



# National Survey of Student Engagement

## Fall 2015

### Selected Items Related to Critical Thinking and Reasoning

**Dates of Administration:** February 17, 2015 – March 17, 2015  
**Method of Administration:** Web survey (Administered through NSSE)

#### Demographics and Response Rates:

	First Years	Seniors
<b>Overall Response Rate</b>	<b>47% (90/193)</b>	<b>58% (107/186)</b>
% Female	54%	50%
% Am. Indian or AK Native	2%	1%
% Asian	18%	20%
% Black or African American	0%	1%
% Hispanic or Latino	0%	1%
% White	49%	63%
% International/foreign born	8%	8%
% Two or more races	11%	1%
% Unknown	10%	6%

#### Background:

The National Survey of Student Engagement (NSSE) asks first year and senior students about the characteristics and quality of their undergraduate experience. It includes 10 Engagement Indicators (Higher-Order Learning, Reflective and Integrative Learning, Learning Strategies, Quantitative Reasoning, Collaborative Learning, Discussions with Diverse Others, Student-Faculty Interaction, Effective Teaching Practices, Quality of Interactions, and Supportive Environment) and High Impact Practices (Learning Communities, Service-Learning, Research with Faculty, Internships, Student Abroad, and Capstones). Additionally, NSSE allows campuses to add up to two additional topical modules to their survey. In 2015, HMC added a module on Experiences with Writing, and items from this module are included here. The comparison group for the overall survey is our Carnegie Class (Private Selective Baccalaureate Arts & Sciences Focus).

HMC participates in the NSSE survey annually each spring, and surveys all first years and graduating seniors. NSSE results are used throughout the campus in departmental program reviews to evaluate growth and development on student learning outcomes and by the college overall in its improvement efforts.










#### Highlights:

- Challenging intellectual work is central to our mission. We promote student learning by challenging students and supporting them as they engage in various forms of learning. In looking at the gains they have made, HMC first year respondents are significantly higher on both critical thinking and analyzing numerical information as compared to first years in our peer group. For seniors, HMC is significantly higher in analyzing numerical information than our peer group. It is worth noting here that for both first years and seniors at HMC, responses are quite high (3.6 out of 4.0 for first years and 3.5 out of 4.0 of seniors).
- When it comes to higher order learning, HMC first years indicate their coursework is more likely to ask them to apply facts, theories or methods to practical problems or in new situations and to analyze an idea, experience or line of reasoning than first years in our peer group. HMC first years report their course work was less likely to ask them to evaluate a point of view, decision, or information source than our peers. HMC seniors were more likely than our peers to apply facts, theories, or methods to practical problems or in new situations, and less likely to evaluate a point of view, decision, or

information source than seniors at our peer institutions.

- Several items within the outcome of Critical Thinking and Reasoning deal specifically with quantitative reasoning. First year respondents indicate that they were more likely to have reached conclusions based on their own analysis of numerical information, used numerical information to examine a real-world issue and evaluated what others have concluded from numerical information more than respondents in our peer group. Seniors also report reaching conclusions based on their own analysis and evaluating what others have concluded from numerical information more than respondents in our peer group.
- Another important part of critical thinking and reasoning is the development of learning strategies that support this type of deeper engagement with issues. First year respondents at HMC are less likely to report identifying key information from reading assignments than first year respondents in our peer group. Seniors at HMC report being less likely to review their notes and less likely to summarize what they learned in class or from course material than seniors in our peer group.

## FIRST YEARS

	<u>HMC</u>	<u>Peer</u>	<u>Comp</u>	<u>Sig</u>
	n=98			
<b>During the current school year, about how often have you done the following?</b>				
<i>1 = never; 2 = sometimes; 3 = often; 4 = very often</i>				
Examined the strengths and weaknesses of your own views on a topic or issue	2.8	2.9		
Learned something that changed the way you understand an issue or concept	3.0	3.0		
Reached conclusions based on your own analysis of numerical information (numbers, graphs, statistics)	3.3	2.6		p< .001
Used numerical information to examine a real-world problem or issue	2.6	2.3		p<.01
Evaluated what others have concluded from numerical information	2.8	2.4		p< .001
Identified key information from reading assignments	3.1	3.3		p< .05
Reviewed your notes after class	2.8	2.9		
Summarized what you learned in class or from course material	2.6	2.9		
<b>During the current school year, how much has your coursework emphasized the following</b>				
<i>1 = very little; 2 = some; 3 = quite a bit; 4 = very much</i>				
Applying facts, theories or methods to practical problems or in new situations	3.7	3.1		p< .001
Analyzing an idea, experience or line of reasoning in depth by examining its parts	3.5	3.1		p< .001
Evaluating a point of view, decision, or information source	2.8	3.1		p<.01
Forming a new idea or understanding from various pieces of information	3.2	3.0		
<b>How much has your experience at this institution contributed to your knowledge, skills, and personal development in the following areas?</b>				
<i>1 = very little; 2 = some; 3 = quite a bit; 4 = very much</i>				
Thinking critically and analytically	3.6	3.2		p< .001
Analyzing numerical and statistical information	3.6	2.6		p< .001

## SENIORS

	<u>HMC</u>	<u>Peer</u>	<u>Comp</u>	<u>Sig</u>
	n=107	n = 33,258		
<b>During the current school year, about how often have you done the following?</b>				
<i>1 = never; 2 = sometimes; 3 = often; 4 = very often</i>				
Examined the strengths and weaknesses of your own views on a topic or issue	2.9	3.0	↓	p< .05
Learned something that changed the way you understand an issue or concept	3.0	3.1		
Reached conclusions based on your own analysis of numerical information (numbers, graphs, statistics)	3.1	2.7	↑	p< .001
Used numerical information to examine a real-world problem or issue	2.5	2.5		
Evaluated what others have concluded from numerical information	2.7	2.6	↑	p< .05
Identified key information from reading assignments	3.3	3.4		
Reviewed your notes after class	2.4	2.8	↓	p< .001
Summarized what you learned in class or from course material	2.4	2.9	↓	p< .001
<b>During the current school year, how much has your coursework emphasized the following</b>				
<i>1 = very little; 2 = some; 3 = quite a bit; 4 = very much</i>				
Applying facts, theories or methods to practical problems or in new situations	3.3	3.2	↑	p< .05
Analyzing an idea, experience or line of reasoning in depth by examining its parts	3.1	3.2		
Evaluating a point of view, decision, or information source	2.8	3.1	↓	p< .001
Forming a new idea or understanding from various pieces of information	3.0	3.1		
<b>How much has your experience at this institution contributed to your knowledge, skills, and personal development in the following areas?</b>				
<i>1 = very little; 2 = some; 3 = quite a bit; 4 = very much</i>				
Thinking critically and analytically	3.5	3.5		
Analyzing numerical and statistical information	3.5	2.8	↑	p< .001