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In Focus

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Beginning College Survey of Student Engagement (BCSSE) 2008: Self-Comparison Report

I. Introduction

This report summarizes the results of the 2008 Beginning College Survey of Student Engagement (BCSSE) focusing on comparisons by gender and first-generation status within Mason.[1] The BCSSE was developed as a companion survey to the National Survey of Student Engagement (NSSE), a national survey for students attending four-year higher education institutions to assess their learning experiences. The BCSSE is designed to help four-year universities and colleges better serve the needs of incoming first-year students. This is the first year that George Mason University participated in BCSSE. The survey includes the following topics: (1) social and demographic background, (2) high school academic engagement and performance (test scores and grades), and (3) expected academic engagement in college.

In 2008, 70,386 incoming first-year students from 119 four-year colleges and universities participated in BCSSE 2008. In summer 2008, all 2,739 prospective first-year Mason undergraduate students were invited by e-mail to participate in the survey online. During summer orientations, post cards were handed to students to remind them to fill out the survey. A total of 1,513 students completed the survey; a response rate of 55%.

Female students accounted for 61% of the respondents, a slight overrepresentation of the female population among the 2008 first-year students. Approximately 30% of the respondents at Mason were identified as first-generation students in the BCSSE 2008. This number is higher than previous reports from the Office of Institutional Assessment because the BCSSE adopted a very broad definition of first-generation students — students are considered "first-generation" if *neither parent nor guardian earned a 4-year college degree*.

II. Highlights

Student Backgrounds

- There are significantly more women and racial/ethnic minorities among first generation students than non-first generation students.

High School Academic Engagement (during the last year of high school)

- Female students and non-first generation students reported having more reading assignments and short paper writing assignments than their counterparts respectively. Female students spent significantly longer hours in class preparation than male peers as well.

Expected College Academic Engagement (during the first year of college)

- Compared with male peers, female students anticipate spending significantly longer hours in class preparation and discussing course related topics with others, such as family and other students, more often than their male counterparts. Male students expect to work with other students on projects during class more often than female

[1] For readers interested in comparing the results between Mason and its peer institutions, please refer to a peer comparison report published in April 2009 (https://assessment.gmu.edu/Results/BCSSE/BCSSE.html).

peers. No difference was found in expected college academic engagement between first-generation and non-first generation students.

Expectations in College Academic Activities

- ***Ability to cope with academic challenges:*** Female students were more confident that they would stay focused on study and be more determined to mobilize available resources to overcome academic challenges than male peers. Male students were more likely than female students to say that they would stay positive when their academic performance is less than desirable. First generation students were more likely to say that they would seek help from instructors when experiencing difficulty in course assignments than their non-first generation peers.

- ***Academic difficulty and perceived academic preparedness:*** Female students and first generation students anticipate more difficulty in learning course material than their respective counterparts. Nonetheless, female students show more confidence in their preparedness in writing and team work skills than male peers. More male students think that they are well prepared in critical thinking, quantitative skills, and IT and computer skills than female students. Compared with first generation students, non-first generation students are more likely to say that they are well prepared in oral communication and critical thinking skills.

- ***Importance of campus environment.*** When it comes to the campus environment, female students place more emphasis on interactions with students from diverse backgrounds, support for their academic success, and assistance for non-academic responsibilities such as work and family than male students. Support for their academic success and support for non-academic responsibilities matter more to first generation students than non-first generation peers.

Financial Concerns

- When it comes to paying college expenses, 40% of first generations students anticipate that it will be "very difficult," a much higher percentage than that of non-first generation students: 23%. Although a little more than 75% of non-first generation students said that their parents/family would pay half to all of college expenses for them, only about 50% of first generation students expect the same level of family financial support. Reflecting less funding coming from their parents/family, first generation students expect to use other funding sources significantly more than non-first generation students.

- Female students are more worried about financing college expenses than male peers and they are planning to cover higher portions of their college education by scholarships and grants than male peers. There is no gender difference in the degree of reliance on other funding sources such as family, student loans, and self.

NOTE

- Total percentages in this report may be slightly lower or higher than 100% due to rounding.
- Frequency and mean calculations in this report exclude "don't know" and "not applicable" responses.

KEY TERMS AND DEFINITIONS

- **Mason freshmen**: "Mason freshmen" and "Mason respondents" are synonymous referring to 1,513 first-time freshmen who completed the BCSSE 2008. No transfer freshmen completed the survey.
- **First-generation students:** Students are identified as first generation if neither parent nor guardian earned a four-year college degree.

III. Demographic Characteristics

1. Demographic Characteristics of the Respondents

First Generation Students. College students whose parents have less than a college degree are defined as "first generation students," and they are more likely to face a greater challenge in their education (e.g., access to college, academic preparation, persistence, and graduation) compared with their peers with parents who earned a college degree

(Choy 2001[2]). Researchers use different parental education levels to determine first generation status of a student. Some identify a first generation student as the first person to attend college among his/her immediate family members. In the most stringent definition, a student is considered first generation if neither parent was ever exposed to any college education. In the broadest definition, a student will be identified as first generation if neither parent has earned a 4-year college degree. BCSSE adopted the latter definition: if a student indicated that neither parent completed a 4-year college degree, the student is identified as a "first-generation" student in the BCSSE. Based on this definition, 30% of Mason respondents are identified as first-generation students.

Gender and Race/Ethnicity. Table 1 displays gender and race/ethnicity of the respondents by first generation status. There are more women among first generation respondents (66%) than non-first generation peers (59%). There are significantly more racial/ethnic minorities among first generation students. Of first generation respondents, 42% are non-Hispanic Whites, compared with 58% of non-first generation respondents. The percentage of first generation Hispanic students is more than double that of non-first generation Hispanic students.

Table 1. Gender and Race/Ethnicity between First-Generation and Non First-Generation Students.

	First-Generation Students (n=380)	Non First-Generation Students (n=875)	Total
Gender			
Female	66%	59%	61%
Male	34%	41%	39%
Total	100%	100%	100%
Race/Ethnicity			
White (non-Hispanic)	42%	58%	53%
Asian, Asian American, or Pacific Islander	20%	16%	17%
Black or African American	11%	7%	8%
Hispanic	12%	5%	7%
Other (Native American, Multiracial, etc.)	11%	9%	10%
I prefer not to respond	4%	5%	5%
Total	100%	100%	100%

IV. High School Academic Engagement and Academic Performance

1. Self-Reported Academic Performance

Student were asked to report the numbers of AP classes and non-AP Honors classes that they took during high school, SAT/ACT scores, and grades for most high school courses. Based on their self-reporting, an average Mason first-time freshman received B+ in most of the high school courses and took 2-3 AP classes and Honors classes respectively. There was no difference by gender or first-generation status in the number of AP courses Mason freshmen took during high school. Female students took slightly more Honors classes than their male peers (data not shown).

Table 2. Self-Reported SAT/ACT scores.

	Female	Male	First Generation	Non-First Generation
Mean[1]	1110	1153	1102	1144
Sig.[2]	<.001		<.001	

[1]ACT scores were converted into SAT scores.
[2]*Mean comparison test (independent sample T-test) results are presented only if the results are statistically significant (p<.05).*

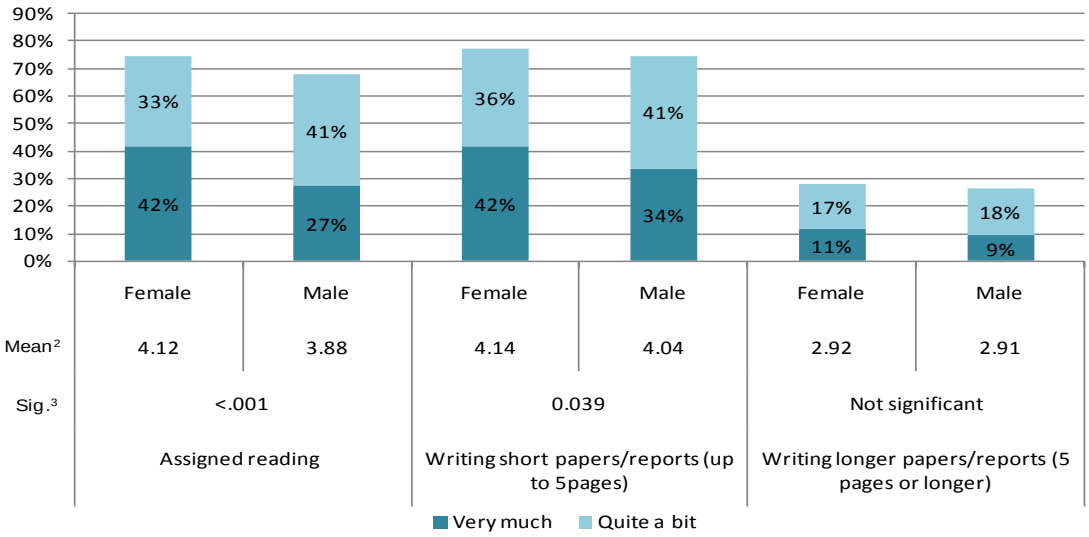
SAT/ACT scores showed significant differences by gender and first generation status (see Table 2). Male students had significantly higher scores than female peers and non-first generation students had significantly higher scores than first generation peers. In both cases, the difference was over 40 points.

2. Reading and Writing

Gender Comparison. According to mean comparison results, female students reported reading much more assigned course materials and textbooks than male peers. Forty-two percent of female students chose "very much," while a little more than one forth of male students chose the same (see Figure 1 on the next page). Female students also reported that they wrote significantly more short, five or fewer page-long papers than male students, although there were no gender differences in writing longer papers (more than five pages).

[2] Choy, S. P. (2001). Students Whose Parents Did Not Go to College: Post secondary Access, Persistence, and Attainment (NCES 2001-126). National Center for Education Statistics, U.S. Department of Education. Washington, D.C.

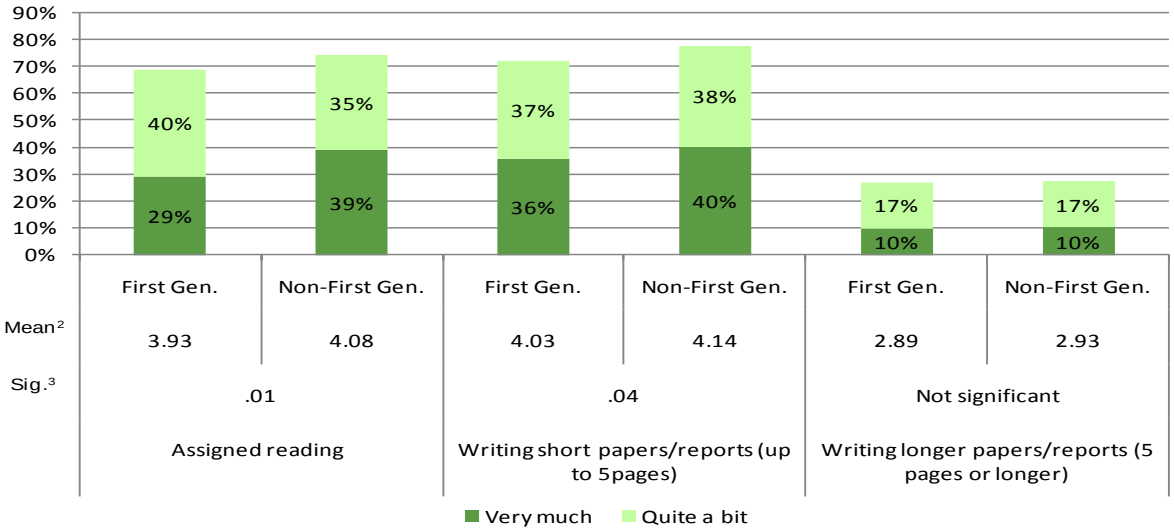
Figure 1. Students Who Did "Very Much" or "Quite a Bit" of Reading and Writing during the Last Year of High School by Gender. [1]



[1] Students were given the following 5 choices: 1=None, 2=Very little, 3=Some, 4=Quite a bit, and 5=Very much.
[2] Mean is calculated using the 5-point scale described above.
[3] Mean comparison test (independent sample T-test) results are presented only if the results are statistically significant (p<.05).

Comparison by First Generation Status. Non-first generation students reported having significantly more reading and short paper assignments than their first generation peers (see Figure 2). There was no difference in longer paper assignments by first-generation status. For assigned reading, 39% of non-first generation students marked "very much," compared with 29% of first generation students.

Figure 2. Students Who Did "Very Much" or "Quite a Bit" of Reading and Writing during the last year of high school by First Generation Status. [1]



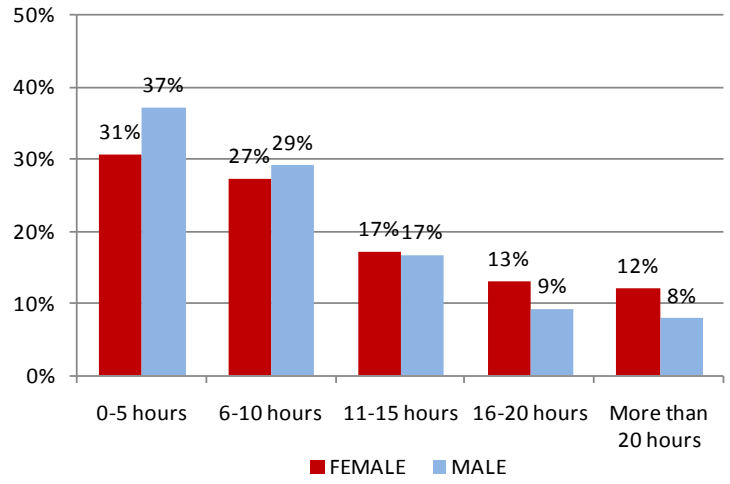
[1] Students were given the following 5 choices: 1=None, 2=Very little, 3=Some, 4=Quite a bit, and 5=Very much.
[2] Mean is calculated using the 5-point scale described above.
[3] Mean comparison test (independent sample T-test) results are presented only if the results are statistically significant (p<.05).

3. Study Hours

Gender Comparison. Female students spent significantly longer hours preparing for classes (e.g., studying, doing homework, and rehearsing) than male students during the final year of high school. The median study hour during high school falls between 6-10 hours. One fourth of female students said that they spent 16 hours or more studying, compared with 17% of male peers (see Figure 3).

There were no significant differences in study hours between first generation students and non-first generation students (data not shown).

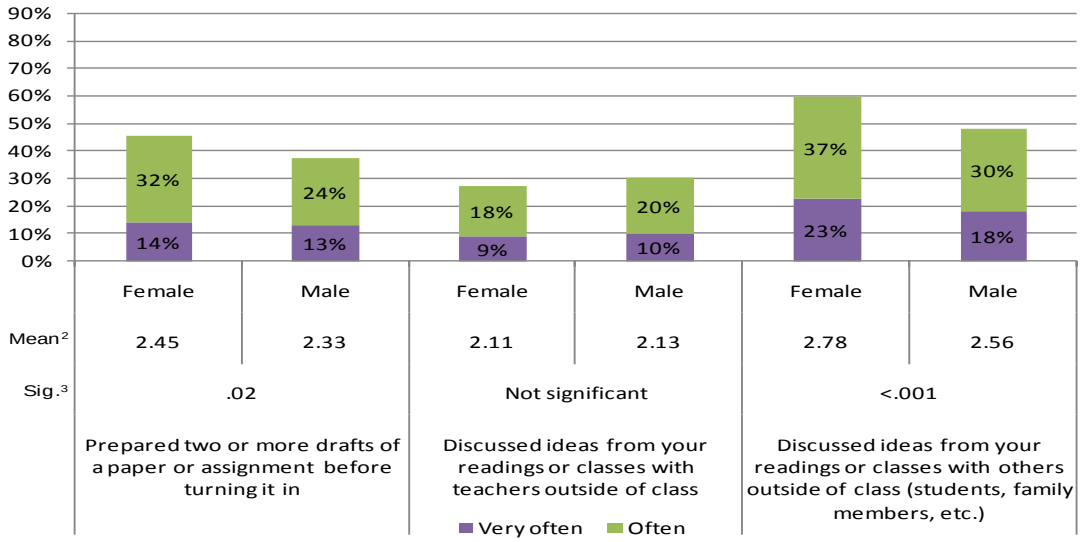
Figure 3. Study Hours during the Last Year of High School by Gender.



4. Class Participation and Interactions

Gender Comparison. Female students reported more active participation in certain high school academic activities than male students (see Figure 4). Female students reported that they prepared two or more drafts of a paper or assignment before turning it in significantly more often than male peers. Female students more often than male peers engaged in discussions about ideas from their readings or classes with students, family members, and other people outside of class. However, there was no gender difference in the same type of discussions with teachers outside class. Further, no gender differences were reported in class participation including collaborative learning (data not shown).
First generation status did not make any difference in class participation and interactions (data not shown).

Figure 4. High School Class Participation and Interactions by Gender. [1]



[1] *Students were given the following four options: 1=Never, 2=Sometimes, 3=Often, and 4=Very often.*
[2] *Mean is calculated using the 4-point scale described above.*
[3] *Mean comparison test (independent sample T-test) results are presented only if the results are statistically significant (p<.05).*

V. Expected College Academic Engagement

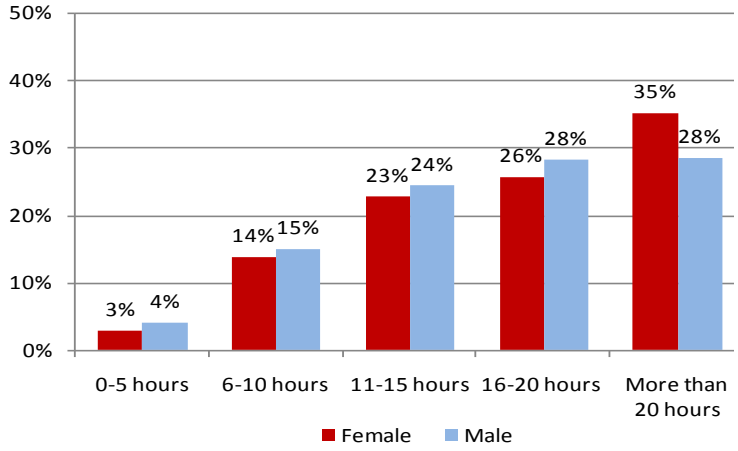
1. Study Hours

Gender Comparison. Mean comparison results show that female students expect significantly longer study hours in college than male peers, but the difference was small. The most notable difference is that 35% of female students expect to study 16 or more hours per week, compared with 28% of male peers (see Figure 5 on the next page). Both female and male students anticipate an increase in study hours in college compared to their high school study hours. More than 30% of the respondents reported they studied 0-5 hours per week during the last year of high school. In

contrast, only 3-4% expect 0-5 hours per week during the first year in college. The median of expected study hours in college is in the 16-20 hour range.

Like study hours during the last year of high school, there were no significant differences in expected study hours between first generation and non-first generation students (data not shown).

Figure 5. Expected Hours of Class Preparation during the First Year of College by Gender.



2. Class Participation and Interactions

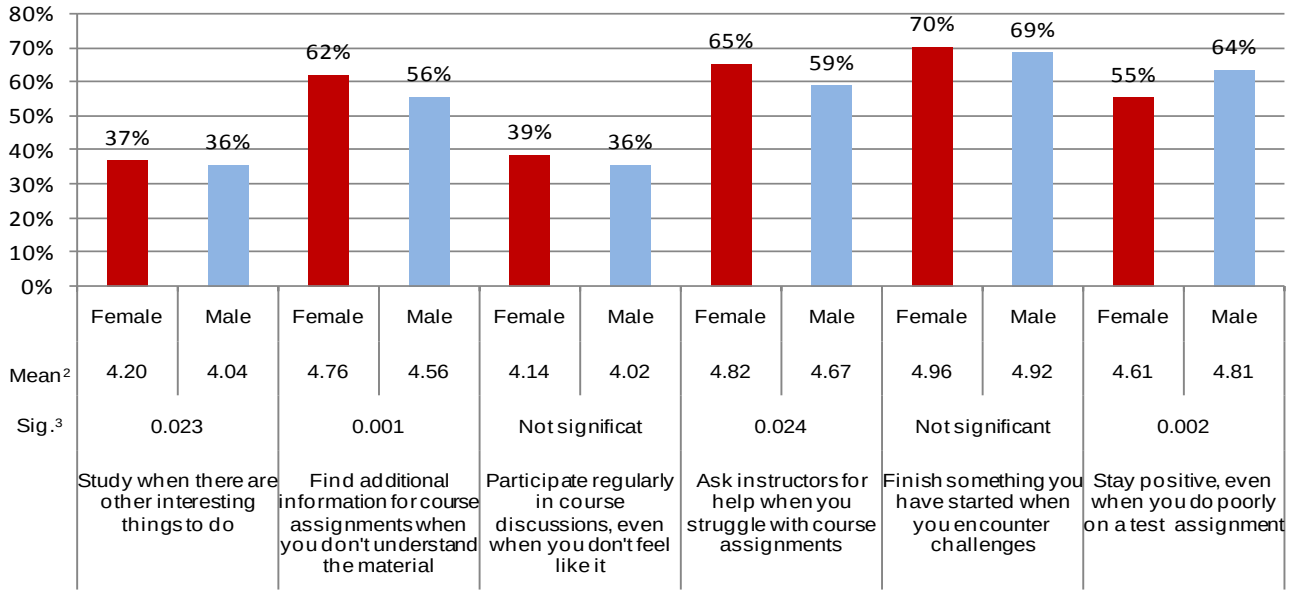
Gender Comparison. Regarding class participation, there was only one item out of seven showing gender difference. Male students expect to work with other students on projects during class more than female students. As reported in the previous section, female students discussed ideas related to course materials outside of class during the final year of high school more than male students. The same pattern appeared in expected academic engagement during the first year of college. Female students expect to discuss course related topics with others, such as family and other students, more often than male students. Regarding class participation and interactions, first generation status did not make any difference (data not shown).

VI. Expectations in College Academic Activities

1. Ability to Cope with Academic Challenges

Gender Comparison. Overall, female students are more likely than male peers to say that they will study even when there are other interesting things to do and that they will find additional information for course assignments or ask instructors for help when they struggle with course materials or assignments (see Figure 6). On the other hand, male students are significantly more likely than female students to say that they will stay positive when their performance on exams is not desirable.

Figure 6. Ability to Cope with Academic Challenges by Gender: Those Who said Highly Certain[1]



[1]The percentages represent the respondents who marked 5 or 6 out of a 6-point scale (1=Not at all certain to 6=Very certain).
[2] Mean is calculated using the 6-point scale described above.
[3]Mean comparison test (independent sample T-test) results are presented only if the results are statistically significant (p<.05).

Comparison by First Generation Status. There was the only one item out of six showing a significant difference by first generation status: first generation students are more likely than non-first generation students to say that they will seek help from instructors when experiencing difficulty with course assignments (data not shown here).

2. Expected Academic Difficulty

Gender comparison. Mean comparison results show that female students consider learning course materials in college more difficult than male students: 32% of female respondents thought that it would be highly difficult to learn course materials in college (see Table 3). First generation students also think that college course material will be more difficult to learn compared to non-first generation students. Regardless of gender or first-generation status, the respondents said that time management would be the most challenging once they start college — about 50% of the respondents rated the task highly difficult.

Table 3. Expected Academic Difficulty: During the coming school year, how difficult do you expect the following to be?[1]

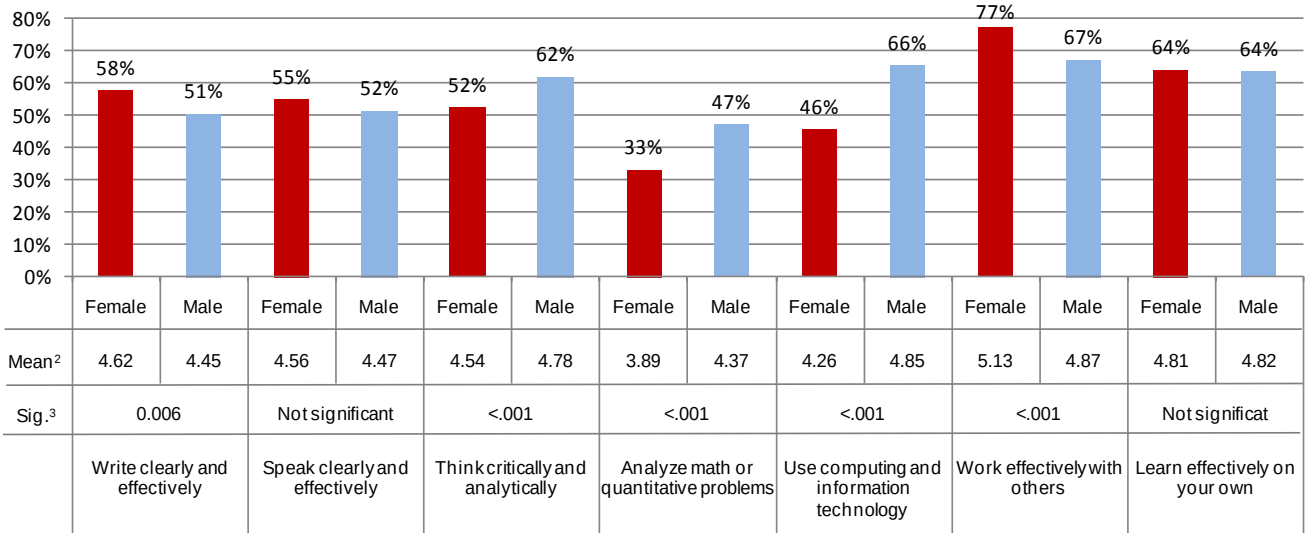
	Learning course material		Managing your time		Getting help with school work		Interacting with faculty	
By Gender								
	Female	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**
% of highly difficult[1]	32%	24%	47%	49%	13%	12%	13%	13%
Mean[2]	4.02	3.74	4.25	4.22	3.09	3.11	2.95	2.96
Sig.[3]	<.001		Not significant		Not significant		Not significant	
By First Generation Status								
	First Generation	**Non-First Generation**	**First Generation**	**Non-First Generation**	**First Generation**	**Non-First Generation**	**First Generation**	**Non-First Generation**
% of highly difficult[1]	31%	28%	51%	47%	15%	11%	16%	12%
Mean[2]	4.01	3.86	4.34	4.2	3.18	3.06	3.02	2.93
Sig.[3]	0.026		Not significant		Not significant		Not significant	

[1]The respondents who marked 5 or 6 out of a 6-point scale of difficulty (1=Not at all difficult to 6=Very difficult).
[2] Mean is calculated using the 6-point scale described above.

3. How Prepared Are You for College Academics?

Gender Comparison. Female students reported a higher level of perceived preparedness in writing skills and team work skills than male peers (see Figure 7). Seventy-five percent of female students said that they were highly prepared to work effectively with others (teamwork skills). On the other hand, male students reported a higher level of perceived preparedness in critical thinking, quantitative skills, and IT and computer skills than female peers. Male students and female students showed comparable levels of perceived preparedness for oral presentation skills and self-learning skills.

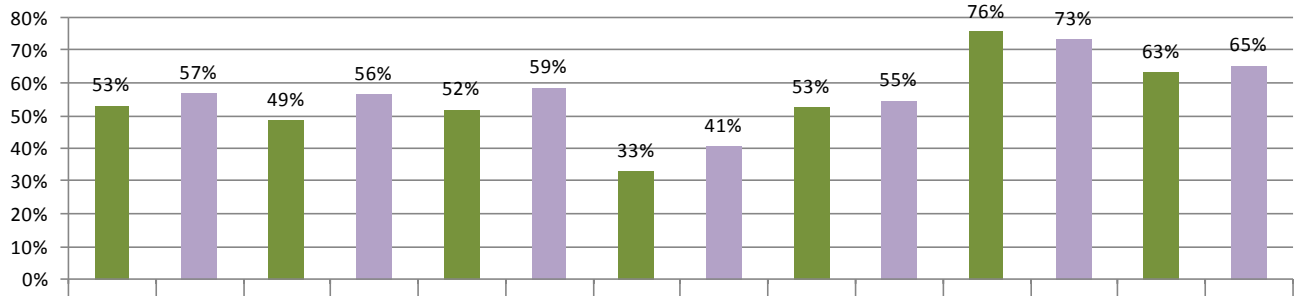
Figure 7. Students Who Rated Themselves as Highly Prepared[1] in Key Academic Elements by Gender.



[1]The respondents who marked 5 or 6 out of a 6-point scale of preparedness (1=Not at all prepared to 6=Very prepared).
[2] Mean is calculated using the 6-point scale described above.
[3]Mean comparison test (independent sample T-test) results are presented only if the results are statistically significant (p<.05).

Comparison by First Generation Status. Non-first generation students were significantly more likely than first generation students to consider themselves highly prepared in oral presentation skills and critical thinking skills (see Figure 8). There are no differences by first-generation status in any other items such as writing, IT, and math skills.

Figure 8. Students Who Said Highly Prepared[1] in Key Academic Elements by First Generation Status



	First Gen.	Non-first Gen.	First Gen.	Non-first Gen.	First Gen.	Non-first Gen.	First Gen.	Non-first Gen.	First Gen.	Non-first Gen.	First Gen.	Non-first Gen.	First Gen.	Non-first Gen.
Mean[2]	4.52	4.61	4.42	4.59	4.54	4.69	3.97	4.12	4.45	4.54	5.05	5.04	4.76	4.85
Sig.[3]	Not Significant		0.021		0.017		Not significant		Not significant		Not significant		Not significant	
	Write clearly and effectively		Speak clearly and effectively		Think critically and analytically		Analyze math or quantitative problems		Use computing and information technology		Work effectively with others		Learn effectively on your own	

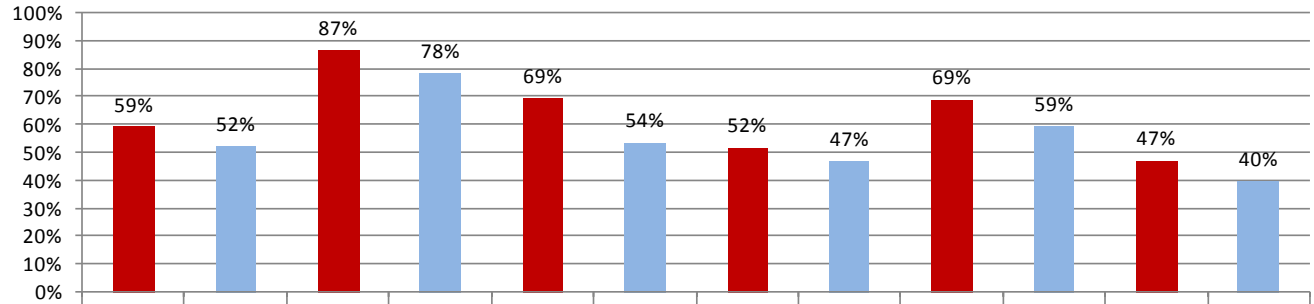
[1]*The respondents who marked 5 or 6 out of a 6-point scale of preparedness (1=Not at all prepared to 6=Very prepared).*
[2]*Mean is calculated using the 6-point scale described above.*
[3]*Mean comparison test (independent sample T-test) results are presented only if the results are statistically significant (p<.05).*

VII. What Matters Most to First-Year Students in College Life?

1. Gender Comparison

What is considered important to Mason first-year students in their college environments? Students were asked to rate the level of importance for six academic and non-academic opportunities and services provided by the university. Female students considered all areas significantly more important than their male peers. In particular, academic support, diversity exposure, and opportunity to attend campus events and activities, showed the widest gap in the percentages of 'highly important' between female students and male students (see Figure 9).

Figure 9. Importance of Campus Environment by Gender: Those Who Said Highly Important[1].



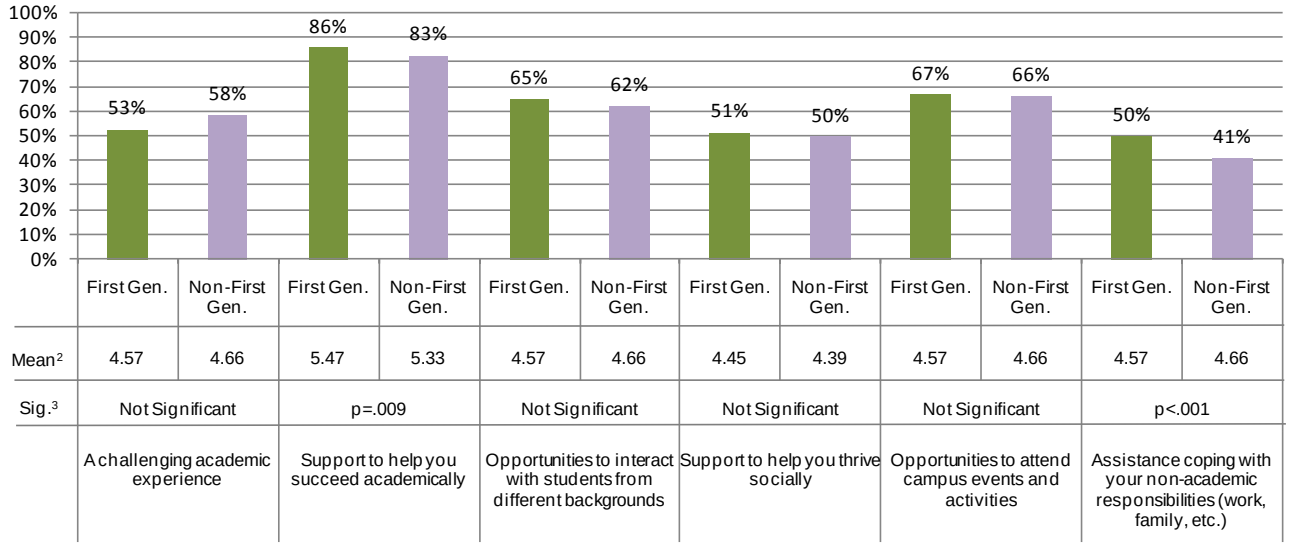
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Mean[2]	4.69	4.53	5.48	5.2	4.96	4.55	4.5	4.25	4.96	4.71	4.34	3.96
Sig.[3]	p<.001		p<.001		p<.001		p=.001		p<.001		p<.001	
	A challenging academic experience		Support to help you succeed academically		Opportunities to interact with students from different backgrounds		Support to help you thrive socially		Opportunities to attend campus events and activities		Assistance for coping with your non-academic responsibilities	

[1]*The respondents who marked 5 or 6 out of a 6-point scale of importance (1=Not important to 6=Very important).*
[2]*Mean is calculated using the 6-point scale described above.*
[3]*Mean comparison test (independent sample T-test) results are presented only if the results are statistically significant (p<.05).*

2. Comparison by First Generation Status

First generation students consider support for academic success and assistance for coping with non-academic responsibilities significantly more important compared to non-first generation peers (see Figure 10). No significant difference by first generation status is found on other items.

Figure 10. Importance of Campus Environment by First Generation Status: Those Who Said Highly Important[1].



[1]The respondents who marked 5 or 6 out of a 6-point scale of importance (1=Not important to 6=Very important).
[2] Mean is calculated using the 6-point scale described above.
[3]Mean comparison test (independent sample T-test) results are presented only if the results are statistically significant (p<.05).

VIII. Financial Conditions of First-Year Students

1. Work Hours

Research has shown that first-generation students are more likely than their non-first generation peers to have worked more than 20 hours per week during the final year of high school and expect to work to pay for college expenses (Saenz et al. 2007[3]). BCSSE asked the respondents about their actual work hours during the last year of high school and expected work hours during the first year of college.

Gender Comparison. During high school, more women said that they worked for pay — 70% of female students worked for pay compared with 57% of male peers (see Table 4). This difference diminished when they were asked to estimate how many hours they would work during the first year in college.

Table 4. Work Hours during the last year of High School and Expected Work Hours during the first year of College by Gender.

Work hours per week	High School		College	
	Female	Male	Female	Male
0 hour	30%	43%	22%	28%
1-10 hours	25%	20%	32%	29%
11-20 hours	30%	25%	34%	32%
More than 20 hours	15%	13%	11%	11%
Total	100%	100%	100%	100%

Table 5. Work Hours during the last year of High School and Expected Work Hours during the first year of College by First Generation Status.

Work Hours per Week	High School		College	
	First Gen.	Non-First Gen.	First Gen.	Non-First Gen.
0 hour	32%	36%	18%	28%
1-10 hours	21%	24%	28%	32%
11-20 hours	26%	29%	38%	31%
More than 20 hours	20%	12%	16%	8%
Total	100%	100%	100%	100%

Comparison by First Generation Status. First generation students worked significantly longer hours than non-first generation peers during the last year of high school. One fifth of first generation students said that they worked more than 20 hours per week, compared with 12% of their non-generation peers (see Table 5). The results of expected work

[3] Saenz, V. B., Hurtado, S., Barrera, D., Wolf, D., Yeung, F. (2007) First in my family: A profile of first-generation college students at four-year institutions since 1971. Los Angeles: Higher Education Research Institute.

hours in college indicate that this pattern is likely to continue at least during the first year of college. The percentage of first generation students who expect to work more than 20 hours (16%) is twice as that of non-first generation students (8%).

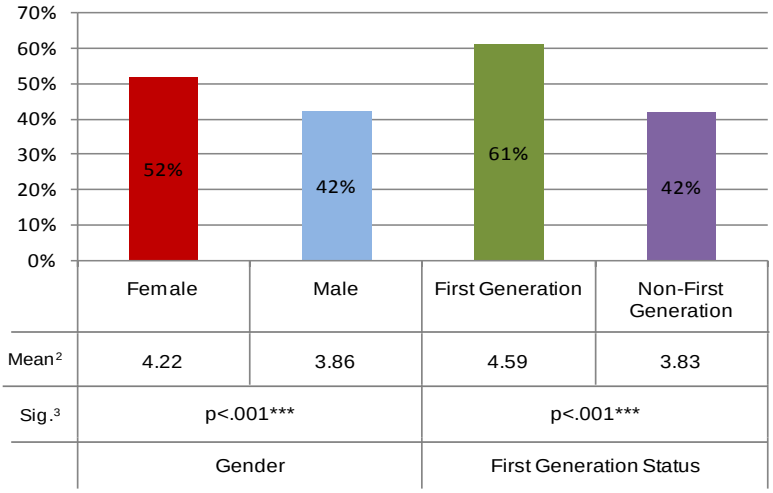
2. Financial Concerns

When asked about the level of expected financial difficulty during the first year of college, nearly half of Mason freshmen (48%) marked 5 or 6 out of a 6-point scale (1=Not at all difficult to 6=Very difficult). Mason freshmen have a higher level of financial anxiety compared with their national peers. (Data not shown)

Gender Comparison. Mean comparison results indicated that female students were more concerned about paying college expenses in the first year of college than male students (See Figure 11). A little more than half of female students (52%) marked 5 or 6 on the 6-point difficulty scale, while 42% of male peers did the same.

Comparison by First Generation Status. Significantly more first-generation students felt it would be very difficult to pay college expenses than non-first generation students: 61% of the former group say that it will be highly difficult compared with 42% of the latter group of students (see Figure 11).

Figure 11. Students Who Expect It to be Highly Difficult to Pay College Expenses by Gender and First Generation Status[1]

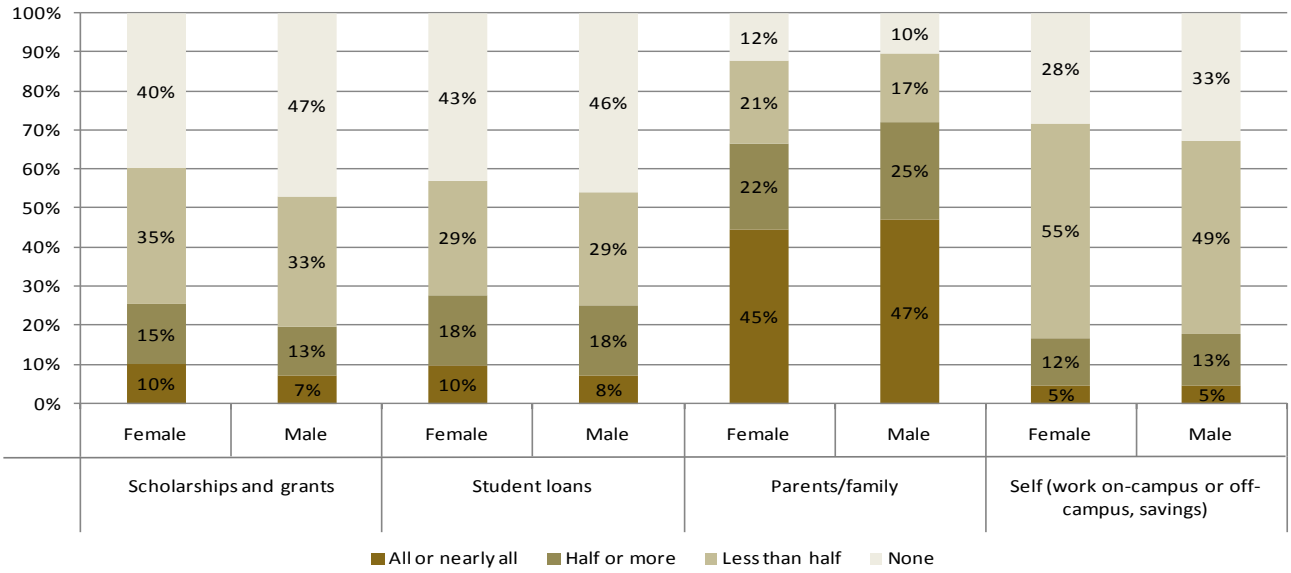


[1] The percentages of the respondents who marked 5 or 6 on a 6-point scale measuring difficulty paying college expenses.
[2] Mean is calculated using the 6-point scale described above.
[3] Mean comparison test (independent sample T-test) results are presented only if the results are statistically significant (p<.05).

3. Funding Sources for College Education

Gender Comparison. Male and female students have very similar patterns of funding for their college expenses except for scholarships and grants (see Figure 12). Female students are somewhat more likely to say that they are planning to pay college expenses using scholarships and grants than male peers. Twenty five percent of female students say half or more of their college expenses will be covered by scholarships and grants, compared with 20% of their male peers.

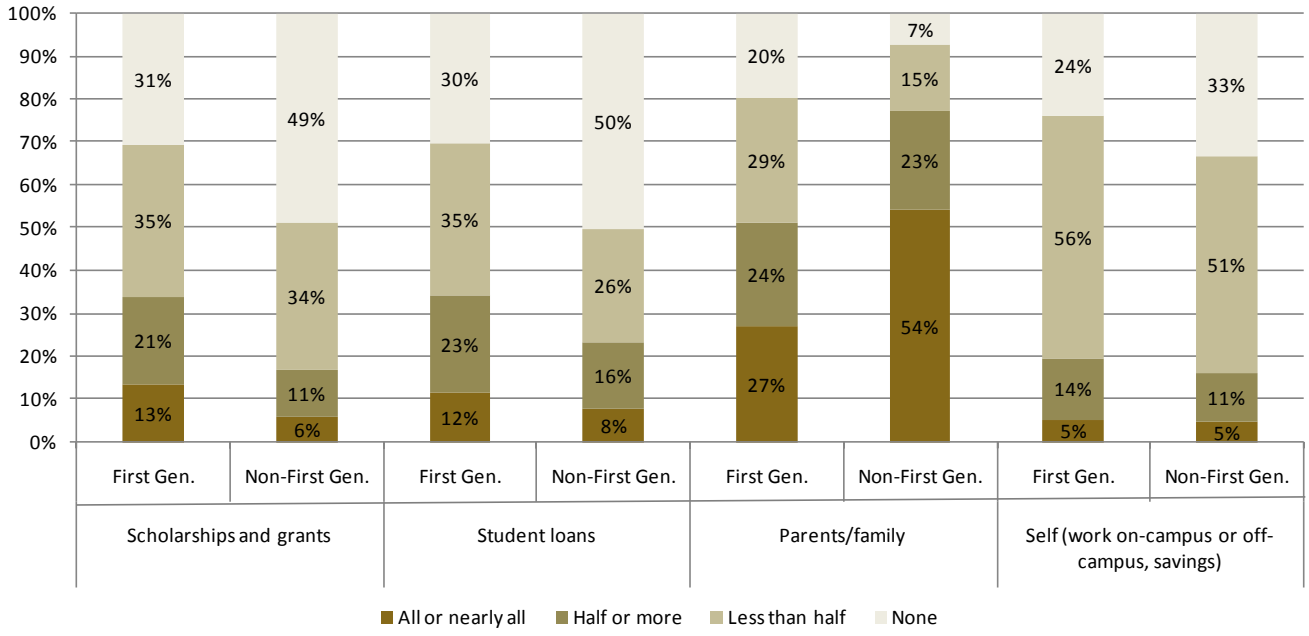
Figure 12. Funding Sources for First-Year College Expenses by Gender



Comparison by First Generation Status. As shown in Figure 13, first generation students show a different pattern of financing their college education compared with their non-first generation peers. Over three quarters of non-first generation students (77%) said that at least half of their college expenses would be paid by their parents/family: 54% said that "all or nearly all" would be covered by their parents and family. On the other hand, only half of first generation students were expecting their parents and family to pay at least half of their college expenses: one fourth of first generation students (27%) would rely on parents and family to pay "all or nearly all" of their college education.

First generation students tend to be financially more vulnerable than their non-first generation peers (Saenz et al. 2007[4]). At Mason, first generation students expect to rely more on non-family funding sources for paying college expenses, while their non-first generation peers have greater financial support from their parents and family. The percentage of first generation students receiving scholarships and grants to cover at least half of their college expenses is twice as high as that of non-first generation students: 34% for first generation students; 17% for non-first generation students. Likewise, first generation students plan to take out more student loans than non-first generation students — 35% of first generation students say that at least half of their college expenses will be covered by student loans, compared with 24% of non-first generation students.

Figure 13. Funding Sources for First-Year College Expenses by First Generation Status



RELEVANT REPORTS AVAILABLE ONLINE

- A full-length, peer comparison report on BCSSE 2008 is available at: https://assessment.gmu.edu/Results/BCSSE/BCSSE.html
- Earlier reports on NSSE, a companion survey of BCSSE, are available at: https://assessment.gmu.edu/Results/NSSE/NSSE.html

[4] Saenz, V. B., Hurtado, S., Barrera, D., Wolf, D., Yeung, F. (2007) First in my family: A profile of first-generation college students at four-year institutions since 1971. Los Angeles: Higher Education Research Institute.