

December 2014

Freshman Retention from Fall 2013 to Fall 2014

Introduction

In fall 2013, 3,009 first-time freshmen were enrolled at Mason. This report analyzes their characteristics and performance by retention status through fall 2014. The results serve to highlight how retained and not-retained students may vary in terms of demographic characteristics, pre-college academic achievement and preparation, educational aspiration, and academic performance.

Important Notes

- In this report, a *first-generation* (FG) student is defined as one with neither household parent/guardian having completed a 4-year degree. The classification of FG status is based on the self-report information collected on the Mason application form.
- *Retained* students refer to those who enrolled in fall 2014; *not-retained* students refer those who did not enroll in fall 2014.
- “Students” and “freshmen” were used interchangeably to refer to the 2013 freshman cohort in this report.
- Percentages may not add up to 100 due to rounding.
- The analysis for this report was based on the Beginning College Survey of Student Engagement and the Student Strengths Inventory, administered in summer and fall 2013, respectively; and on institutional data provided by the Office of Institutional Research and Reporting.

Highlights

Demographic Characteristics

- A higher proportion of out-of-state students (19.0%) were not retained than in-state students (10.8%).
- Fall-to-fall attrition rate was higher among residential students than those living off campus.

Incoming Academic Characteristics and Educational Aspirations

- Students retained through fall 2014 were in a somewhat stronger academic position as measured by incoming GPA at the time of entry into Mason—the difference between those retained and not retained is small, but statistically significant.
- Students differ significantly in their educational aspirations by retention status: 74% of retained students aspired to educational attainment beyond a baccalaureate degree compared to 66% of those not retained.

Academic Performance in College

- Students not retained through fall 2014 had a significantly lower credit hour completion rate than their retained peers: 48% of those not retained earned fewer credit hours than they attempted in the first semester compared with 18% of the retained group.
- Retained students maintained a significantly higher GPA in the first semester than those not retained through fall 2014.

In the fall 2013 cohort, 377 students did not return to Mason in fall 2014, resulting in a retention rate of 87.5%. The difference between retained students and those not retained are examined in several areas: demographic characteristics, incoming academic characteristics, educational aspiration, and academic performance during the first semester on campus.

Demographic Characteristics

When examining retention within the context of demographic characteristics and other selected non-academic factors, several differences emerge. Results in Table 1 show that a higher proportion of out-of-state students were not retained through fall 2014 than was the case for in-state students. Residential students also had a significantly higher fall-to-fall attrition rate compared to their off-campus peers. Please note that a substantial percentage of on-campus non-returning students are also out-of-state (33%).

Table 1. Comparison of Attrition Rate by Subgroups

		Not Retained	Sig.
Gender	Female (n=1,591)	11.4%	
	Male (n=1,418)	13.8%	
FG Status	FG (n=998)	13.6%	
	Non-FG (n=1,804)	12.1%	
Residential Status	On-campus (n=2,177)	13.5%	*
	Off-campus (n=832)	10.1%	
Domicile	In-state (n=2,388)	10.8%	***
	Out-of-state (n=621)	19.0%	

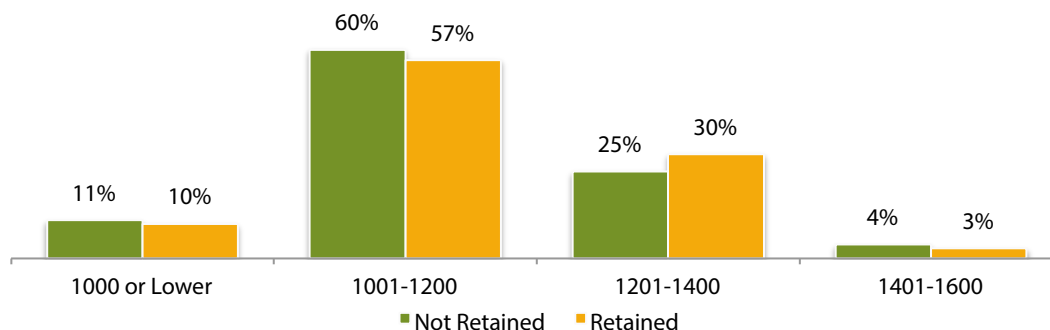
Note: Based on fall 2013 subgroup classifications and fall 2014 retention status.

* $p < .05$, *** $p < .001$, Chi-square (2-tailed)

Incoming Academic Characteristics

On average, students retained through fall 2014 had a significantly higher high school GPA than those not retained: 3.67 vs. 3.60, respectively ($p < .001$, t-test (2-tailed), small effect size of 0.22). While the two groups did not differ significantly on the average SAT composite, a slightly higher percent (33%) of retained students scored above 1200 compared to 29% of those not retained (see Figure 1).

Figure 1. SAT Composite Score by Retention Status



Note: Based on institutional data. The numbers of students for the retained and not-retained groups were 1,979 and 265, respectively.

Other incoming academic characteristics are based on three scales from the Beginning College Survey of Student Engagement (BCSSE), a survey administered to the incoming freshmen in summer 2013. The three scales are Perceived Academic Preparation, Expected Academic Difficulty, and Expected Academic Perseverance. For a description of the three BCSSE scales, see the *Beginning College Survey of Student Engagement Self-Comparison Report 2013* at <https://assessment.gmu.edu>. Results in Table 2 reveal no significant differences between the two groups on the three scales.

Table 2. Academic Characteristics by Retention Status

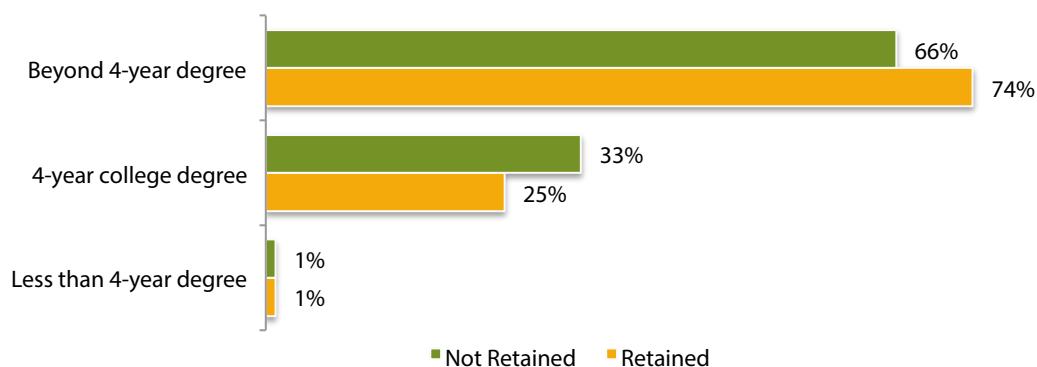
<i>Selected BCSSE Scale</i>	Retained (n=1,074)	Not Retained (n=136)
Perceived Academic Preparation	45.6	46.0
Expected Academic Difficulty	29.4	29.4
Expected Academic Perseverance	45.0	44.5

Note: Based on mean scale scores ranging from 0 to 60.

Educational Aspirations

Retention status is found to be associated with students' educational aspirations as measured by an item from the Student Strengths Inventory (SSI), a survey administered to the freshman class in fall 2013 (a comprehensive report on the 2013 SSI is available at <https://assessment.gmu.edu>). Figure 2 shows that a larger proportion of those not retained through fall 2014 reported that a 4-year college degree is the highest degree they expect to complete compared to their retained peers (33% vs. 25%). The association between retention status and educational aspiration is statistically significant ($p < .05$, Chi-square (2-tailed)).

Figure 2. Highest Degree Expected to Complete by Retention Status



Note: Based on data from the SSI. The numbers of students for the retained and not-retained groups were 1,987 and 271, respectively.

Academic Performance in College

Two academic performance indicators were examined in this retention analysis: cumulative GPA and credit hours attempted vs. credit hours earned during the first semester. Results in Table 3 show that, on average, retained students completed 14.1 credit hours in fall 2013, compared to 11.0 for those not retained through fall 2014. The difference between credit hours attempted and credit hours earned for those who continued to enroll in fall 2014 was only 0.8, significantly smaller than that for those not retained. This finding is particularly revealing in light of the fact that retained students on average attempted more credit hours than their peers who were not retained (14.9 vs. 14.5, respectively). These results suggest that the retained students were more ambitious with their course load and were able to carry out their academic plan more successfully than those not retained through fall 2014.

Table 3. Average Credit Hours Earned vs. Average Credit Hours Attempted by Retention Status

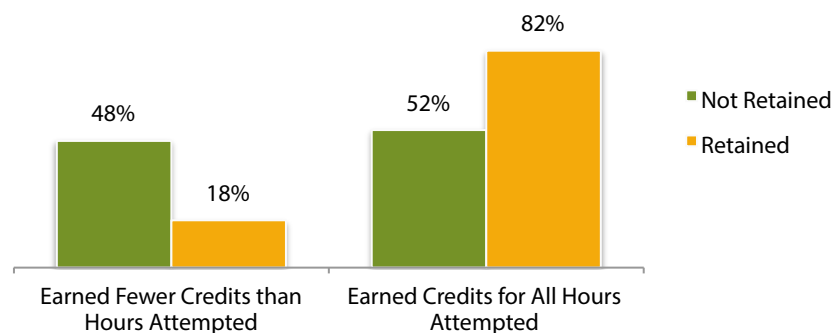
Credit Hours	Retained (n=2,627)	Not Retained (n=365)	Sig.	Effect Size
Attempted	14.9	14.5	***	0.27
Earned	14.1	11.0	***	0.78
Difference	-0.8	-3.6	***	0.75

Note: Based on fall 2013 credit hours and fall 2014 retention status.

*** $p < .001$, t test (2-tailed), small to large effect sizes (criteria for t -test effect size, small: 0.20, medium: 0.50, large: 0.80, Cohen, 1988)

Results in Figure 3 illustrate further that a larger proportion of those not retained through fall 2014 had trouble completing the courses they had attempted in the first semester on campus: 48% of them earned fewer credit hours than they attempted compared to 18% of the retained group. The difference is statistically significant ($p < .001$, Chi-square (2-tailed)).

Figure 3. Percent of Students Earning Fewer Credit Hours Than Attempted by Retention Status



Note: Based on fall 2013 credit hours and fall 2014 retention status. The numbers of students for the retained and not-retained groups were 2627 and 365, respectively.

Retained students and not retained students also differed significantly on college academic achievement as measured by cumulative GPA. As shown in Table 4, retained students maintained a significantly higher GPA than those not retained through fall 2014.

Table 4. Average College GPA by Retention Status

	Retained (n=2,627)	Not Retained (n=365)	Sig.	Effect Size
Cumulative GPA	3.01	2.27	***	0.72

Note: Based on fall 2013 cumulative GPA and fall 2014 retention status.

*** $p < .001$, t test (2-tailed), large effect size (criteria for t -test effect size, small: 0.20, medium: 0.50, large: 0.80, Cohen, 1988)

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