



# Students Strengths Inventory (SSI) Report 2013

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October 2014

Office of Institutional Assessment

October 2014

**Suggested Citation**

Office of Institutional Assessment, George Mason University (2014). *Student Strengths Inventory (SSI) Report 2013*, Fairfax, VA: Office of Institutional Assessment, George Mason University.

**Contact Information**

Office of Institutional Assessment  
3100 Alan and Sally Merten Hall  
4400 University Drive, MS 3D2  
Fairfax, VA 22030  
Phone: (703) 993-8834  
Fax: (703) 993-8835  
Web: <https://assessment.gmu.edu>  
Email: [assessment@gmu.edu](mailto:assessment@gmu.edu)

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## EXECUTIVE SUMMARY

Fall 2013 marked Mason's initial participation in the Beacon Student Strengths Inventory (SSI). The SSI is primarily a survey tool for identifying at-risk freshmen by highlighting student strengths and weaknesses. All together, 2,373 first-time freshmen responded to the survey at Mason, yielding a response rate of 78.9%.

This report focuses on the 2013 SSI results from Mason in two main areas – SSI scales based on standard items and SSI composites based on institutional specific items.

### Major Findings

#### SSI Scales

##### *Overall*

- Non-first-generation (non-FG) students reported a higher level of social comfort than their first-generation (FG) peers.
- Freshmen reported high levels of *Educational Commitment* and *Academic Self-Efficacy* (averaging over 80 on a 100-point scale) and a relatively lower level of resiliency (averaging 58).

##### *Subgroups*

- Residential students reported confidence in successful completion of college math and a willingness to participate in orientation activities (measures of *Academic Self-Efficacy* and *Campus Engagement*) at a significantly higher rate than non-residential students.

##### *Relationship of SSI Scales and College Completion Intentions*

- Educational goals were highly associated with educational commitment and engagement. Students who intend to return to Mason for a second semester and those who plan to graduate from Mason reported a significantly higher level of *Educational Commitment*, *Campus Engagement*, and *Academic Engagement*.
- Students with higher scores on *Educational Commitment*, *Resiliency*, and *Competencies for Success* reported a significantly higher level of *Academic* and *Campus Engagement*.

#### SSI Composites

##### *Overall*

- Freshmen scored high on most SSI composites (averaging over 70 on a 100-point scale), particularly in terms of *Sense of Belonging* and *Global Awareness*. Seventeen percent of the respondents reported that they had found a mentor at Mason five weeks into the first semester, despite an overall low score on *Engagement with Faculty/Staff/Students*.

##### *Subgroups*

- Female students seem to be more certain of the direction they are going than their male counterparts. A higher percentage of female students reported that their life seems to be on track, they know where to go for advising, and friends encourage them to make healthy choices.
- Compared to FG students, non-FG students were better prepared for college in terms of perceived verbal ability and teamwork skills when working with diverse others.

##### *Relationship of SSI Composites and Scales*

- Academic advising and engagement with faculty/staff/students are positively associated with students' sense of belonging. Freshmen who knew where to go for advising, who had discussed their major with an advisor, or who had more a favorable perception of advising also reported a significantly higher level of sense of

belonging. Similarly, freshmen that were more engaged with professors, staff, and other students, on average, also reported a significantly higher level of sense of belonging.

- Having a strong sense of belonging in college in turn may positively impact academic and campus engagement, as well as overall satisfaction. Students scoring high on the *Sense of Belonging* component reported a significantly higher level of engagement as measured by the *Academic* and *Campus Engagement* composites, and a significantly higher satisfaction with their overall Mason Experience.

## Summary

The SSI was given to freshmen shortly after they matriculated into Mason. It is plausible that as we follow these students a year or two later, significant indicators of success will emerge and will distinguish between students who persevere and those who do not. For this current analysis, the SSI shows many positive strengths that freshmen bring with them to the university. In particular, student commitment to obtaining a college education is very strong. However, the ability to cope with stress and manage emotion (resiliency) is not so strong.

In this analysis, most SSI scales and composites do not show major differences among the various subgroups. Where there are significant subgroup differences, most have small effect sizes. There are a few exceptions, however. Students who have a high comfort level with an advisor and feel they are getting quality advising also have a much higher sense of belonging to the university, a quality that is associated with retention. The same is true for students who are highly engaged with faculty, staff and other students; they also have a higher sense of belonging. And, not surprisingly, a higher sense of belonging is also associated with both academic and campus engagement and overall Mason experience.

Both academic and campus engagement are also associated with educational commitment and competencies for success (a composite of items related to staying focused, working toward goals, communication and analytical skills, etc.).

Thus, engagement with advisors and others on campus appears to be a strong corollary to an important retention factor, sense of belonging. Academic and campus engagement, also known retention factors, are associated with educational commitment, where our students score highly. On the other hand, there are areas in which freshmen did not score highly; these areas may need special attention in order to help students succeed in the university. Personal qualities and skills (competencies, resiliency, engagement with faculty, and social comfort) are not as strong and students might well benefit from support in these areas.

## INTRODUCTION

The Beacon Student Strengths Inventory (SSI), developed by Campus Labs, uses self-report measures to identify students' strengths and weaknesses during their first few weeks of college.

### Instrumentation

The SSI uses 48 self-report items to gather information about students' attitudes, opinions, and behaviors during their initial college experience. These items converge on six non-cognitive factors (referred to as scales in this report) that help predict student retention: *Academic Engagement*, *Academic Self-Efficacy*, *Campus Engagement*, *Educational Commitment*, *Resiliency*, and *Social Comfort*. The SSI is reported to have excellent reliabilities for the scales (alphas range from .81 to .90) (White, 2012).

Beyond the 48 standard items, Mason included institutional specific items on the SSI during the fall 2013 administration to address information needs from various constituents on campus. Most of these items were included under six principal components (referred to as composites in this report): *Sense of Belonging*, *Advising*, *Competencies for Success*, *Community and Personal Responsibility*, *Global Awareness*, and *Engagement with Faculty/Staff/Students*.

The SSI scales and composites provide a framework for data analysis and reporting. For a description of the scales and composites, please see appendix A. For the methodology used to form scales and composites, and to convert items to a common scale for scale and composite-level analyses, see appendix B.

### Administration and Response Rates

In fall 2013, SSI was administered for the first time to all 3,009 freshmen at Mason. In total, 2,373 freshmen responded to the survey, yielding an overall response rate of 78.9 %.

Table 1 presents summary response rates overall and by subgroups. Students living off campus had the lowest response rate. The first-generation (FG) status is based on the information collected on the Mason application form.

**Table 1.** Response Rates

	<b>Overall</b>	<b>Gender</b>		<b>First-Generation</b>		<b>Residence</b>	
		Female	Male	FG	Non-FG	On Campus	Off Campus
<i>Number of Respondents</i>	<b>2373</b>	1333	1040	795	1428	1970	403
<i>Response Rate</i>	<b>78.9%</b>	83.8%	73.3%	79.7%	79.2%	90.5%	48.4%

### Structure of the Report

This report focuses on the university-level results from the 2013 SSI. Beyond overall reporting, subgroup results by gender, FG status, and residence are also included in the report where applicable. The report is organized into two sections:

- SSI scales
- SSI composites

Beyond scale/composite-level and item-level analyses, the report also explores the relationships among SSI scales and composites to gain insights on how various factors are interconnected and may work in concert to impact student achievement and retention. The information synthesized in the report is intended to inform the development of support programs that can benefit freshmen, particularly potential at-risk students.

### **Important Notes**

- In this report, a first-generation (FG) student is defined as one in which no household parent/guardian has completed a 4-year degree.
- “Students,” “respondents,” and “freshmen” are used interchangeably to refer to the 2013 freshmen who took the survey.
- Percentages may not add to 100 due to rounding.
- Fall to Spring retention is not included in these analyses because the percentage of students not retained is less than 4%.
- Since some students skipped survey items, numbers (n’s) reported for scales and composites may be smaller than the number of respondents used to calculate the response rates.



## SSI SCALES

The SSI instrument contains six scales: *Academic Engagement*, *Academic Self-Efficacy*, *Campus Engagement*, *Educational Commitment*, *Resiliency*, and *Social Comfort*. Each scale includes a series of attitudinal and behavioral questions with six response choices ranging from 1=strongly disagree to 6= strongly agree. Each scale was calculated by taking the average of student responses of items composing each scale. This section provides an overview of the SSI scales and a closer look at items within the scales.

Since the fall 2013 semester marked the first administration of the SSI at Mason and no trend or multi-institutional comparative data exist, each scale was analyzed by examining its overall mean and calculating means of subgroups (see Table 2). The subgroups included gender, first-generation (FG) and residence. Overall, freshmen reported high levels of educational commitment and academic self-efficacy and lower levels of resiliency and social comfort. When examining each scale by subgroup, a significant difference emerged by FG status: FG students on average scored lower on the *Social Comfort* scale than their non-FG peers.

**Table 2.** SSI Scales: Overall and Subgroup Means

Scale	Overall (n=2348)	Gender		First-Generation		Residence	
		Female (n=1318)	Male (n=1030)	FG (n=788)	Non-FG (n=1412)	On Campus (n=1948)	Off Campus (n=400)
Academic Engagement	<b>71.5</b>	71.5	71.4	71.5	71.6	71.5	71.5
Academic Self-Efficacy	<b>81.1</b>	80.9	81.2	80.7	81.1	81.1	81.0
Campus Engagement	<b>72.4</b>	72.3	72.5	72.5	72.4	72.5	72.1
Educational Commitment	<b>87.2</b>	87.2	87.2	87.0	87.4	87.1	87.5
Resiliency	<b>57.8</b>	57.7	57.9	57.7	57.6	57.7	58.0
Social Comfort	<b>69.2</b>	69.4	69.0	67.9	69.7 *	69.2	68.9

Note: Items were rescaled to values ranging from 0 to 100.

\*  $p < .05$ , t-test (two-tailed), small effect size of 0.10 (criteria for t-test effect size: small=0.20, medium=0.50, large=0.80, Cohen, 1988)

### Academic Engagement

The *Academic Engagement* scale asks students about time management, homework completion, and class attendance. Among the *Academic Engagement* scale items, there were no significant mean differences within each subgroup. Table 3 provides the overall percentage of respondents who agreed or strongly agreed with each item within the scale.

**Table 3.** Academic Engagement Scale

<i>Item</i>	<b>Overall</b>
I strive for excellence in all of my school work	83%
I get to school on time	89%
I turn my homework in on time	87%
I wait until the last minute to get my assignments done	19%
I waste a lot of time before settling down to do my homework	40%
I often go to class without being fully prepared	7%
I sometimes skip classes	9%
My parents often have to remind me to do my homework	6%

Note: Percentages are for “strongly agree” and “agree” responses combined.

### Academic Self-Efficacy

The *Academic Self-Efficacy* scale contains items related to students’ confidence of academic success at the college, major, and course level (see Table 4). At least three-quarters of freshmen reported that they were confident in maintaining at least a B average overall and in science and English course requirements. Respondents also reported being highly confident about succeeding and excelling in their academic major and entire college academic experience. However, freshmen were less likely to report being confident about completing their college math requirements with a B or better. Respondents living off campus were significantly less confident than those living on campus about achieving at least a B in college math requirements. There were no other significant mean differences within the subgroups.

**Table 4.** Academic Self-Efficacy Scale

<i>Item</i>	<b>Overall</b>	<b>Residence</b>	
		On Campus	Off Campus
I am confident that I can maintain a B average in college	77%		
I will be able to complete college science requirements with a B or better	72%		
I will be able to complete college math requirements with a B or better	64%	<b>65% *</b> ES=0.15	<b>60%</b>
I will be able to complete college English requirements with a B or better	79%		
I will <i>succeed</i> in my chosen major	83%		
I will <i>excel</i> in my chosen major	84%		
I am confident that I will <i>succeed</i> in college	84%		
I am confident that I will <i>excel</i> in college	75%		

Note: Percentages are for “strongly agree” and “agree” responses combined.

\*  $p < .05$ , t-test (two-tailed), small effect size (criteria for t-test effect size, small=0.20, medium=0.50, large=0.80, Cohen, 1988)

## Campus Engagement

The *Campus Engagement* scale contains items related to students' involvement in campus activities (see Table 5). Overwhelmingly, freshmen were most likely to report that they wanted to feel part of the college they attend (80%). They were least likely to report that they planned to take on-campus leadership roles while in college (41%). Freshmen living on campus were significantly more likely than their off-campus peers to plan on participating in orientation activities to learn about Mason. There were no other significant differences within the subgroups.

**Table 5.** Campus Engagement Scale

<i>Item</i>	Overall	Residence	
		On Campus	Off Campus
I plan to take part in many campus social activities	56%		
I intend to join campus clubs	61%		
Being active in extra-curricular activities in college is important to me	61%		
It is important for me to be involved in the school I am attending	62%		
I plan to take on campus leadership roles when I'm in college	41%		
I want to feel part of the college I attend	80%		
I intend to seek volunteer or service learning experiences in college	59%		
I will participate in orientation activities to learn about the college I attend	54%	55% *	49%

Note: Percentages are for "strongly agree" and "agree" responses combined.

\*  $p < .05$ , t-test (two-tailed), small effect size (criteria for t-test effect size, small=0.20, medium=0.50, large=0.80, Cohen, 1988)

## Educational Commitment

The SSI measures *Educational Commitment* by asking students about college completion and the importance of a college education (see Table 6.) Generally, students responded favorably about the importance of college. Fewer than 10% of respondents reported that they might not finish college if they were offered a good job.

**Table 6.** Educational Commitment Scale

<i>Item</i>	Overall
Getting a college degree is very important to me	95%
Graduating from college is necessary for me to achieve my career goals	89%
I am sure that a college education is the right goal for me	90%
I see value in completing a college education	93%
I am willing to do whatever it takes to stay in college	83%
School is a priority for me	90%
Getting good grades is important to me	93%
If I were offered a good job, I might not finish college	9%

Note. Percentages are for "strongly agree" and "agree" responses combined.

## Resiliency

The *Resiliency* scale contains items related to students' ability to cope and manage emotions (see Table 7). Around three-quarters of freshmen reported that they are pretty calm; yet, only a little over one-third of students reported that they manage stress well. There were no statistically significant differences within subgroups.

**Table 7.** Resiliency Scale

<b>Item</b>	<b>Overall</b>
I am easily frustrated	16%
Little things upset me	15%
I am a worrier	36%
I am quick to react emotionally	13%
I find it hard to relax	12%
I manage stress well	35%
I am a pretty calm person	74%
I rarely get anxious	18%

*Note: Percentages are for "strongly agree" and "agree" responses combined.*

## Social Comfort

The *Social Comfort* scale asked students about interactions with individuals and groups (see Table 8). Respondents were most likely (77%) to report that they tend to work well with others. Overall, most student see themselves as socially competent. However, a majority of students do not find it easy to talk to strangers and nearly half disagree with the statement that they have many friends. Subgroup analyses did not reveal any significant differences.

**Table 8.** Social Comfort Scale

<b>Item</b>	<b>Overall</b>
I consider myself to be shy	23%
I find it easy to talk to strangers	44%
I never know what to say when meeting new people	18%
I am comfortable in groups	69%
I have many friends	58%
I avoid social events	7%
I enjoy meeting new people	75%
I tend to work well with others	77%

*Note: Percentages are for "strongly agree" and "agree" responses combined.*

## Relationships Among SSI Scales and College Completion Intentions

### *Academic Engagement, Campus Engagement, Educational Commitment and College Completion Intentions*

The SSI included two institutional specific items related to student completion intentions – the short-term intention of returning for the spring 2014 semester and the long-range intention of graduating from Mason. These items included three categories of intention: yes, no, and uncertain. One-way ANOVA analyses were conducted to determine if there were differences in *Academic Engagement*, *Campus Engagement*, and *Educational Commitment* among the three categories of completion intentions.

As seen in Table 9, respondents differed in the engagement and commitment scales based on their intent to return to Mason for the spring semester. Across all three scales, students with the intention of returning to Mason in the spring reported the highest levels of *Academic Engagement*, *Campus Engagement*, and *Educational Commitment*. Freshmen who did not plan to return in the spring reported consistently lower scores on average for all three scales. Results from Table 9 should be interpreted with caution given the small effect sizes for each comparison.

**Table 9.** Engagement and Educational Commitment by Intent to Return for Spring 2014 (Means)

	Do you intend to return to Mason next semester (spring 2014)?			Sig.	E.S.	Post-hoc Comparisons
	Yes (1) n=2,151	No (2) n=32	Uncertain (3) n=106			
Academic Engagement	71.8	66.1	68.4	**	.01	3 < 1
Campus Engagement	72.6	63.0	71.7	**	.01	2 < 1, 3
Educational Commitment	87.6	73.9	84.0	***	.02	2, 3 < 1; 2 < 3

Note: The numbers reported represent means, which were rescaled to values ranging from 0 to 100

\*\*  $p < .01$ , \*\*\*  $p < .001$

Small effect sizes (criteria for ANOVA eta-squared effect size: small = 0.01, medium = 0.059, and large = 0.138, Cohen, 1988)

Results shown in Table 10 reveal that there were statistical differences in all engagement and commitment levels by students' intent to graduate from Mason. Students who reported that they planned to graduate from Mason scored significantly higher on the *Academic Engagement*, *Campus Engagement*, and *Educational Commitment* scales. Again, results should be interpreted with caution given the small effect sizes.

**Table 10.** Engagement and Educational Commitment by Intent to Graduate from Mason (Means)

	Do you intend to graduate from Mason?			Sig.	E.S.	Post-hoc Comparisons
	Yes (1) n=1,893	No (2) n=53	Uncertain (3) n=339			
Academic Engagement	72.2	65.2	69.0	***	.01	2, 3 < 1
Campus Engagement	73.2	60.4	69.6	***	.02	2, 3 < 1; 2 < 3
Educational Commitment	88.2	74.4	83.9	***	.04	2, 3 < 1; 2 < 3

Note: The numbers reported represent means, which were rescaled to values ranging from 0 to 100

\*\*\*  $p < .001$

Small effect sizes (criteria for ANOVA eta-squared effect size: small = 0.01, medium = 0.059, and large = 0.138, Cohen, 1988)

## SSI COMPOSITES

This section focuses on the SSI composites consisting of items specific to Mason. Overall and subgroup results are presented at the composite level, followed by item-level analysis for each composite. Relationships among selected SSI composites are examined later in this section to highlight how students' initial experiences may affect their perceptions and engagement during the freshman year.

Six composites were formed based on a principal component analysis of the SSI data – *Sense of Belonging*, *Academic Advising*, *Competencies for Success*, *Community and Personal Responsibility*, *Global Awareness*, and *Engagement with Faculty/Staff/Students*. Table 11 presents overall composite means and subgroup means by gender, FG status, and residence. Overall, composite means were in the 70s with the exception of *Engagement with Faculty/Staff/Students* which received the lowest average score mainly because most students were not yet familiar with the Mason Civility Project (a project that aims to promote core values of civil interactions in diverse communities and initiate dialogue across campus), an item contributing to the composite. There were no significant differences by subgroups.

**Table 11.** SSI Composites: Overall and Subgroup Means

<b>Composite<sup>1</sup></b>	<b>Overall</b> (n=2249)	<b>Gender</b>		<b>First-Generation</b>		<b>Residence</b>	
		Female (n=1254)	Male (n=995)	FG (n=762)	Non-FG (n=1344)	On Campus (n=1862)	Off Campus (n=386)
Sense of Belonging	<b>77.1</b>	77.6	76.5	77.6	76.9	77.1	77.2
Academic Advising <sup>2</sup>	<b>72.3</b> (n=1145)	73.0 (n=645)	71.4 (n=500)	72.6 (n=402)	72.2 (n=684)	72.1 (n=961)	73.8 (n=184)
Competencies for Success	<b>71.2</b>	71.6	70.8	70.9	71.4	71.2	71.5
Community and Personal Responsibility	<b>73.5</b>	73.7	73.2	73.6	73.5	73.5	73.3
Global Awareness	<b>78.3</b>	78.6	78.1	77.6	78.5	78.5	77.8
Engagement with Faculty/ Staff/Students	<b>40.4</b>	40.1	41.0	40.6	40.5	40.6	39.5

<sup>1</sup>Composite items were rescaled to values ranging from 0 to 100.

<sup>2</sup>Based on four items about the perceptions of advising quality, NA responses are excluded from the calculations.

### Sense of Belonging

The *Sense of Belonging* composite includes five items that asked students to rate their feeling of belonging, fitting in, and being cared about on a 6-point scale (1=strongly disagree to 6 = strongly agree). Results in Table 12 show that over two-thirds of the respondents strongly agreed or agreed that they felt they belonged on the campus (71%) and were proud to be Mason students (82%). Over half of the students felt that people on campus cared about their success and that they had found activities, events, or other involvement opportunities that matched their interests (56%). These are encouraging figures considering that students had only been on campus for about five weeks. There were no significant differences by subgroups.

**Table 12.** Sense of Belonging Composite

<i>Item</i>	<b>Overall</b>
I feel like I belong on this campus	71%
I am proud to be a Mason student	82%
Mason is a safe place for someone like me	87%
People on this campus care about my success	58%
I have found activities, events, and/or involvement opportunities at Mason that match my interests	56%

*Note: Percentages are for "strongly agree" and "agree" responses combined.*

### Academic Advising

The *Academic Advising* composite is based on six items. Four items asked students to rate the quality of advising based on their experience on a 6-point scale (1=strongly disagree to 6 = strongly agree); the other two items focus on whether they know where to go for advising and whether they have discussed their major with an advisor. Results in Table 13 show that, overall, about two-thirds of freshmen who had met with their advisors strongly agreed or agreed that their advisors helped them understand degree requirements and that the meeting occurred in a supportive atmosphere (68% and 69%, respectively). Over half (57%) of respondents knew where to go for academic advising and felt comfortable contacting their advisors if needed. Another 44% had already discussed their major with an advisor, even though this was early in their first semester.

**Table 13.** Academic Advising Composite

<i>Item</i>	<b>Overall</b>	<b>Gender</b>	
		Female	Male
My advisor helps me understand degree requirements <sup>1</sup>	68%		
My advisor helps me understand co-curricular connections degree <sup>1</sup>	52%		
When I meet with my advisor, I feel like he/she takes time to listen to my concerns and creates an open, respectful, and inclusive atmosphere <sup>1</sup>	69%		
I am comfortable contacting my advisor if I have any questions about my major or academic plans <sup>1</sup>	65%		
Do you know where to go for academic advising at Mason <sup>2</sup>	57%	<b>59% *</b> ES=0.08	<b>54%</b>
Have you discussed your potential or declared major/program with a Mason academic advisor <sup>2</sup>	44%		

<sup>1</sup>Percentages are for "strongly agree" and "agree" responses combined. N/A responses are excluded from the calculations.

<sup>2</sup>Percentages are for "yes" responses.

\*  $p < .05$ , *t*-test (two-tailed), small effect size (criteria for *t*-test effect size: small=0.20, medium=0.50, large= 0.80, Cohen, 1988)

Subgroup analysis revealed that female students reported knowing where to go for academic advising at a significantly higher rate than male students (59% vs. 54%, respectively). There were no significant differences within other subgroups.

## Competencies for Success

The *Competencies for Success* composite consists of 10 items that ask students about their ability to stay focused and work toward their goals; resiliency; communication, analytical skills, and team-work skills; and willingness to try new things. Results in Table 15 show that about two-thirds of the respondents agreed or strongly agreed that they possess competencies described by the majority of these items.

Subgroup analysis in Table 14 revealed that non-FG students reported being significantly more comfortable working in teams with diverse others than FG respondents. Furthermore, non-FG freshmen perceive that they are able to express themselves well verbally at a significantly higher rate than their FG peers. Female students significantly outscored males on two items: 67% of female students felt that their life seems to be on track compared to 64% of male students and a smaller percentage of female students struggle to find meaning in life than their male peers (12% vs. 14%, respectively).

**Table 14.** Competencies for Success Composite

<i>Item</i>	<b>Overall</b>	<b>Gender</b>		<b>First-Generation</b>	
		Female	Male	FG	Non-FG
I have a plan for achieving my academic goals	69%				
When bad things happen to me, I find a way to survive	83%				
I can express myself well verbally	57%			<b>55%</b>	<b>58% *</b> ES=0.10
I am able to analyze and apply information to reach an answer or conclusion	71%				
My life seems to be on track	66%	<b>67% *</b> ES=0.11	<b>64%</b>		
I am comfortable working in teams with people different than me	64%			<b>60%</b>	<b>65% *</b> ES=0.08
I can easily identify and provide examples that illustrate my strengths	68%				
I look for opportunities to try new things	65%				
I get distracted from my academic work by social media (Facebook, Twitter, Pinterest, etc.)	36%				
I struggle to find meaning in life	13%	<b>12% *</b> ES=0.08	<b>14%</b>		

*Note: Percentages are for "strongly agree" and "agree" responses combined.*

*\*  $p < .05$ , t-test (two-tailed), small effect size (criteria for t-test effect size., small=0.20, medium=0.50, large=0.80, Cohen, 1988)*

## Community and Personal Responsibility

The *Community and Personal Responsibility* composite asks students to indicate their agreement on a 6-point scale to six items describing how they live their lives in relation to others and the community. Results in Table 15 show that about 80% of the students believed that leading an ethical life is important and that they are willing to protect/defend the rights of others. Nearly 60% of the respondents also strongly agreed or agreed that they had responsibility to their community and to contribute to the well-being of others. Sixty percent of the respondents reported getting positive encouragement from their friends to make healthy choices.



By subgroup, non-FG students significantly outscored their FG peers in attaching more importance to leading an ethical life. Female students were significantly more likely than males to report receiving encouragement from friends to make healthy choices. There were no other significant differences within subgroups.

**Table 15.** Community and Personal Responsibility: Overall and Subgroup Percentages

<i>Item</i>	Overall	Gender		First-Generation	
		Female	Male	FG	Non-FG
Leading an ethical life is important to me	80			<b>78%</b>	<b>81% *</b> ES=0.08
I have responsibilities to my community	58				
I participate in activities that contribute to the well-being of others	56				
I am willing to act to protect/defend the rights of others	79				
My friends encourage me to make healthy choices	60	<b>63% *</b> ES=0.11	<b>57%</b>		
It is OK to be a passive bystander	7				

*Note.* Percentages are for “strongly agree” and “agree” responses combined.

\* *p* .05, *t*-test (two-tailed), small effect sizes (criteria for *t*-test effect size, small=0.20, medium=0.50, large= 0.80, Cohen, 1988)

### Global Awareness

The *Global Awareness* composite comprises two items measuring perceptions of US connectedness to other countries. Results in Table 16 show that over two-thirds of the respondents reported an awareness of the connectedness, particularly in terms of the impact of the United States on other countries. There were no significant differences by subgroup.

**Table 16.** Global Awareness Composite

<i>Item</i>	Overall
What happens in the U.S. affects other countries	73%
What happens in other countries affects the U.S.	68%

*Note:* Percentages are for “strongly agree” and “agree” responses combined.

### Engagement with Faculty/Staff/Students

The *Engagement with Faculty/Staff/Students* composite subsumes four items that asked students to rate themselves in terms of interaction with faculty/staff and other students as well as their familiarity with the Mason Civility Project using three different response scales. Results in Table 17 show very low percentages of students were familiar with the Civility Project. Nearly half of these respondents expressed an interest in interacting with faculty outside of class and more than 1 in 10 had already identified a mentor.

**Table 17.** Engagement with Faculty/Staff/Student Composite

<i>Item</i>	<b>Overall</b>	<b>Gender</b>		<b>Residence</b>	
		Female	Male	On Campus	Off Campus
I am interested in interacting with faculty outside of class <sup>1</sup>	48%				
I have found a mentor at Mason <sup>1</sup>	17%				
How familiar are you with the Mason Civility Project <sup>2</sup>	6%			<b>7% **</b> ES=0.15	<b>4%</b>
How often do you discuss world news and events with your peers <sup>3</sup>	32%	<b>30%</b>	<b>35% *</b> ES=0.10		

<sup>1</sup> Percentages are for “strongly agree” and “agree” responses combined.

<sup>2</sup> Percentages are for “very familiar” and “somewhat familiar” responses combined.

<sup>3</sup> Percentages are for “very often” and “often” responses combined.

\*  $p < .05$ , \*\*  $p < .01$ , t-test (two-tailed), small effect sizes (criteria for t-test e.s., small= 0.20, medium=0.50, large=0.80, Cohen, 1988)

### Relationships Among SSI Composites and Scales

Further analyses were performed on the SSI data to explore the relationship among selected composites and scales to determine how they may impact students’ retention and achievement. The results focus on how students’ sense of belonging may be affected by their initial experience with academic advising, engagement with faculty/staff/students, and how their engagement may vary by level of sense of belonging in the college environment. *Competencies for Success* is also compared to some select scales.

#### *Sense of Belonging and Academic Advising*

Students’ sense of belonging can be affected by their perceived social support on campus and the experience or feeling that others on campus care about them (Strayhorn, 2012). One support service that can have such an effect on sense of belonging is academic advising. Based on their responses to each item related to academic advising, respondents were divided into groups. For each item, a statistical test was conducted to compare the groups’ *Sense of Belonging* composite score to determine how their sense of belonging might differ by the measure.

Results in Table 18 show that respondents who knew where to go for advising reported a significantly higher level of sense of belonging than those who did not know or were not sure. Freshmen who had discussed their major with a Mason advisor also reported a significantly stronger sense of belonging than those who had not. Furthermore, students with a better perception of the advising quality (i.e., comfortable contacting advisors, positive atmosphere for advising meeting, advisors helping understand degree requirements or co-curricular connection) also reported a significantly higher sense of belonging.

**Table 18.** Relationship between Sense of Belonging and Academic Advising

Advising Items	Group	Mean Score for Sense of Belonging <sup>1</sup>	Sig. (Post-hoc comparison)	E.S.
Do you know where to go for academic advising at Mason?	Yes (1) (n=1264)	79.7	*** (1>2, 1>3)	0.04 <sup>2</sup>
	No (2) (n=416)	72.5		
	Not sure (3) (n=553)	74.9		
Have you discussed your potential or declared major/program with a Mason academic adviser?	Yes (n=1249)	78.9	***	0.20 <sup>3</sup>
	No (n=984)	75.8		
Perception of Advising <sup>4</sup> (median = 80)	At or above median (n=581)	83.1	***	0.73 <sup>3</sup>
	Below median (n=563)	72.4		

<sup>1</sup> The mean values for Sense of Belonging composite range from 0 to 100

<sup>2</sup> ANOVA, small effect size (criteria for ANOVA effect size, small=0.01, medium=0.059, large=0.138 Cohen, 1988)

<sup>3</sup> t-test (two-tailed), small to large effect sizes (criteria for t-test effect size, small=0.20, medium= 0.50, large=0.80, Cohen, 1988)

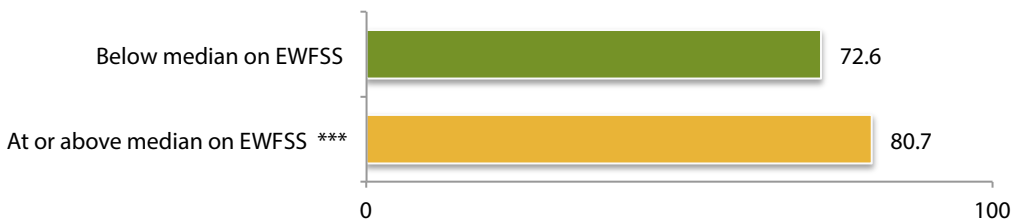
<sup>4</sup> Based on the average of 4 items about comfort level for meeting with advisors & perception of advising quality

\*\*\* p<.001

### ***Sense of Belonging and Engagement with Faculty/Staff/Students***

Respondents were classified into two groups based on their scores on the *Engagement with Faculty/Staff/Students* (EWFSS) composite – high (scoring at or above the median) and low (scoring below the median). The two groups were then compared in terms of their sense of belonging. Results in Figure 1 show that students in the higher group reported a significantly higher level of sense of belonging than those in the lower group.

**Figure 1.** Sense of Belonging Mean Score and Level of Engagement with Faculty/Staff/Students



\*\*\* p<.001, t-test (two-tailed), medium effect size of 0.55 (criteria for t-test e.s., small=0.20, medium=0.50, large=0.80, Cohen, 1988)

### ***Academic Engagement, Campus Engagement and Sense of Belonging***

Research suggests that sense of belonging is a cognitive evaluation of how well one fits into an environment and relates to others. As such, sense of belonging may impact student behavior (Strayhorn, 2012). To gain an insight on how sense of belonging may affect engagement in college, survey respondents were divided into two groups based on their *Sense of Belonging* composite score – high (scoring at or above the median) and low (scoring below the median). Analyses were then conducted on the *Academic Engagement* and *Campus Engagement* scales separately to determine whether students with varying levels of sense of belonging score differently on these engagement measures.

Results in Table 19 show that the group with higher scores on the *Sense of Belonging* composite reported a significantly higher level of academic and campus engagement than the group with lower *Sense of Belonging* composite scores.

**Table 19.** Relationship between Sense of Belonging and Academic/Campus Engagement

<i>Sense of Belonging</i> (median = 80.0)	n	Academic Engagement			Campus Engagement		
		Mean <sup>1</sup>	Sig.	E.S.	Mean <sup>1</sup>	Sig.	E.S.
At or above the median	1,218	75.1	***	0.57	78.9	***	0.93
Below the median	1,026	67.4			64.8		

<sup>1</sup> *Academic Engagement and Campus Engagement means were rescaled to values ranging from 0 to 100*

\*\*\*  $p < .001$ , t-test (two-tailed), medium to large effect sizes (criteria for t-test e.s., small=0.20, med=0.50, large=0.80, Cohen, '88)

### *Sense of Belonging and Overall Mason Experience*

On the survey, students were asked to rate their overall Mason experience so far on a 7-point scale (1=very poor, 2=poor, 3=fair, 4=good, 5=very good, 6=excellent, 7=exceptional). Results in Figure 2 show that sense of belonging is positively related to freshman overall experience. Students with a higher level of sense of belonging (scoring at or above the median on the *Sense of Belonging* composite) reported a significantly more positive reaction to the Mason experience than their peers with a lower level of sense of belonging.

**Figure 2.** Sense of Belonging Mean Score and Overall Mason Experience



\*\*\*  $p < .001$ , t-test (two-tailed), large effect size of 1.41 (criteria for t-test effect size, small=0.20, med=0.50, large=0.80, Cohen, 1988)

### *Engagement by Educational Commitment, Resiliency, and Competencies for Success*

In Table 20, *Competencies for Success* is compared to *Academic* and *Campus Engagement*. The results show that those who scored higher in *Competencies* also scored higher in both *Academic* and *Campus Engagement*. Additional analyses of these engagement scores by *Education Commitment* and *Resiliency* show similar patterns – those with higher scores on *Education Commitment* and *Resiliency* also had higher scores on *Academic* and *Campus Engagement*.

**Table 20.** Engagement by Level of Educational Commitment, Resiliency, and Competencies for Success

<i>Scale/Composite Levels</i>	n	<b>Academic Engagement</b>			<b>Campus Engagement</b>		
		Mean <sup>1</sup>	Sig.	E.S.	Mean <sup>1</sup>	Sig.	E.S.
<b>Educational Commitment</b> (median = 90.0)							
At or above the median	1,351	75.9	***	0.80	77.5	***	0.77
Below the median	997	65.4			65.5		
<b>Resiliency</b> (median = 57.5)							
At or above the median	1,290	74.3	***	0.45	73.7	***	0.17
Below the median	1,058	68.1			70.9		
<b>Competencies for Success</b> (median = 72.0)							
At or above the median	1,192	76.8	***	0.87	78.1	***	0.78
Below the median	1,052	65.6			66.1		

<sup>1</sup> *Academic Engagement and Campus Engagement means were rescaled to values ranging from 0 to 100*

\*\*\* *p* < .001, *t*-test (two-tailed), small to large effect sizes (criteria for *t*-test *e.s.*, small= 0.20, med=0.50, large=0.80, Cohen, 1988)

## REFERENCES

Strayhorn, T. L. (2012). *College students' sense of belonging: A key to educational success for all students*. NY: Routledge.

White, J. D. (2012). *Identifying more at-risk students with an expanded data set*. Campus Labs.

## APPENDIX A: SSI Scales and Composites

The Beacon SSI instrument uses six scales related to student perception: *Academic Engagement*, *Academic Self-Efficacy*, *Campus Engagement*, *Educational Commitment*, *Resiliency*, and *Social Comfort*. The 2013 SSI report also includes six composites to tap into student attitude and behavior on an array of issues based on their initial experiences on campus. These six composites are *Sense of Belonging*, *Advising*, *Competencies for Success*, *Community and Personal Responsibility*, *Global Awareness*, and *Engagement with Faculty/Staff/Students*. Following are brief descriptions of each scale and composite.

### SSI Scales

- ***Academic Engagement***: Includes items related to time management, homework completion, and class attendance.
- ***Academic Self-Efficacy***: Includes items related to students' confidence in successful completion of course requirements, academic major, and college overall.
- ***Campus Engagement***: Includes items related to students' plans and attitudes toward being involved on campus through extra-curricular activities such as clubs, leadership roles, and volunteer or service learning experiences.
- ***Educational Commitment***: Includes items related to value and importance students attach to a college education.
- ***Resiliency***: Includes items pertaining to students' ability to cope with stress and manage emotions.
- ***Social Comfort***: Includes items that ask how students feel about interactions with others either individually or in groups.

### SSI Composites

- ***Sense of Belonging***: Includes items addressing how students feel about belonging to and fitting into Mason, whether they feel safe and cared about at Mason, and whether they are proud to be a Mason student.
- ***Academic Advising***: Includes items related to students' awareness of where to go for advising services, their meeting with academic advisors, and their perception of advising quality.
- ***Competencies for Success***: Includes items describing student ability to stay focused and work toward their goals; resiliency; communication, analytical, and teamwork skills; and willingness to try new things.
- ***Community and Personal Responsibility***: Includes items addressing how students live their lives in relation to others and the community, and friends' influence on their healthy choices.
- ***Global Awareness***: Includes items measuring how students view the United States in relation to other nations.
- ***Engagement with Faculty/Staff/Students***: Includes items related to student interactions with others on campus, and students' familiarity with the Mason Civilian project.

## **APPENDIX B: Methodology**

### **Methods for Forming Scales and Composites**

Principal component analyses were performed on the Beacon scale items and institutional specific items separately. Results from the analysis of the SSI standard items confirmed the grouping of the items around six scales as initially suggested by Campus Labs. Analysis of the institutional specific items (demographic items and items with unique response scales are excluded) suggested a six-component structure. The loadings of the items on the components range from .35 to .95. With the exception of one component, the reliabilities of the components range from .44 to .88. The six components capture the foci of most institutional specific items and help to group these items into six composites. The scales and composites were used to support the examination of the survey results overall and subgroup comparisons.

### **Methods for Calculating Scale and Composite Scores**

Since different response scales were used on the SSI, items were recoded to a common scale (0 to 100) where feasible for each respondent. Thus a 6-point scale is converted to a 100-point scale via the following conversion method: 1(Strongly Disagree) = 0, 2(Disagree) = 20, 3(Somewhat Disagree) = 40, 4(Somewhat Agree) = 60, 5(Agree) = 80, and 6(Strongly Agree) = 100. An average score for each scale and composite was calculated. The average scores were then used for scale- and composite-level analyses overall and by subgroups.

For item-level analysis, data on the original scale were used.