

# Beginning College Survey of Student Engagement (BCSSE): 2013 Institute Report

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## EXECUTIVE SUMMARY

In Fall 2013, the Georgia Tech (GT) Office of Assessment administered the Beginning College Survey of Student Engagement (BCSSE) to first-time, first-year students. The BCSSE is designed to collect data about entering college students' high school engagement and expectations of their first-year college experience. Students who participated in FASET orientation were asked to complete the BCSSE. Based on the 2,293 responses (85.8% of the first-time, first-year class), this report presents selected results.

Highlights from the GT BCSSE 2013 survey include:

- During their first year at GT, more than 99% of incoming students expected to *receive a "B" average or higher*.
- Less than four percent reported that they expected to *attend class without reading or completing course assignments*.
- Fewer than eleven percent expected to *encounter academic difficulties at an institutional level*, such as interacting with faculty or getting help on course work, while almost half thought they would *face personal academic difficulties*, such as managing their time or learning the course material.
- During their first year, only half the respondents expected to *interact with faculty*, while international students were moderately more likely to expect to *engage with faculty*. More than 87% of the incoming class expected to *interact with diverse peers*.
- While over three-quarters of respondents believed they would *persist when it comes to finishing something when faced with challenges*, less than half trusted that they would *be able to study when there are other interesting things to do*.
- Approximately 53% of incoming students noted that they *used quantitative reasoning in high school such as examining real-world problems or evaluating others' conclusions from numerical data*.
- In high school, almost 80% of entering students stated that they *frequently identified key information from reading assignments*, while only half *frequently used learning strategies such as reviewing their notes or summarizing course material*.
- Only 53% of students expressed *feeling prepared for their undergraduate work in the areas of public speaking* and, surprisingly, just 56% felt prepared in the *use of computing and information technology*.
- More than seven out of ten entering students placed an importance on GT *providing challenging academic experiences and opportunities to attend campus activities and events*, while 85% felt *academic support* was important.
- One quarter of incoming students expected *difficulties with paying their college expenses*. More than 93% planned to *rely on financial support from their family* and almost 75% *had grants or scholarships*. More than 17% expected to *work for pay for 16 hours or more during their first year*, up from just over 9% in 2012.

## INTRODUCTION

The inaugural administration of the BCSSE at GT took place in Fall 2012. With the 2013 edition, the BCSSE underwent a major update in order to increase alignment with the National Survey of Student Engagement (NSSE). The 2013 version of the BCSSE is designed to expand assessment of the time and effort that beginning college students devoted to academic activities in high school and to delve deeper into what experiences and expectations they bring to campus. The BCSSE is offered at the beginning of a student's undergraduate experience, while the NSSE is administered at the end of the first year and again during the last semester of the graduating year to capture actual student participation and engagement during their time as an undergraduate.

Similarly constructed, these student engagement survey instruments provide overlap and allow for comparison of student expectations and experiences over the course of their undergraduate years. The opportunity for a thorough analysis is provided by future integration of BCSSE and NSSE responses to investigate short- and long-term trends in student engagement.

At the 2013 FASET orientations, GT first-time, first-year students were invited to complete the BCSSE. This Institute report is based on 2,293 student responses, or 85.8% of the students who entered GT in Fall 2013.

### Organization of the Report

This report will present sample and population demographics, summarize BCSSE survey items, highlight high school experiences, review first-year engagement indicators and expectations, and conclude with comparisons to the BCSSE 2012. Select findings will be presented by specific student groups, including gender, first-generation, and international status.

The BCSSE 2013 organizes the first-year engagement indicators around nine scales:

- Quantitative Reasoning
- Learning Strategies
- Collaborative Learning
- Student-Faculty Interaction
- Interaction with Diverse Others
- Expected Academic Perseverance
- Expected Academic Difficulty
- Perceived Academic Preparation
- Importance of Campus Environment

These scales function as a model for understanding beginning college student engagement. The corresponding responses provide insight into the quality of GT students' high school experiences and their undergraduate expectations. These measures can help identify areas where student expectations might not match the reality of college life or areas where students may need extra support during the course of their undergraduate work. Statistical differences between sub-groups of students, where significant, will be noted throughout.

### Statistical and Practical Significance

Due to the large sample sizes within many groups at GT, very small differences may show up as statistically significant ( $p < 0.01$ ). To address this issue, this report provides *effect size* rather than *statistical significance* to determine *practical significance*. This report uses relaxed interpretations of Cohen's  $d$  and  $\phi$ , with a value of 0.1 to be a small notable effect, 0.3 to be a moderate effect, and 0.5 to be a large effect. Small, moderate, and large effect sizes are indicated by \*, \*\*, and \*\*\* designations in subsequent results tables. Table 1 provides detailed information on Cohen's  $d$  and Phi.

**Table 1. Effect Size: Measures of Practical Significance**

	<u>Measure</u>	<u>Calculation</u>
<b>Cohen's <i>d</i></b>	Mean Values	Difference between sample means divided by the pooled standard deviation
<b>Phi (<math>\phi</math>)</b>	Frequencies	Square root of the Chi Square statistic divided by sample size

The sampling error for 2013 BCSSE items was 0.92%. Standard errors for individual items are not reported in the tables of this report, but are available from the Office of Assessment.

## SURVEY FINDINGS

Based on the high quality assurance standards of data collection and few small practical significances between sample and population demographics, this report is based on the conclusion that the results obtained are both accurate and broadly representative of the first-time, first-year students entering GT in the 2013–14 academic year. Further methodological information on this survey is available from the Office of Assessment.

### Sample and Population Demographics

Chi-square tests for sample representation revealed no statistical or practical significance between genders or among colleges. Statistical significance was found for overall ethnicity, however, small effect sizes revealed practical significance. Among the ethnicities, Asian and Black or African American students were slightly underrepresented in the sample, while International and White students were slightly overrepresented. In-state residents were also found to be slightly overrepresented in the sample. Statistical sample representation comparisons for first-generation students were not able to be conducted since this population data is not yet collected by GT.<sup>1</sup> Detailed 2013 demographic information for the GT student sample and population are presented in Table 2.

**Table 2. BCSSE 2013 Demographics: GT Respondents to GT First-Time, First-Year Students**

	<b>GT Total BCSSE Respondents<sup>1</sup> <i>n</i> = 2,293</b>	<b>GT First-Time, First-Year Students<sup>1</sup> <i>n</i> = 2,673</b>
<b>Gender</b>		
Female	37.6%	37.3%
Male	62.4%	62.7%

<sup>1</sup> Figures may not sum to 100% due to rounding.

[continued on next page]

<sup>1</sup> Beginning in Fall 2014, the Common Application will collect first-generation data from first-year, first-time students.

**Table 2. BCSSE 2013 Demographics: GT Respondents to GT First-Time, First-Year Students (cont'd)**

	<b>GT Total BCSSE Respondents<sup>1</sup> n = 2,293</b>	<b>GT First-Time, First-Year Students<sup>1</sup> n = 2,673</b>
<b>Ethnicity</b>		
Asian	16.6%	19.1%
Black or African American	4.6%	5.9%
Hispanic or Latino	4.8%	5.1%
International	12.9%	11.9%
Other	4.5%	4.5%
White	56.6%	53.6%
<b>College</b>		
Architecture	1.8%	1.6%
Computing	9.5%	9.2%
Engineering	72.6%	72.0%
Ivan Allen Liberal Arts	2.6%	3.2%
Scheller Business	5.9%	6.3%
Sciences	7.6%	7.7%
<b>First-Generation Student<sup>2</sup></b>	17.7%	n/a <sup>3</sup>
<b>International Student</b>	12.9%	11.9%
<b>In-State Resident</b>	55.9%	53.4%

<sup>1</sup> Figures may not sum to 100% due to rounding.

<sup>2</sup> First-generation is defined as no parent or guardian having graduated with a four-year college degree.

<sup>3</sup> Beginning in Fall 2014, the Common Application will collect first-generation data from first-year, first-time students.

## BCSSE 2013 Results

Of the respondents to the GT BCSSE 2013 Survey, 37.6% were female and 62.4% were male. The majority of survey participants were White, with Asian students representing 16.6% of the respondents.

In 2012, almost ten percent of those surveyed reported first-generation status, while in 2013, almost 18% reported having no parents with a four-year college degree. More than half were in-state residents and originated from homes within a two-hour driving distance from GT. Over 99% planned to enroll full-time and 97.2% expected to graduate from GT. For almost 90% of students, GT was one of their top three choices.

The sections that follow detail GT students' high-school experiences, BCSSE student engagement indicator scores, and other first-year expectations.

## High School Experiences

Not surprisingly, GT students have a strong technical background. Over 60% of incoming students reported that their high school coursework challenged them to do their best work. Data from respondents' high school academic background are presented in Table 3.



Compared to the 2012 BCSSE, slightly more incoming 2013 students (80%) reported taking five or more Advanced Placement courses in high school, up from 73.5%, and almost 40% of entering 2013 students took college courses for credit, up from 31.9% in 2012.

**Table 3. BCSSE 2013: High School Courses and Grades**

* $\phi > .1$ ; ** $\phi > .3$ ; *** $\phi > .5$	GT Total BCSSE <i>n</i> = 2,293	Female <i>n</i> = 863	Male <i>n</i> = 1,430	Eff. Size	Int'l <i>n</i> = 296	U.S. Citizen <i>n</i> = 1,997	Eff. Size
<b>What were most of your high school grades</b>							
A	95.5%	96.3%	95.0%		90.5%	96.2%	*
B	4.1%	3.5%	4.6%		7.7%	3.7%	*
<b>During high school, how many of the following types of classes did you complete?</b>							
Advanced Placement (AP) classes (5 or more)	80.0%	79.7%	80.2%		57.8%	83.1%	*
College courses for credit (1 or more)	39.3%	38.6%	39.8%		29.3%	40.7%	*
<b>To date, in which of the following math classes have you earned a grade of "C" or better?</b>							
Pre-Calculus/Trigonometry	95.1%	95.1%	95.0%		89.5%	95.9%	*
Calculus	94.5%	92.7%	95.5%	*	88.9%	95.3%	*
Probability or Statistics	49.5%	48.4%	50.2%		65.5%	47.2%	*
<b>During your last year of high school, to what extent did your courses challenge you to do your best work?</b>							
On a scale of 1 to 7, with 7 being "Very Much," Rated 5+	60.6%	67.7%	56.3%	*	60.3%	60.7%	

Of students who participated in the survey, 69.1% reported opportunities for integrative learning in high school by attempting to better understand someone else's view from their perspective. Male students were slightly more likely than female students to report having examined strengths and weaknesses of their own views on a topic or issue. There were no differences by first-generation or international status. Detailed responses on integrative learning experiences in high school are included in Table 4.

**Table 4. BCSSE 2013: High School Integrative Learning**

* $\phi > .1$ ; ** $\phi > .3$ ; *** $\phi > .5$	GT Total BCSSE <i>n</i> = 2,293	Female <i>n</i> = 863	Male <i>n</i> = 1,430	Eff. Size
<b>During your last year of high school, about how often did you do the following?</b>				
<i>(Percent that rated "Often" or "Very Often")</i>				
Included diverse perspectives (political, religious, racial/ethnic, gender, etc.) in course discussions or assignments	54.9%	55.7%	54.5%	
Examined the strengths and weaknesses of your own views on a topic or issue	62.4%	59.3%	64.2%	*
Tried to better understand someone else's views by imagining how an issue looks from his or her perspective	69.1%	68.7%	69.4%	

As noted in Table 5, the majority of entering GT students participated in high school co-curricular activities, such as academic clubs or honor societies, community service or volunteer work, and athletic teams. More than seven out of ten female students participated in academic clubs or honor societies. First-generation students were less likely to have participated on athletic teams. Incoming international students tended to be less involved with athletic teams but more involved in activities such as student government and vocational clubs.

**Table 5. BCSSE 2013: High School Co-curricular Involvement**

	GT Total BCSSE n = 2,293	Female n = 863	Male n = 1,430	Eff. Size	First-Gen <sup>1</sup> n = 401	Non- First-Gen n = 1,892	Eff. Size	Int'l n = 296	U.S. Citizen n = 1,997	Eff. Size
<i>During your high school years, how involved were you in the following activities at your school or elsewhere?</i>										
<i>(Percent that rated "Quite A Bit" or "Very Much")</i>										
Athletic teams (varsity, JV, club sport, etc.)	51.6%	47.7%	54.0%	*	44.7%	53.2%	*	37.2%	53.7%	*
Performing or visual arts program (band, chorus, theater, art, etc.)	39.2%	46.3%	34.8%	*	40.2%	38.7%		36.8%	39.5%	
Student government	15.5%	21.0%	12.1%	*	17.6%	15.1%		25.4%	14.0%	*
Publications (student newspaper, yearbook, etc.)	7.6%	10.7%	5.6%	*	7.1%	7.6%		13.6%	6.7%	*
Academic clubs or honor societies	64.9%	72.7%	60.1%	*	66.0%	64.8%		57.4%	66.0%	*
Vocational clubs (business, health, technology, etc.)	17.8%	16.1%	18.8%		18.7%	17.6%		23.9%	16.9%	*
Religious youth groups	19.6%	23.6%	17.1%	*	20.0%	19.4%		9.5%	21.0%	*
Community service or volunteer work	59.3%	72.0%	51.6%	*	60.8%	59.1%		60.8%	59.1%	

<sup>1</sup> First-generation is defined as no parent or guardian having graduated with a four-year college degree.

### First-Year Engagement Indicators

The BCSSE presents its student engagement indicators as a series of nine scaled scores:

- Quantitative Reasoning
- Learning Strategies
- Collaborative Learning
- Student-Faculty Interaction
- Interaction with Diverse Others
- Expected Academic Perseverance
- Expected Academic Difficulty
- Perceived Academic Preparation
- Importance of Campus Environment

These indicators reflect students' prior high school experiences and preparation as well as expectations for academic and social engagement in college. Each score represents the mean of several components,

expressed on 0–60 point scale. It is important to note that these engagement indicators are based on self-reporting of students’ frequency of activities, expectations, and beliefs. A brief explanation of each indicator and results from the individual components follow.

**Quantitative Reasoning**

The **High School Quantitative Reasoning** scale consists of three items related to the students’ experience in using, analyzing, and evaluating numerical information during the last year of high school.

Of the students who took the BCSSE in 2013, three-quarters had experiences with analyzing quantitative information to reach conclusions during high school. As presented in Table 6, according to the scaled score, female students were slightly less likely than male students to report the use of quantitative reasoning. There were no significant differences by first-generation or international status. See Figure 1 for a comparison of significantly different responses within the quantitative reasoning component items by gender.

**Table 6. BCSSE 2013: High School Quantitative Reasoning Scores**

	GT Total BCSSE n = 2,293	Female n = 863	Male n = 1,430	Eff. Size
Mean Scale Score (0–60)	35.5	33.9	36.6	*

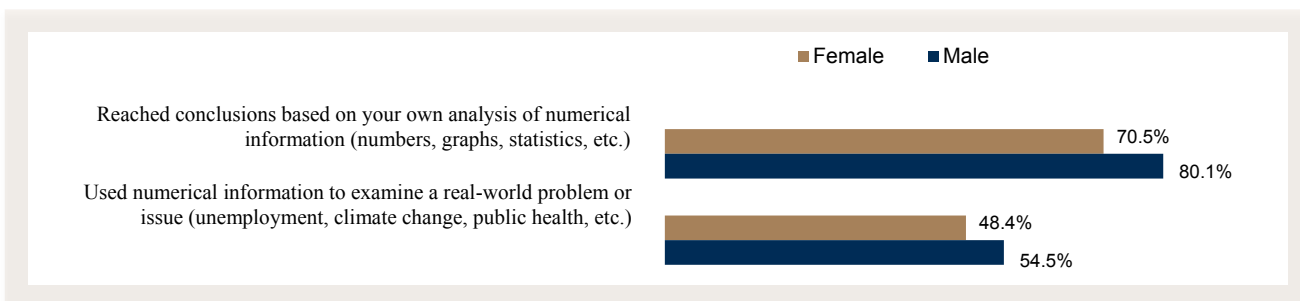
\* $\phi > .1$ ; \*\* $\phi > .3$ ; \*\*\* $\phi > .5$   
 \* $d > .1$ ; \*\* $d > .3$ ; \*\*\* $d > .5$

**During your last year of high school, about how often did you do the following?**

(Percent that rated “Often” or “Very Often”)  
 [On a Scale: 1 = Never to 4 = Very Often]

Reached conclusions based on your own analysis of numerical information (numbers, graphs, statistics, etc.)	76.5%	70.5%	80.1%	*
Used numerical information to examine a real-world problem or issue (unemployment, climate change, public health, etc.)	52.2%	48.4%	54.5%	*
Evaluated what others have concluded from numerical information	52.9%	49.8%	54.8%	

**Figure 1. BCSSE 2013: High School Quantitative Reasoning by Gender**



Learning Strategies

The **High School Learning Strategies** scale consists of three items related to the students’ use of effective learning strategies during the last year of high school.

Overall, 79% of entering GT students stated that they frequently identified key information from high school reading assignments, while only half frequently reviewed their notes or summarized course material.

Comparing the scaled score, female students were moderately more likely than male students to report the use of learning strategies in high school ( $p < 0.01$ ;  $d = 0.4$ ). Slightly more international students reported reviewing notes after their high school classes. There were no differences between first- and non-first-generation students. Table 7 contains scaled scores and detailed item responses for the high school learning strategies scale. Figures 2 and 3 illustrate comparisons of significantly different responses to learning strategy components by gender and by citizenship status.

**Table 7. BCSSE 2013: High School Learning Strategies Scores**

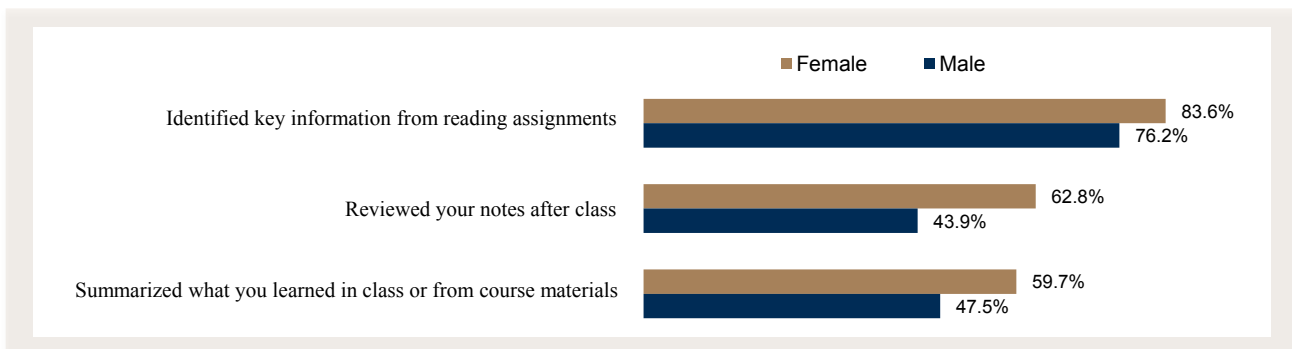
	GT Total BCSSE n = 2,293	Female n = 863	Male n = 1,430	Eff. Size	Int'l n = 296	U.S. Citizen n = 1,997	Eff. Size
Mean Scale Score (0–60)	36.1	39.7	33.9	**	37.8	35.9	

**During your last year of high school, about how often did you do the following?**

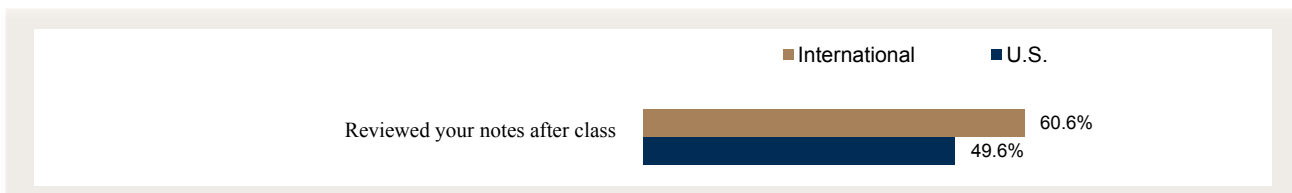
(Percent that rated “Often” or “Very Often”)  
[On a Scale: 1 = Never to 4 = Very Often]

Identified key information from reading assignments	79.0%	83.6%	76.2%	*	74.4%	79.7%	
Reviewed your notes after class	51.0%	62.8%	43.9%	*	60.6%	49.6%	*
Summarized what you learned in class or from course materials	52.1%	59.7%	47.5%	*	58.3%	51.2%	

**Figure 2. BCSSE 2013: High School Learning Strategy by Gender**



**Figure 3. BCSSE 2013: High School Learning Strategy by Citizenship**



**Collaborative Learning**

The **First-Year Collaborative Learning** scale consists of four items related to the students' expectation to interact and collaborate with peers during their first year as an undergraduate.

As noted in Table 8, over three-quarters of students expect to frequently participate in collaborative learning through activities such as discussing course material to prepare for exams or working on course projects and assignments. International students were slightly less likely to ask for assistance from another student or to expect to discuss work with other students. There were no significant differences between first- and non-first-generation students. According to the scaled score, females expect to interact and collaborate slightly more than their male classmates. Figures 4 and 5 illustrate significant findings within collaborative learning components by gender and by citizenship status.

**Table 8. BCSSE 2013: Expectations for Collaborative Learning Scores**

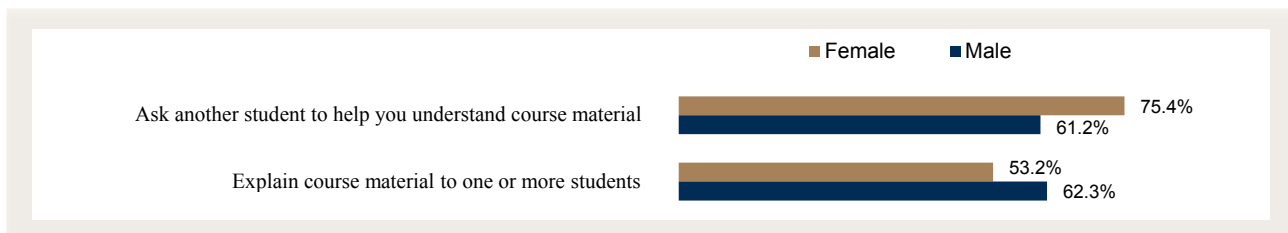
	GT Total BCSSE n = 2,293	Female n = 863	Male n = 1,430	Eff. Size	Int'l n = 296	U.S. Citizen n = 1,997	Eff. Size
Mean Scale Score (0–60)	38.9	40.4	38.1	*	37.5	39.2	

*During the coming year, about how often do you expect to do each of the following?*

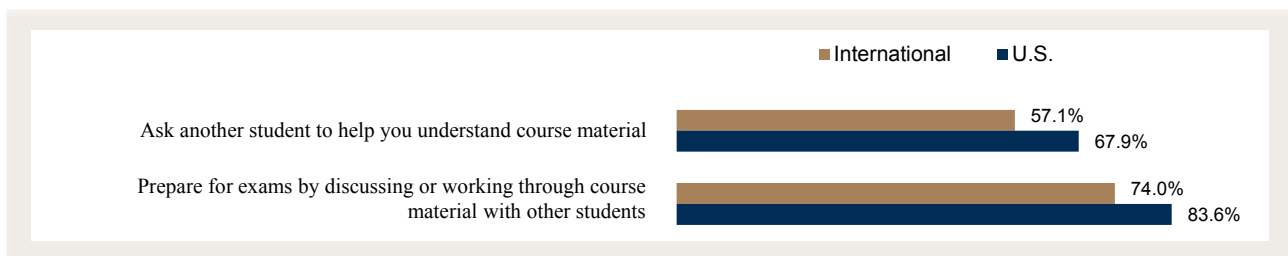
(Percent that rated "Often" or "Very Often")  
[On a Scale: 1 = Never to 4 = Very Often]

Ask another student to help you understand course material	66.5%	75.4%	61.2%	*	57.1%	67.9%	*
Explain course material to one or more students	58.9%	53.2%	62.3%	*	60.8%	58.6%	
Prepare for exams by discussing or working through course material with other students	82.3%	84.9%	80.8%		74.0%	83.6%	*
Work with other students on course projects or assignments	77.8%	79.2%	77.0%		75.4%	78.2%	

**Figure 4. BCSSE 2013: Expectations for Collaborative Learning by Gender**



**Figure 5. BCSSE 2013: Expectations for Collaborative Learning by Citizenship**



### Student-Faculty Interaction

The **First-Year Student-Faculty Interaction** scale consists of four items related to the students' expectation to interact and engage with the faculty during their first year as an undergraduate.

Comparing the scaled score, female students were slightly more likely to expect a variety of faculty interactions during their first year. International students were moderately more likely to expect interactions with faculty ( $p < 0.01$ ;  $d = 0.4$ ). Approximately half of students reported expectations of speaking with faculty about their career plans. Detailed item responses for student expectations of faculty interactions can be found in Table 9. Figures 6, 7, and 8 illustrate significant findings by gender, by first-generation, and by citizenship status.

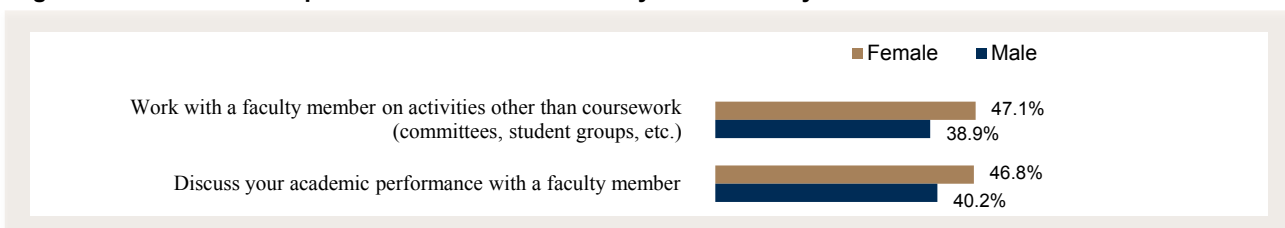
From 2012 to 2013, student expectations of faculty interaction with activities other than course work decreased slightly from 48.7% to 42.0%.

**Table 9. BCSSE 2013: Expectations for Student-Faculty Interaction Scores**

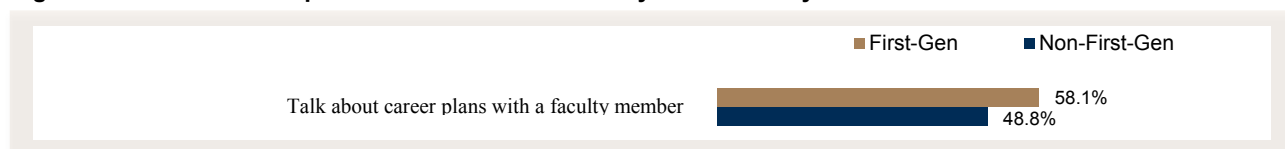
	GT Total BCSSE n = 2,293	Female n = 863	Male n = 1,430	Eff. Size	First-Gen <sup>1</sup> n = 401	Non- First-Gen n = 1,892	Eff. Size	Int'l n = 296	U.S. Citizen n = 1,997	Eff. Size
<b>Mean Scale Score (0–60)</b>	31.0	32.0	30.4	*	32.4	30.7		35.3	30.4	**
<i>During the coming year, about how often do you expect to do each of the following?</i>										
					(Percent that rated "Often" or "Very Often") [On a Scale: 1 = Never to 4 = Very Often]					
Talk about career plans with a faculty member	50.4%	52.3%	49.2%		58.1%	48.8%	*	60.2%	48.9%	*
Work with a faculty member on activities other than coursework (committees, student groups, etc.)	42.0%	47.1%	38.9%	*	43.5%	41.8%		59.2%	39.5%	*
Discuss your academic performance with a faculty member	42.7%	46.8%	40.2%	*	46.4%	41.8%		55.2%	40.9%	*
Discuss course topics, ideas, or concepts with a faculty member outside of class	49.9%	50.4%	49.6%		51.1%	49.6%		63.2%	48.0%	*

<sup>1</sup>First-generation is defined as no parent or guardian having graduated with a four-year college degree.

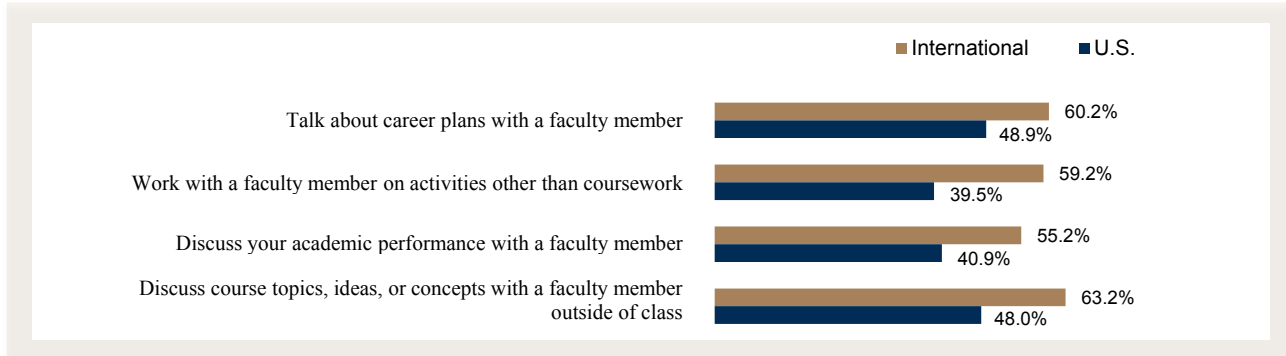
**Figure 6. BCSSE 2013: Expectations for Student-Faculty Interaction by Gender**



**Figure 7. BCSSE 2013: Expectations for Student-Faculty Interaction by First-Generation Status**



**Figure 8. BCSSE 2013: Expectations for Student-Faculty Interaction by Citizenship**



Interaction with Diverse Others

The **First-Year Interaction with Diverse Others** scale consists of four items related to the students’ expectation to interact with peers who are different from themselves.

Approximately nine out of ten entering students expected to have interactions with diverse others on campus. According to the overall scale score, male students and international students were slightly less likely to expect diverse interactions with other members of the GT community. There were no significant differences by first-generation status. As seen in Table 10 and Figure 9, international students were slightly less likely to expect to have discussions with people of different political views.

Compared to 2012, slightly more students in 2013 expected to have discussions with people of race or ethnic diversity, up from 78.0% to 91.9%.

**Table 10. BCSSE 2013: First-Year Interaction with Diverse Others Scores**

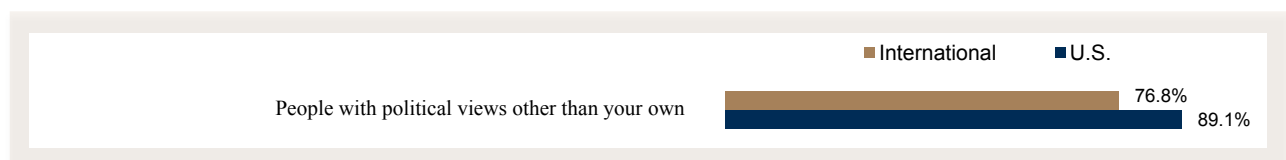
	GT Total BCSSE n = 2,293	Female n = 863	Male n = 1,430	Eff. Size	Int'l n = 296	U.S. Citizen n = 1,997	Eff. Size
<b>Mean Scale Score (0–60)</b>	47.6	49.0	46.8	*	45.7	48.0	*

*During the coming school year, about how often do you expect to have discussions with people from the following groups?*

(Percent that rated “Often” or “Very Often”)  
[On a Scale: 1 = Never to 4 = Very Often]

People of a race or ethnicity other than your own	91.9%	93.6%	90.8%	90.6%	92.1%	
People from an economic background other than your own	89.1%	90.6%	88.2%	85.1%	89.7%	
People with religious beliefs other than your own	89.1%	90.3%	88.5%	85.8%	89.6%	
People with political views other than your own	87.5%	88.0%	87.2%	76.8%	89.1%	*

**Figure 9. BCSSE 2013: First-Year Interaction with Diverse Others by Citizenship**



### Expected Academic Perseverance

The **Expected Academic Perseverance** scale is represented by six components measuring students' certainty that they will persist in the face of academic adversity. This is not a self-rating of ability but rather of drive and attitude.

Approximately 70% of students coming to GA Tech expressed high degrees of certainty that they will persist in completing work that they have started and in seeking out resources when not understanding course material. Less than half, however, trusted that they will be able to study when interesting things are going on around them and only 35% of students felt they would be able to participate in class discussions when they just did not feel like it. Within the scaled score, international students were slightly more likely than domestic students to expect to persevere academically.

Between 2012 and 2013, slightly more students responded with expectations of perseverance while studying when there are other interesting things to do, from 41.6% to 45.3%. Students also were more likely to expect to ask instructors for help when struggling with course assignments, from 56.8% to 61.9%, and to expect to finish their work after encountering challenges (from 71.6% to 75.1%).

Table 11 presents significant differences in the scale scores and component percentages. There were no significant differences by first-generation status. See Figures 10 and 11 for a comparison of the significantly different responses to the expected academic perseverance component items by gender and citizenship status.

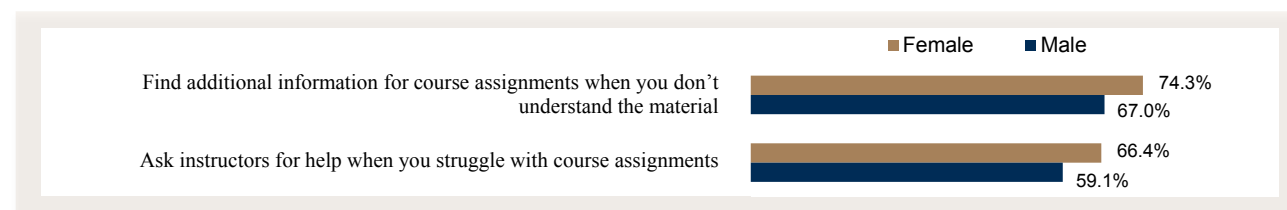
**Table 11. BCSSE 2013: First-Year Expected Academic Perseverance Scores**

	GT Total BCSSE n = 2,293	Female n = 863	Male n = 1,430	Eff. Size	Int'l n = 296	U.S. Citizen n = 1,997	Eff. Size
Mean Scale Score (0–60)	43.3	43.9	43.0		44.7	43.2	*

**During the coming school year, how certain are you that you will do the following?**

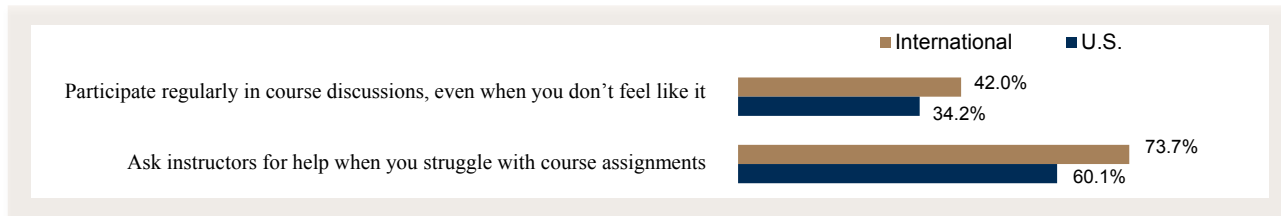
		(Percent responding 5 or 6) [On a Scale: 1 = Not at all Certain to 6 = Very Certain]				
Study when there are other interesting things to do	45.3%	48.2%	43.5%		45.3%	45.3%
Find additional information for course assignments when you don't understand the material	69.7%	74.3%	67.0%	*	75.8%	68.9%
Participate regularly in course discussions, even when you don't feel like it	35.2%	37.2%	33.9%		42.0%	34.2%
Ask instructors for help when you struggle with course assignments	61.9%	66.4%	59.1%	*	73.7%	60.1%
Finish something you have started when you encounter challenges	75.1%	77.1%	73.9%		72.6%	75.5%
Stay positive, even when you do poorly on a test or assignment	52.5%	50.1%	54.0%		56.7%	51.9%

**Figure 10. BCSSE 2013: First-Year Expected Academic Perseverance by Gender**





**Figure 11. BCSSE 2013: First-Year Expected Academic Perseverance by Citizenship**



Expected Academic Difficulty

The **First-Year Expected Academic Difficulty** scale is represented by four component items to measure students' expectations of academic difficulty during their first year of college.

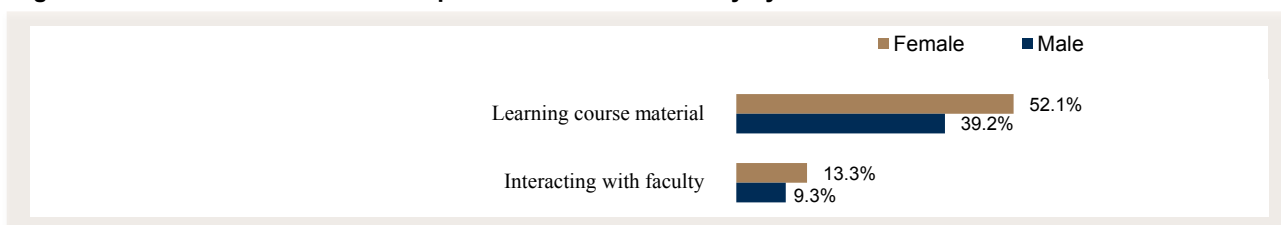
While eleven percent or less of incoming students expect difficulties on an institutional level, such as interacting with faculty or getting help on course work, approximately half think they will encounter difficulties on a personal level, such as managing their time or learning the course material. Based on the scaled score, female students were slightly more likely to expect academic difficulties at GT. Table 12 presents mean scaled scores and component item percentages for first-year's expectations of academic difficulty. There were no significant differences for first-generation or international student status. See Figure 12 for a comparison of the significantly different responses by gender for components of expected academic difficulty.

Less than five percent of students in the incoming 2013 class expected to have problems getting help with course work, down from seven percent in 2012.

**Table 12. BCSSE 2013: First-Year Expected Academic Difficulty Scores**

	GT Total BCSSE n = 2,293	Female n = 863	Male n = 1,430	Eff. Size
<b>Mean Scale Score (0–60)</b>	31.0	32.0	30.4	*
<i>During the coming school year, how difficult do you expect the following to be?</i>				
		(Percent responding 5 or 6) [On a Scale: 1 = Not at all Difficult to 6 = Very Difficult]		
Learning course material	44.0%	52.1%	39.2%	*
Managing your time	53.1%	52.6%	53.4%	
Getting help with school work	4.7%	5.0%	4.5%	
Interacting with faculty	10.8%	13.3%	9.3%	*

**Figure 12. BCSSE 2013: First-Year Expected Academic Difficulty by Gender**



Perceived Academic Preparation

The **First-Year Perceived Academic Preparation** scale is represented by seven component items to measure students' perception of their academic preparation.

Approximately seven out of ten beginning students reported confidence in most aspects of their academic preparation, while between five and six out of ten were confident with their preparation in writing or speaking clearly and effectively and in the use of computing and information technology. Scaled score comparisons suggest that females were moderately less likely to feel prepared for their academic work when compared to males ( $p < 0.01$ ;  $d = 0.3$ ). International students were slightly less likely to believe they were prepared for their academic work at GT as compared to domestic students.

Mean scaled scores and component item percentages are presented in Table 13 for BCSSE respondents' perceptions of academic preparation. There were no significant differences by first-generation status. Table 14 shows less than four percent of beginning students expected to attend class at GT without reading or completing course assignments. Figures 13 and 14 illustrate the significantly different perceptions of academic preparation by gender and citizenship.

Comparing responses from 2012 to 2013, it is interesting to note that slightly more students believed they were well-prepared in writing (from 54.1% to 60.6%) and almost 56% felt they were prepared in using computing and information technology, up from 46.7%.

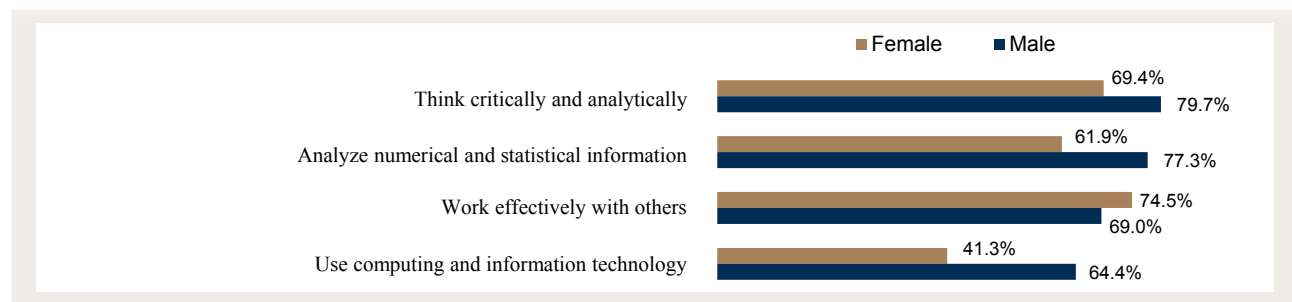
**Table 13. BCSSE 2013: Perceived Academic Preparation Scores**

	GT Total BCSSE <i>n</i> = 2,293	Female <i>n</i> = 863	Male <i>n</i> = 1,430	Eff. Size	Int'l <i>n</i> = 296	U.S. Citizen <i>n</i> = 1,997	Eff. Size
<b>Mean Scale Score (0–60)</b>	45.8	44.5	46.7	**	44.5	46.0	*
<i>How prepared are you to do the following in your academic work at this institution?</i>							
(Percent responding 5 or 6) [On a Scale: 1 = Not at all Prepared to 6 = Very Prepared]							
Write clearly and effectively	60.6%	63.2%	59.0%		49.7%	62.2%	*
Speak clearly and effectively	53.1%	50.2%	54.9%		44.1%	54.5%	*
Think critically and analytically	75.8%	69.4%	79.7%	*	64.6%	77.5%	*
Analyze numerical and statistical information	71.5%	61.9%	77.3%	*	74.3%	71.1%	
Work effectively with others	71.1%	74.5%	69.0%	*	64.5%	72.1%	*
Use computing and information technology	55.6%	41.3%	64.4%	*	61.8%	54.7%	
Learn effectively on your own	67.8%	65.1%	69.4%		68.3%	67.7%	

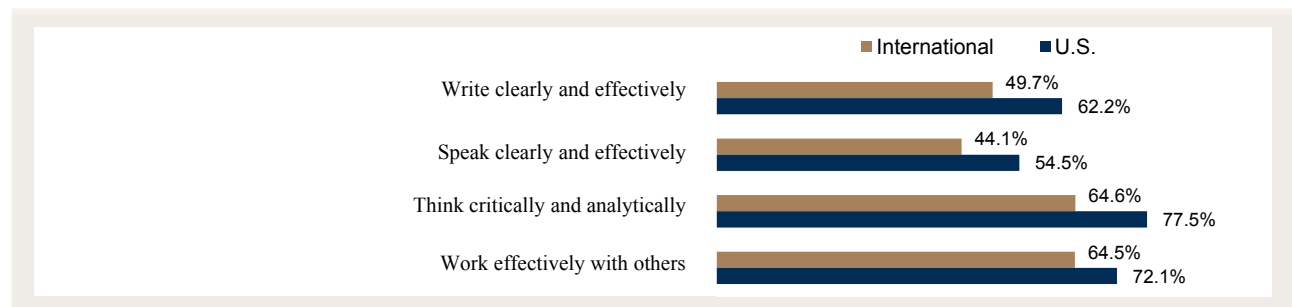
**Table 14. BCSSE 2013: Perceived Class Preparation**

	GT Total BCSSE n = 2,293	Female n = 863	Male n = 1,430	Eff. Size
* $\phi > .1$ ; ** $\phi > .3$ ; *** $\phi > .5$				
<b>During the coming school year, about how often do you expect to do each of the following?</b>				
(Percent that Rated "Often" or "Very Often")				
Come to class without completing readings or assignments	3.6%	2.9%	4.0%	
Prepare two or more drafts of a paper or assignment before turning it in	59.1%	64.6%	55.7%	*

**Figure 13. BCSSE 2013: Perceived Academic Preparation by Gender**



**Figure 14. BCSSE 2013: Perceived Academic Preparation by Citizenship**



### Importance of Campus Environment

*The Importance of Campus Environment scale includes seven component items to address the importance the student places on a challenging and supportive campus environment.*

Student responses indicated the two most important things an institution can provide were: support to help students succeed academically and opportunities to attend campus activities and events. Less important to students was help with managing non-academic responsibilities. According to the scaled score, females were moderately more likely than males to place an importance on a supportive campus environment ( $p < 0.01$ ;  $d = 0.4$ ). Table 15 presents the mean scaled scores and item percentages for the importance that BCSSE respondents placed on the campus environment. Except for the importance of challenging academics, males and females differed slightly on every component item. Figures 15 and 16 illustrate significant differences by gender and citizenship status between component items on the importance of campus environment.

Almost 73% of students in 2013 placed an importance on opportunities to attend campus events, up slightly from 67.5% in 2012.

**Table 15. BCSSE 2013: Importance of Campus Environment Scores**

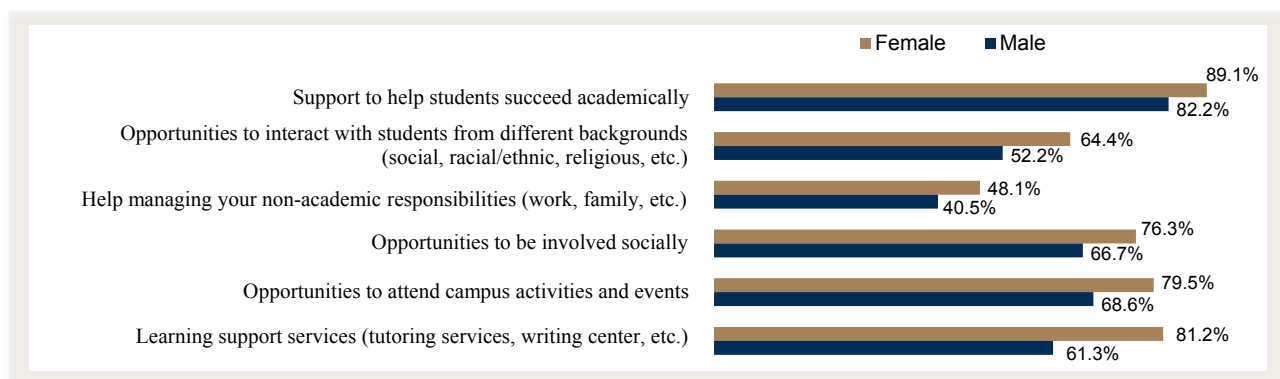
	GT Total BCSSE n = 2,293	Female n = 863	Male n = 1,430	Eff. Size	Int'l n = 296	U.S. Citizen n = 1,997	Eff. Size
Mean Scale Score (0–60)	46.1	48.4	44.8	**	46.7	46.1	

**How important is it to you that your institution provides each of the following?**

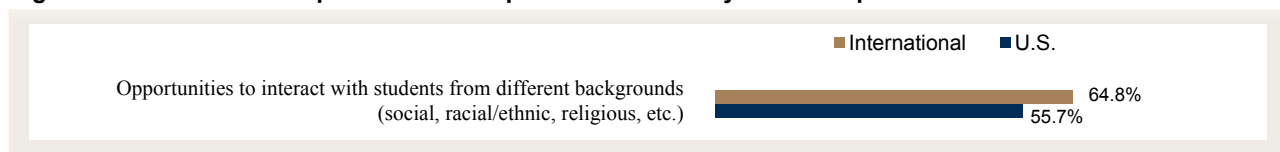
(Percent responding 5 or 6)  
[On a Scale: 1 = Not Important to 6 = Very Important]

A challenging academic experience	70.3%	70.7%	70.1%		72.6%	70.0%	
Support to help students succeed academically	84.8%	89.1%	82.2%	*	86.6%	84.5%	
Opportunities to interact with students from different backgrounds (social, racial/ethnic, religious, etc.)	56.8%	64.4%	52.2%	*	64.8%	55.7%	*
Help managing your non-academic responsibilities (work, family, etc.)	43.4%	48.1%	40.5%	*	46.4%	43.0%	
Opportunities to be involved socially	70.3%	76.3%	66.7%	*	66.0%	71.0%	
Opportunities to attend campus activities and events	72.7%	79.5%	68.6%	*	71.7%	72.9%	
Learning support services (tutoring services, writing center, etc.)	68.8%	81.2%	61.3%	*	69.3%	68.7%	

**Figure 15. BCSSE 2013: Importance of Campus Environment by Gender**



**Figure 16. BCSSE 2013: Importance of Campus Environment by Citizenship**



## First-Year Expectations

Financial responsibilities, social integration, and academic expectations are integral parts of the overall college experience and can help provide views into the life of undergraduate students. These expectations are important to consider for those assisting with students' transition from high school to collegiate life.

With increasing access to post-secondary education, today's students are faced with mounting financial stressors to pay for the costs associated with higher education. Socially, when students are comfortable with their connections, they are able to function more effectively in a learning community. Academic expectations of performance also play a role in students' perceptions of achievement. When frustration occurs, it is typically when students' goals and expectations are unattainable. Incoming students who were top-performers in their high schools may find that they need to make changes to their academic approaches or to adjust their expectations in order to achieve success at GT.

## Finances

Almost one quarter of incoming 2013 students expected difficulties in paying their college expenses, down from 31% in 2012. More than 93% of incoming GT students planned to use support from family and almost 75% reported the use of grants or scholarships to help defray education expenses. As seen in Table 16, slightly more first-generation than non-first-generation GT students noted concerns about paying undergraduate expenses, with a greater reliance on loans, grants, and scholarships. International students were moderately less likely to use grants or scholarships ( $p < 0.01$ ,  $\phi = 0.3$ ). There were no significant gender differences.

**Table 16. BCSSE 2013: Finances**

	GT Total BCSSE n = 2,293	First-Gen <sup>1</sup> n = 401	Non- First-Gen n = 1,892	Eff. Size	Int'l n = 296	U.S. Citizen n = 1,997	Eff. Size
* $\phi > .1$ ; ** $\phi > .3$ ; *** $\phi > .5$							
<b>During the coming year, how difficult do you expect the following to be?</b>							
	(Percent responding 5 or 6) [On a Scale: 1 = Not at all Difficult to 6 = Very Difficult]						
Paying college expenses	24.8%	35.6%	22.3%	*	24.9%	24.8%	
<b>Which of the following sources are you using to pay your education expenses (tuition, fees, books, room &amp; board, etc.)?</b>							
Support from parents or relatives	93.1%	87.6%	94.3%	*	95.2%	92.8%	
Loans	33.0%	47.5%	29.8%	*	19.1%	35.0%	*
Grants or scholarships	74.3%	82.3%	72.7%	*	37.6%	79.5%*	**
Job or personal savings	47.2%	51.2%	46.5%		29.3%	49.8%	*
Other	7.6%	10.1%	7.0%		4.8%	8.0%	

<sup>1</sup> First-generation is defined as no parent or guardian having graduated with a four-year college degree.

Social Integration

Of the incoming GT students, less than ten percent believed they will have significant difficulty making new friends on campus and the majority reported having at least one close friend attending GT. Almost all respondents indicated they will reside in a dormitory or a residence within walking distance to campus. Table 17 details social expectations for the Class of 2017.

**Table 17. BCSSE 2013: Social Expectations**

<i>*<math>\phi &gt; .1</math>; **<math>\phi &gt; .3</math>; ***<math>\phi &gt; .5</math></i>	<b>GT Total BCSSE n = 2,293</b>	<b>Int'l n = 296</b>	<b>U.S. Citizen n = 1,997</b>	<b>Eff. Size</b>
<i>During the coming year, how difficult do you expect the following to be?</i>				
	<i>(Percent responding 5 or 6) [On a Scale: 1 = Not at all Difficult to 6 = Very Difficult]</i>			
Making New Friends	9.1%	8.7%	9.2%	
<i>How many of your close friends will attend this institution during the coming year?<sup>1</sup></i>				
None	42.0%	55.4%	40.0%	*
1–3	34.1%	24.5%	35.6%	*
4 or more	23.9%	20.1%	24.5%	

<sup>1</sup> Figures may not sum to 100% due to rounding.

Academic Expectations

As shown in Table 18, less than one percent of the GT Class of 2017 believed that they will receive a “C or below” in their first-year undergraduate courses. Slightly more females and international students expected an “A” in their first year. Student expectations of achieving a “B” or higher during their first year at GT has increased since 2012, from 94.5% to 99.2%.

**Table 18. BCSSE 2013: First Year Expected Grades**

<i>*<math>\phi &gt; .1</math>; **<math>\phi &gt; .3</math>; ***<math>\phi &gt; .5</math></i>	<b>GT Total BCSSE n = 2,293</b>	<b>Female n = 863</b>	<b>Male n = 1,430</b>	<b>Eff. Size</b>	<b>Int'l n = 296</b>	<b>U.S. Citizen n = 1,997</b>	<b>Eff. Size</b>
<i>What do you expect most of your grades will be during the coming year?<sup>1</sup></i>							
A	60.7%	64.7%	54.1%	*	73.7%	58.7%	*
B	38.5%	34.9%	44.4%	*	25.6%	40.4%	*
C or below	0.8%	0.4%	1.5%		0.7%	0.9%	

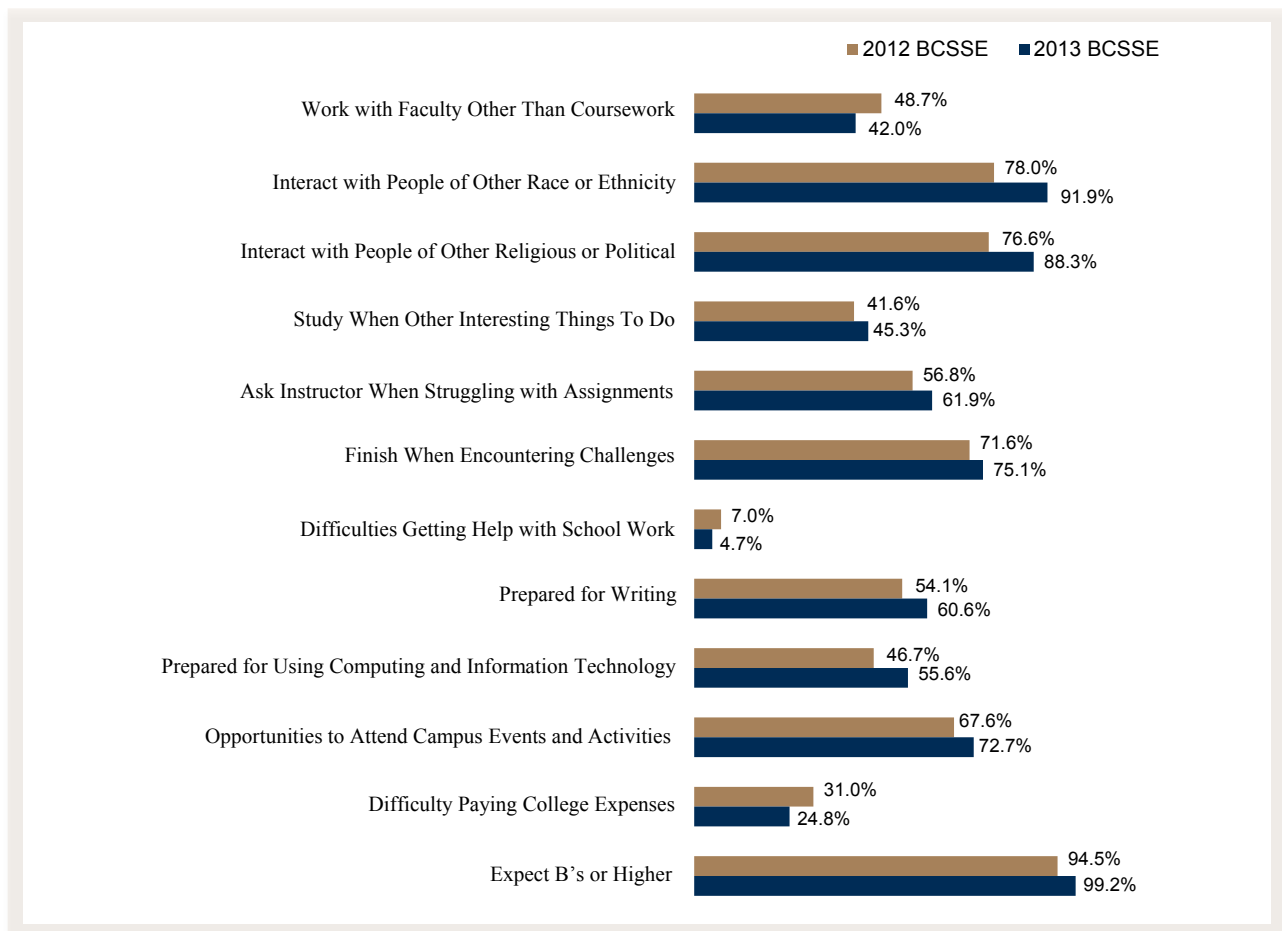
<sup>1</sup> Figures may not sum to 100% due to rounding.

## BCSSE 2012 to 2013 Comparisons

Over 85% of incoming students participated in the BCSSE surveys in 2012 and 2013. In general, the samples remained fairly similar; however, there were two slight demographic differences. In 2012, Asian students were represented by 27.4% of responses; in 2013, this dropped slightly to 16.6%. Also in 2012, just fewer than ten percent of survey respondents reported first-generation<sup>2</sup> status; this jumped to 17.7% in 2013. The decrease in Asian students was mirrored in the student population. It is not known whether the increase in first-generation status is reflected in the overall population because this data was not yet collected for entering classes. While not significant, it is interesting to note that, from 2012 to 2013, the percent of female enrollment increased in the College of Computing (3.1% to 5.2%) and in the College of Engineering (61.0% to 65.6%).

The 2013 BCSSE update included the expansion of indicator engagement scales and the reconstruction of individual component items. In this report, some comparisons could not be analyzed due to changes in scale measurement or in item language differences. Future reports will include more in-depth indicator comparisons and trends among consistent component items. Throughout this report, select differences were noted between the 2012 and 2013 BCSSE responses. Figure 17 provides a summary of these comparisons.

**Figure 17. Significant Differences between BCSSE 2012 and 2013: First Year GT Expectations**



<sup>2</sup> First-generation is defined as no parent or guardian having graduated with a four-year college degree.

In addition, significant increases were seen from 2012 to 2013 in students' expectations of weekly hours spent preparing for class, participating in co-curricular activities, and relaxing or socializing. That is, almost 90% of students in 2013 expected to spend 16 hours or more preparing for class at GT, up from 66.8% in 2012. While only one quarter of incoming 2012 students expected to participate in co-curricular activities for 16 hours or more per week, this expectation jumped to almost half in 2013. Further, over half of 2013 students expected to spend 16 hours or more relaxing or socializing, a moderate increase from 21.6% in 2012. Table 19 compares students' expectations of their weekly use of time.

**Table 19: BCSSE 2012 to 2013: Weekly Use of Time**<sup>1</sup>

	High School Experiences			First Year Expectations		
	BCSSE 2012 (n = 2,734)	BCSSE 2013 (n = 2,293)	Eff. Size	BCSSE 2012 (n = 2,734)	BCSSE 2013 (n = 2,293)	Eff. Size
Class Preparation (16+ hours per week)	27.7%	44.6%	*	66.8%	88.8%	**
Work for Pay (16+ hours per week)	8.7%	14.3%	*	9.1%	17.1%	*
Co-Curricular Activities (16+ hours per week)	34.2%	52.8%	*	24.4%	48.5%	**
Relax and Socialize (16+ hours per week)	37.5%	56.4%	*	21.6%	51.9%	**

<sup>1</sup> Statistical comparisons were made between high school experiences from 2012 to 2013 and between first-year expectations from 2012 to 2013.

## SUMMARY

Students admitted to GT are well-prepared academically as exhibited by exemplary high school course work and standardized test performance. Results from the BCSSE 2013 illustrated students' tremendous confidence, strong technical backgrounds, and previous success with challenging academics.

Responses from incoming students seemed to indicate that they are comfortable with the available academic campus programs and resources, but are a bit apprehensive in their own efforts to succeed as an undergraduate. Beginning students might be lacking in effective learning strategies such as reviewing class notes or summarizing course material. They also expressed feeling unprepared in the areas of public speaking and, surprisingly, in the effective use of computing and technology.

The Class of 2017 pointed to expectations of collaboration with fellow classmates more than they expected to interact with faculty members. As compared to high school, entering students expected to spend increased amounts of time preparing for class by decreasing the amount of time that they spend on co-curriculars or relaxing and socializing. Recognizing the rigor of GT academics, new students expect to put forth extensive time and effort in preparation for class.

Adjustments may be necessary in first-time, first-year students' expectations of academic performance. That is, more than 99% of incoming students believed that they will receive a "B" or above in the first year of their undergraduate courses. This expectation is perhaps unrealistic as only 65.9% historically have earned above a 3.0 in their first year at GT. Necessary academic recalibration may promote students' feelings of success in the attainment of their academic goals.



Student academic and social programming grounded in the expectations of specific student groups may assist in the transition to the collegiate environment. Gender comparisons suggested that while male students were more likely to report the use of quantitative reasoning in high school and to feel academically prepared, female students were more likely to use learning strategies in high school, to welcome opportunities for collaborative learning, to expect engagement with faculty and diverse classmates, and to place importance on a challenging and supportive campus environment. First-generation students were more likely to pay their college expenses with loans, grants, or scholarships and to expect to work for pay during their first year. International students were more likely to expect interaction and engagement with faculty members and to persevere academically, but less likely to expect to interact with people with diverse political views and to have friends already on campus.

Clearly ready to make a difference at GT, the Class of 2017 is well-positioned to continue the tradition of excellence in scholarship and research. The Office of Assessment will continue to monitor the student engagement and experiences through data collection and longitudinal studies.