

What Do 2018 University of California Undergraduate Experience Survey (UCUES) Responses Tell Us About Students Who Stopout at UC Merced?

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This analysis was conducted to inform UC Merced faculty, staff, and administration regarding how student responses on the 2018 University of California Undergraduate Experience Survey (UCUES) can help us understand why students stopout (i.e., are not retained) at UC Merced. A stopout student was defined as one that chose to leave UC Merced (i.e., did not graduate and was not academically dismissed by the University). In terms of student background characteristics, stopout students (versus non-stopouts) who took UCUES had somewhat lower high school GPAs, were less likely to be first generation college students, more likely to speak English only as their first language, less likely to have AB540 status, and more likely to be from Southern California. Stopout students (versus non-stopouts) also tended to enroll in fewer credits the term they took UCUES and to have been in poor academic standing the term prior to taking UCUES suggesting they were struggling academically. In terms of survey responses, not surprisingly, the analysis revealed that stopout students were more likely (versus non-stopouts) to report less engagement (less involvement in student organizations), lower sense of belonging, lower sense of feeling valued on campus, less satisfaction with course availability, less positive faculty interactions, more feelings of stress, and less positive feelings about the campus climate for equity and inclusion. Importantly, no differences were found in basic needs (food security and homelessness) or financial concerns. Suggestions for better serving stopout students and thus for improving retention are discussed.

Background

Stopout students (those who leave the University without graduating and without being academically dismissed¹) represent an opportunity to better serve our students by addressing the reasons students choose to leave and/or providing students the opportunity to return should UC Merced be able to help them achieve their educational goals. This analysis was conducted to help the campus better understand why students stopout (i.e., are not retained), by focusing on student survey responses that might inform areas for improvement.

Each even year spring, all undergraduate students are invited to complete the [University of California Undergraduate Experience Survey \(UCUES\)](#), which asks for input on the UC experience, including the academic and co-curricular experience as well as behaviors like study habits and how students spend their time. **This analysis focused only on students who completed UCUES in the spring of 2018**, which had a 37% response rate. Further, as can be seen in Table I, the analysis compared non-stopout students (n = 1262) to stopout students (n = 188) and excluded students who did not meet these criteria.

Importantly, this means that this analysis does not generalize to students who did not take UCUES – there may be important differences between students who did and did not take the survey that are not accounted for in this analysis².

Table I. Analysis Sample.

Stop out Status	Count
Non-stopout, enrolled fall 2019 (comparison group)	1262
Non-stopout, graduated before fall 2019 (excluded)	801
Non-stopout, academically dismissed spring 2018 (excluded)	15
Stopout, not enrolled fall 2019 (key group)	188
Total	2266

Part I. Stopout Student Background/Demographic Characteristics

Eighteen background/demographic characteristics of students who took UCUES were examined to determine whether there were differences between students who did and did not stopout. Statistically significant³ differences are below.

- **Unweighted high school GPA:** stopout students had somewhat lower average GPAs (M = 3.25) than non-stopout students (M = 3.35).
- **First generation status⁴:** first generation students were less likely to stopout (12%) compared to non-first generation students (17%).
- **First language:** students who speak English only were more likely to stopout (17%) compared to students for whom a language other than English is their first language (10%). 12% of students with multiple first languages stopped out – this did not differ from the other groups.
- **AB540 status⁵:** students with AB540 status were less likely to stopout (10%) compared to students without this status (19%).

Stopout students (vs. non-stopouts) who took UCUES had lower high school GPAs, were less likely to be first generation college students, were more likely to speak English only as their first language, were less likely to have AB540 status, were more likely to be from Southern California, enrolled in fewer credits, and were previously in poor academic standing.

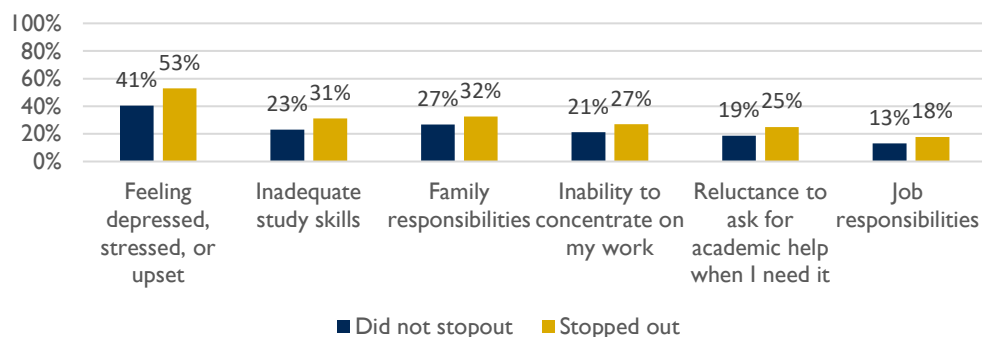
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- **Region of origin:** Students from southern California were *more* likely to stopout (15%) compared to students from central California (9%). Students from northern California had a stopout rate of 13% - this did not differ from the other groups. There were too few out of state students to include in the analysis.
- **Fall 2017 academic standing:** students in poor academic standing¹ the term prior to taking the survey were *more* likely to stopout (24%) compared to students in good standing (11%), indicating that they were struggling academically.
- **Spring 2018 credits enrolled:** stopout students were enrolled in *fewer* credits at census during the term they took the survey (M = 14) compared to non-stopout students (M = 15).
- Variables for which there are no statistically significant differences can sometimes be as important for understanding patterns as those for which there are differences. There was no statistically significant difference between stopout and non-stopout students who took UCUES on the following: lower/upper division status, School of first major in the term they took the survey (spring 2018), entering level/matriculation status, gender, underrepresented minority status⁶, financial independence status, Pell Grant eligibility status, referral pool status, first term campus housing status (on versus off campus), and enrollment in Math005 and/or Wri001⁷.

Part 2. Stopout Student Survey Responses

We examined more than 70 UCUES items that anecdote and research suggested might be important. Items fell into key areas: person-specific/situational factors (e.g., barriers/obstacles), campus-specific factors (e.g., campus climate for equity/inclusion, sense of belonging, engagement in campus activities, major/class offerings, quality of education), economic factors (e.g., finances, basic needs). To emphasize key findings, we summarize items where response patterns for stopout versus non-stopout students differed by at least 5%.

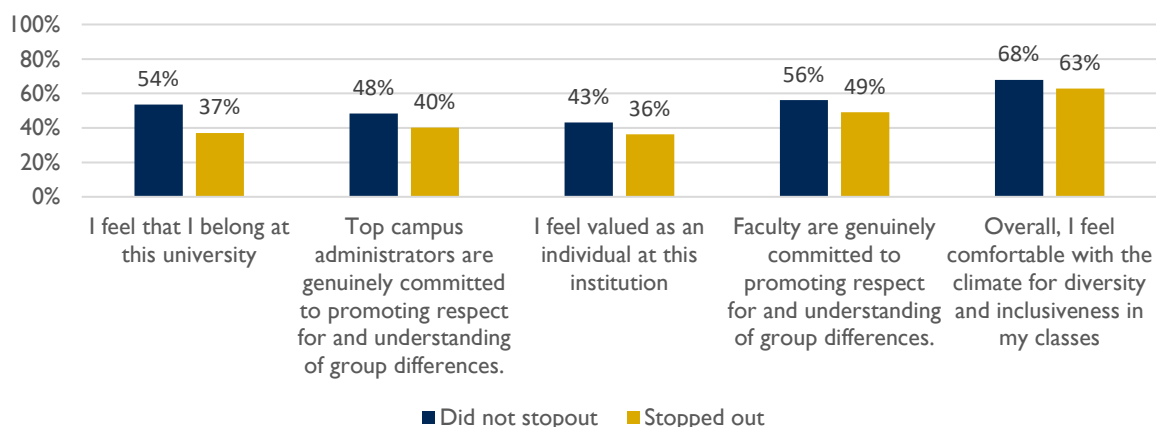
Fig 1. Barriers/Obstacles: % Answered Frequently/All the Time by Stopout Status



Person-specific/situational factors.

As can be seen in Fig 1, stopout students reported that every barrier/obstacle was an issue for them more often than non-stopout students. The most reported barrier/obstacle was feeling depressed, stressed, or upset, which was reported by just over 1 in 2 stopout students. Obstacles of

Fig 2. Campus Climate: % Answered Agree/Strongly Agree by Stopout Status



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having inadequate study skills and family responsibilities were reported by just under 1 in 3 stopout students.

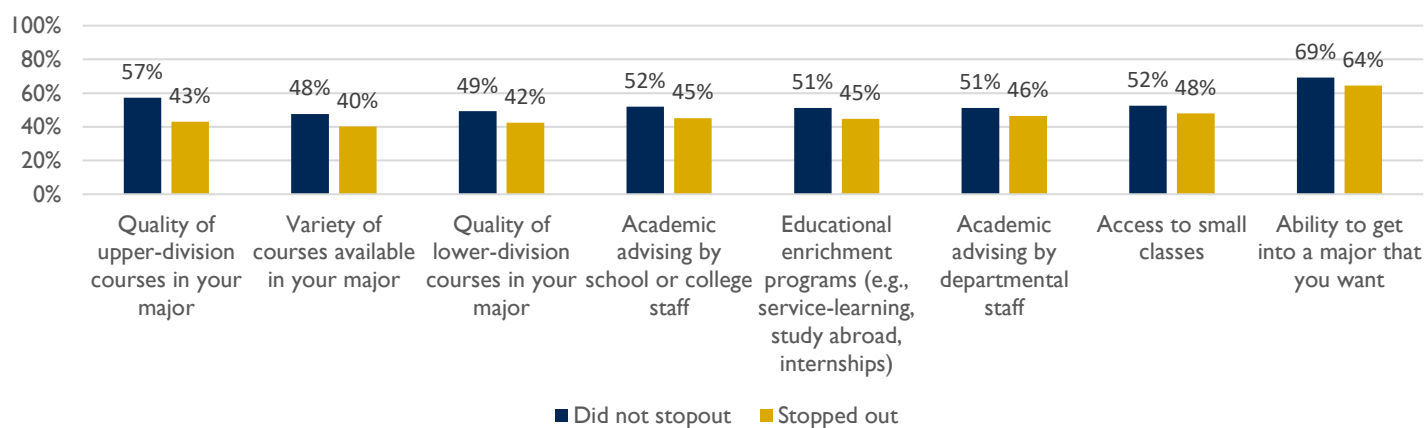
Campus-specific factors. From Fig 2, stopout students felt less positively about the **campus climate for equity and inclusion** and had a lower **sense of belonging and feeling valued on campus** than non-stopout students. The most striking difference was for sense of belonging – only 1 in 3 stopout students agreed or strongly agreed that they belong at UC Merced compared to 1 in 2 of non-stopout students. Stopout students were also less likely to report (57%) that students are often or very often treated equitably and fairly by the faculty compared to non-stopout students (66%; not pictured).

Stopout students reported being less **engaged on campus** than non-stopout students with only 50% of stopout students saying they had been or were currently involved in a student organization compared to 59% of non-stopout students (not pictured).

Overall, only 57% of stopout students agreed or strongly agreed that UC Merced has a strong **commitment to undergraduate education** compared to 64% of non-stopout students (not pictured). Students with a declared major also answered a series of **major evaluation** questions.

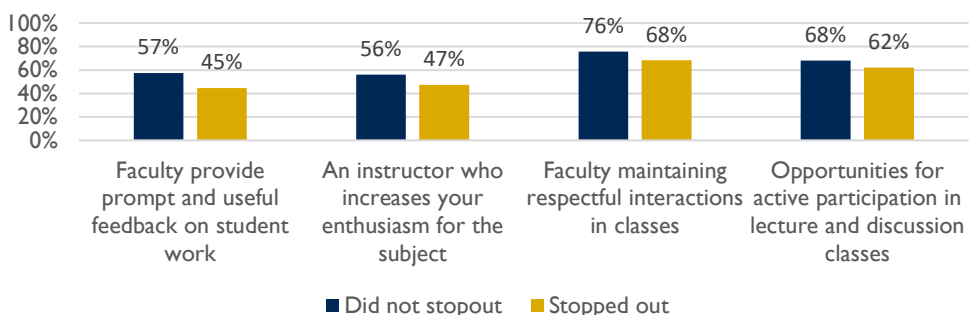
- Fewer stopout students (79%) said that program requirements were well defined compared non-stopout students (89%; not pictured).
- Fewer stopout students (83%) said they understood how the requirements of their major combine to produce a coherent understanding of a field of study compared to non-stopout students (90%; not pictured).

Fig 3. Major Evaluation: % Answered Satisfied/Very Satisfied by Stopout Status



- As can be seen from Fig 3, across all satisfaction items, stopout students were less satisfied than non-stopout students. The most pronounced difference was with regards to satisfaction with the quality of upper-division courses in the major, with only 43% of stopout students indicating that they were satisfied compared to 57% of non-stopout students.
- As can be seen in Fig 4, stopout students reported less frequent

Fig 4. Major Evaluation: % Answered Often/Very Often by Stopout Status



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positive experiences with faculty in their major compared to non-stopout students. The most pronounced difference was with regards to faculty feedback – only 45% of stopout students reported that faculty often or very often provide prompt and useful feedback compared to 57% of non-stopout students.

Economic factors. Across all items involving student **finances** – seven items spanning hours spent on paid employment, concerns about paying for expenses, and concerns about educational debt - there were no differences that met the 5% or greater threshold for inclusion in this report indicating that finances are likely not a key factor for student stopouts.

Survey responses were used to calculate food security rates⁸ – stopout students had higher rates of low or very low **food security** (66%) compared to non-stopout students (59%; not pictured). There were no differences in reported rates of **homelessness** during the most recent academic year (both 4%; not pictured).

Part 3. Identifying Key Predictors of Stopout Status

Because so many survey items were examined, to better identify the **key** reasons why students stopout at UC Merced, several additional analytic strategies were employed:

- Exploratory factor analysis⁹ was conducted on items with similar response options (e.g., satisfaction, agreement), which identified 15 factors (see Appendix A). Factor analysis is one method of item reduction that allows researchers to determine which items cluster together in the way students respond such that they can be combined into an overarching construct for analysis. Student responses to items that comprised each factor were averaged to produce factor scores.
- Several logistic regression models¹⁰ were built to determine which student background/demographic variables, factor scores, and individual survey items were the most robust predictors of stopout status (see Appendix B).
- A univariate Analysis of Variance (ANOVA)¹¹ was conducted on each factor score to identify those that differed significantly³ between stopout and non-stopout students.

The logistic regression models for students with declared majors and for all students revealed similar patterns as in Parts 1 and 2:

- Background/demographic variables associated with being **less** likely to stopout: having a higher high school GPA, being in good academic standing at the end of the prior term, enrolling in more credit hours in the current term, and having a first language other than English (versus speaking English only).
- Background/demographic variable associated with being **more** likely to stopout: being from Southern California (vs. Central).
- Factors associated with being **less** likely to stopout: reporting a higher sense of belonging and feeling valued (factor score) and involvement in student organizations (single item).

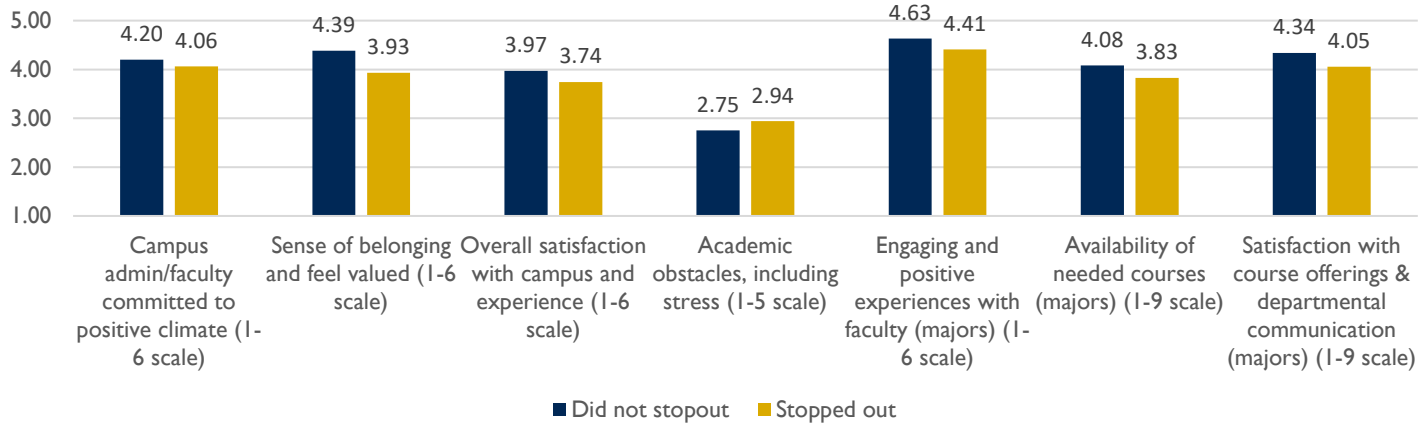
Students who reported a higher sense of belonging and involvement in student organizations were less likely to stopout.

For students with declared majors, higher scores on the satisfaction with course offerings and departmental communications factor were also associated with being **less** likely to stopout.

Fig 5 reports the factor score averages that the univariate ANOVAs revealed significantly differed between students who did and did not stopout. The pattern of findings is very similar to those of the logistic regression analyses. Again, the largest difference in factor scores was for sense of belonging and feeling valued where stopout students had lower scores compared to non-stopout students. Stopout students also had lower scores on the satisfaction with course offerings and departmental communication (majors) factor than non-stopout students. Similar to the findings in Part 2, stopout (vs. non-stopout) students also had higher scores on the academic obstacles, including stress, factor and lower scores on factors related to satisfaction with the overall campus experience, feeling like campus administration/faculty are committed to a positive climate, having engaging and positive experiences with faculty (majors), and the availability of needed courses (majors).

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Fig 5. Factor Scores: Averages by Stopout Status



Conclusion and Recommendations

As noted, stopout students represent an opportunity to better serve our students by addressing the reasons they choose to leave and/or by providing opportunities to return if that is consistent with their educational goals. Of course, it will always be the case that some students might conclude that their educational goals would be better achieved at another institution (e.g., we do not have the program they want) or for whom their life circumstances might make it challenging to complete a college degree (e.g., personal/family challenges) such that there is little the University can do to retain them. However, this analysis does suggest that the following might be helpful strategies for better serving UC Merced students:

- As a reminder, this analysis examined background/demographic factors related to stopout status for students who took UCUES. With regards to the background/demographic factors associated with stopout status for UCUES takers, it is not clear why some of these characteristics put students at greater risk for stopping out or whether these results would generalize beyond this sample. The exception perhaps is poor academic standing in a prior term, which clearly identifies students who are struggling and for which the campus already has support programs in place. However, knowing these possible risk factors could be useful for faculty and staff (e.g., academic advisors, special program staff who serve these student groups, resident assistants) for student conversations and consideration when directing students to resources that support their academic success. Though it is important to note that care must be taken in the framing of such conversations to ensure that student motivation is not undermined and that students believe that the campus is invested in their success.
- The most robust finding across all analysis methods was that students with a lower **sense of belonging** and those who do not feel valued by the institution are more likely to stopout. Thus, employing strategies to increase student sense of belonging and feelings of value is critical for stopout students, and likely for all students.
- A second key finding was that students who are less involved in student organizations are more likely to stop out. This is likely a proxy variable for **student engagement** on campus, particularly in extra/co-curricular activities. Thus, it might be helpful for the campus to think about ways to encourage student engagement on campus – likely helpful for all students and linked with sense of belonging.
- A third key finding was with regards to **students with a declared major** – clarity around academic requirements, course availability/options, positive interactions with faculty in and out of the classroom, and clear communications from departments is critical for retaining students.
- A fourth key finding was with regards to helping students overcome **academic obstacles** and particularly feelings of stress. Further developing strategies to help students identify available resources and removing barriers to the utilization of resources is likely also critical to retention.
- Finally, student perceptions regarding the **campus climate for equity and inclusion** – particularly faculty and administration commitment to a positive climate – were also important for understanding stopouts. Thus, developing strategies for identifying and responding to student concerns about the campus climate for equity an inclusion both in and out of the classroom is also likely important for retaining students.

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Contact Us

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ENDNOTES

1. [UC Merced Academic Standing Policy](#)
2. To view IRDS reports that examined the characteristics of stopout and non-stopout students regardless of whether they took UCUES, please see the following: [Background and Destinations of High Unit Leavers](#); [Where do High Achieving Students go after leaving UC Merced?](#); and [Fast Facts About Students who Leave UC Merced Without a Degree](#).
3. Tests of statistical significance included chi-squared tests and univariate Analysis of Variance tests depending on whether the outcome variable was categorical or continuous, respectively. $P < .05$ was used as the threshold for statistical significance. Bonferroni correction was not used due to the exploratory nature of this analysis. The results of specific statistical tests are available on request.
4. First generation status is defined by the UC system as neither parent having earned a 4-year degree.
5. [AB540 status](#)
6. Students who identified as American Indian, Black, Hispanic, or Pacific Islander on the admissions application were considered to have underrepresented minority (URM) status.
7. Math005 is pre-calculus and Wri001 is academic writing – both are considered college preparatory courses.
8. [UC Global Food Initiative: Food and Housing Security at the University of California](#)
9. Exploratory factor analysis with principal axis factoring and varimax rotation was employed. Individual items that did not load .30 or higher on any factor were excluded. Items for which only a subset of students could answer (e.g., major evaluation items) were considered separately. See Appendix A for more information.
10. Student stopout status was regressed on the student background/demographic variables associated with stopout status at the bivariate level (Part I) and the applicable factor scores. Models were run iteratively and trimmed of predictors that were not significant ($p > .05$) to simplify. Separate models were run for students to had and had not declared a major. All of the models were problematic in terms of the assumptions of logistic regression because so few students were in the stopout group and due to missing data (i.e., students who had missing background or factor score data are dropped from the models). Thus, model results should be interpreted with caution. However, the patterns of results generally did support the other findings in this brief regarding key variables important for predicting stopout status. See Appendix B for more information.
11. Not all ANOVAs met the distributional assumptions of the statistical test. However, the patterns of results generally did support the other findings in this brief regarding key variables important for predicting stopout status.

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Appendix A: Exploratory Factor Analysis Results

Factor #	Description	# Items	Cronbach's Alpha	Scale	Example Item
1	Campus is safe, welcoming, and inclusive	5	0.92	Agree - 1 to 6	Overall, I feel comfortable with the climate for diversity and inclusiveness at this university
2	Campus admin/faculty committed to positive climate	3	0.75	Agree - 1 to 6	Top campus administrators are genuinely committed to promoting respect for and understanding of group differences at UC Merced
3	Overall satisfaction with campus and experience	4	0.76	Satisfied - 1-6	Overall academic experience
4	Obstacles largely out of campus control (e.g., military, homelessness, etc.)	6	0.76	How often - 1 to 5	How often an obstacle - Inconsistent access to housing, or homelessness
5	Academic obstacles, including stress	6	0.84	How often - 1 to 5	How often an obstacle - Feeling depressed, stressed, or upset
6	Outside responsibility obstacles	3	0.64	How often - 1 to 5	How often an obstacle - Job responsibilities (e.g., paid employment)
7	Sense of belonging and feel valued	3	0.82	Agree - 1 to 6	I feel valued as an individual at this institution
8	Engaging and positive experiences with faculty (majors)	7	0.88	How often - 1 to 6	Opportunities for active participation in lecture and discussion classes
9	Concerns about debt/spending	2	0.61*	How often - 1 to 6	Cut down on personal / recreational spending
10	Policies and requirements are clear (majors)	4	0.69	Yes/no - 0 to 1	Are the program requirements well defined?
11	Quality of instruction and educational opportunities/resources (majors)	8	0.86	Satisfied - 1 to 9	Educational enrichment programs (e.g., service-learning, study abroad, internships)
12	Satisfaction with academic advising resources (majors)	3	0.92	Satisfied - 1 to 9	Academic advising by school or college staff
13	Availability of needed courses (majors)	3	0.82	Satisfied - 1 to 9	Availability of courses needed for graduation
14	Concerns about educational debt	3	0.85	Concerned - 1 to 4	How concerned have you been about paying for your undergraduate education up to now?
15	Satisfaction with course offerings & departmental communication (majors)	4	0.82	Satisfied - 1 to 9	Variety of courses available in your major

*Because this scale had 2 items, the reported reliability value is a Pearson's r.

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Appendix B: Logistic Regression Analysis

Table 2A. Final Logistic Regression Model Predicting Stopout Status for Students with a Declared Academic Major

Block 1: Demographic/Background Variables	B	SE	p-value	Odds Ratio
High School GPA	-.85	.34	.01	.43
Good academic standing (prior term)	-.87	.23	.00	.42
Enrolled credit hours at census (current term)	-.13	.05	.01	.88
First language other than English (vs English Only)	-.70	.26	.01	.50
First language English and other (vs. English Only)	-.38	.23	.11	.69
California region of origin – Northern (vs. Central)	.58	.31	.58	1.78
California region of origin – Southern (vs. Central)	.64	.29	.03	1.07
Block 2: Survey Variables				
Factor 7: Sense of belonging and feel valued	-.39	.12	.00	.68
Factor 11: Quality of instruction and educational opportunities/resources	.29	.18	.10	1.34
Factor 15: Satisfaction with course offerings & departmental communication	-.24	.12	.04	.79
Item: Have been/currently involved in student orgs? (1 = yes; 0 = no)	-.44	.21	.04	.65
Item: How many profs know well enough to ask for letter of rec? (numeric)	.15	.09	.10	1.16
Constant	4.66	1.54	.00	105.44

Note: bolded text indicates predictors that attained statistical significance – these predictors accounted for $R^2 = 7.14\%$ of the variance in stopout status (stopped out versus did not stopout). The model was iteratively trimmed of factors and items that were non-significant predictors until a parsimonious model was achieved.

Table 2B. Final Logistic Regression Model Predicting Stopout Status for All Students (Regardless of Declared Major Status)

Block 1: Demographic/Background Variables	B	SE	p-value	Odds Ratio
High School GPA	-.79	.31	.01	.45
Good academic standing (prior term)	-.73	.21	.00	.48
Enrolled credit hours at census (current term)	-.14	.05	.00	.87
First language other than English (vs English Only)	-.71	.24	.00	.49
First language English and other (vs. English Only)	-.39	.22	.07	.68
California region of origin – Northern (vs. Central)	.37	.27	.18	1.45
California region of origin – Southern (vs. Central)	.50	.26	.06	1.65
Block 2: Survey Variables				
Factor 7: Sense of belonging and feel valued	-.44	.09	.00	.65
Item: Have been/currently involved in student orgs? (1 = yes; 0 = no)	-.36	.19	.05	.70
Constant	5.31	1.33	.00	201.62

Note: bolded text indicates predictors that attained statistical significance – these predictors accounted for $R^2 = 6.12\%$ of the variance in stopout status (stopped out versus did not stopout). The model was iteratively trimmed of factors and items that were non-significant predictors until a parsimonious model was achieved.