time Frosh Subject to Academic Dismissal in Semester 01 by Cohort
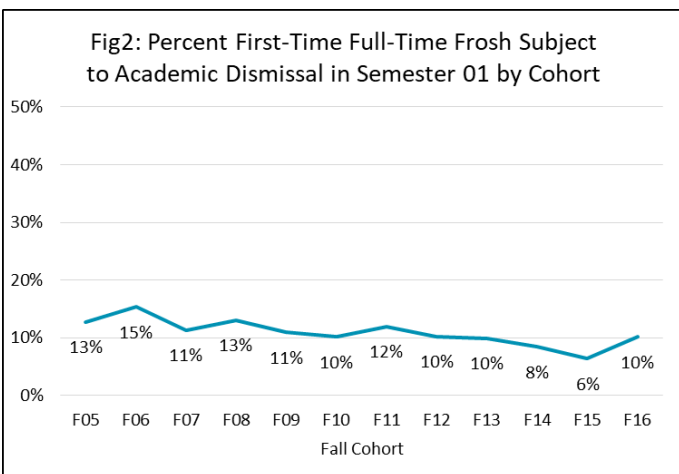
From Table2, students who expected a higher GPA, reported preparing for and attending class, and reported engaging in scheduling activities (e.g., recorded class deadlines) were less likely to be SAD. In contrast, students who received 1 D/F grade at midterm, expected their final course grades to be C's or lower, reported a higher likelihood of changing their major, and reported a higher likelihood of taking summer courses were more likely to be SAD.

Table 2: Key Variables that Predict Subject to Academic Dismissal (SAD)
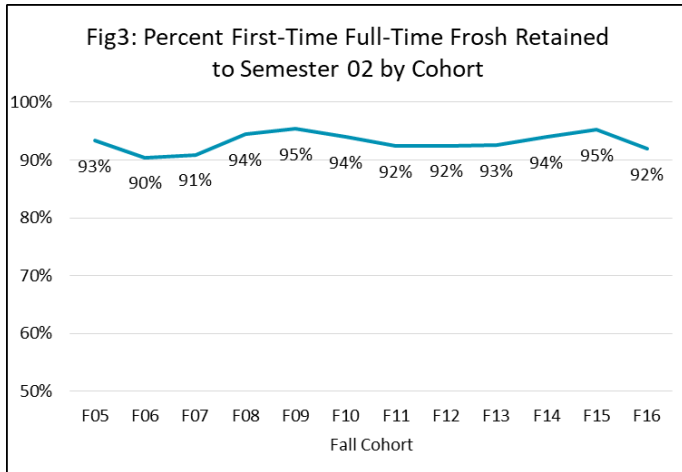
Less **Likely to be SAD**

Category	Variable
Perceived Performance	Satisfaction with expected GPA (higher)
Behavior	Habits: preparing for and attending classes
Behavior	Habits: engaging in scheduling activities

More **Likely to be SAD**

Category	Variable
Grades	Received at least one D/F at Midterm
Perceived Performance	Expected final course grades C's or lower
Behavior	Likelihood of changing major (higher)
Behavior	Likelihood of taking summer courses (higher)

Retention to the Second Semester

In fall 2016, 92% of new frosh were retained to their second semester, a relatively consistent trend over time (Fig3).

Fig3: Percent First-Time Full-Time Frosh Retained to Semester 02 by Cohort

93% 90% 91% 94% 95% 94% 92% 92% 93% 94% 95% 92%

F05 F06 F07 F08 F09 F10 F11 F12 F13 F14 F15 F16
Fall Cohort

From Table3, students who received 1 D/F grade at midterm, expected their final course grades to be C's or lower, and reported a higher likelihood of leaving UCM at the end of the semester were less likely to be retained. In contrast, students who reported engaging in scheduling activities were more likely to be retained.

> The strongest predictors of poor academic standing and not being retained were receiving at least 1 D/F midterm grade and expecting poor final course grades.

Findings & Potential Intervention Targets

The two strongest predictors overall were receiving at least 1 D/F grade at midterm and reporting the expectation that one would receive final course grades of C's or lower. This demonstrates the importance of midterm grades as an early alert to identify students at risk of poor standing at the end of their first term and of not being retained to the second term. Additionally, because reporting the expectation that one would receive grades of C's or lower was similarly related to these

outcomes, this suggests that at midterm, students have a good idea of where they stand academically and that many students can likely identify when they are facing academic difficulty as a result. Both might aid with intervention efforts and campaigns to share resources. UC Merced already requires midterm grade interventions for particular student groups and continues to develop and refine these intervention strategies.

Table 3: Key Variables that Predict Semester 02 Retention

Less **Likely to be Retained**

Category	Variable
Grades	Received at least one D/F at Midterm
Perceived Performance	Expected final course grades C's or lower
Behavior	Likelihood of leaving UCM at end of semester (higher)

More **Likely to be Retained**

Category	Variable
Behavior	Habits: engaging in scheduling activities

Though not robust across all of the outcomes, these analyses also suggest other areas to target for improving frosh student success. For instance, helping students to develop academic habits like engaging in scheduling activities and reinforcing the importance of preparing for and attending class might also be useful and are currently addressed, for example, in the ASCEND new student conference at the beginning of each

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academic year. Additionally, students who express expectations of leaving UCM, changing majors, or taking summer courses, could also be targeted for conversations about their particular goals and academic plans to aid with goal setting and the transition to college.

Next Steps

Additional analyses might examine whether these same variables are linked with future outcomes such as academic standing at the end of the second term and retention to the third term. Additionally, for future survey administrations, analysis will explore whether these same variables are robust at predicting academic standing and retention outcomes over time and for different cohorts. For example, an analysis using the 2014 New Student Survey data found similar results for academic achievement (first semester GPA) and retention to

the second term (report here) and to the third term (report here), but there were key differences. The goal of such analyses is to help the campus identify ways to improve success for our new students. We can supplement gaps in academic preparation to help put all new students on an even playing field; and we can instill in our new students beliefs and behaviors that we know are linked with success.

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