



National Survey of Student Engagement 2017

Selected Items Related to Critical Thinking and Reasoning

Dates of Administration: February 14, 2017 – March 28, 2017
Method of Administration: Web survey (Administered through NSSE)

Demographics and Response Rates:

	First Years	Seniors
Overall Response Rate	112/217 = 52%	94/189 = 50%
% Female	55	55
% Am. Indian or AK Native	0	0
% Asian	15	16
% Black or African American	4	1
% Hispanic or Latino	21	9
% White	35	53
% International/foreign born	7	11
% Two or more races	8	7
% Unknown	8	3

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, Study Abroad, and Capstones). Additionally, NSSE allows campuses to add up to two additional topical modules to their survey. In 2017, HMC participated in *Experiences with Writing* and *Inclusiveness & Engagement with Diversity*. The comparison group for the overall survey is our Carnegie Class (Private More 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 slightly (but not statistically significantly) higher on critical thinking and .8 on a 4-point scale higher on analyzing numerical information as compared to first years in our peer group. This pattern continues for Seniors. It is worth noting here that for both first years and seniors at HMC, responses are quite high for analyzing numerical information (3.4 out of 4.0 for first years and 3.7 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. They are also more likely to report having and have learned something that changed the way they understand an issue or concept. HMC first years report their course work was less likely to ask them to evaluate a point of view, decision, or information source than first years in our peer group. 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 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 though this second difference is slight and not statistically significant.
- 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 slightly less (and not statistically significantly) likely to report identifying key information from reading assignments than first year respondents in our peer group. They are also slightly less (and not statistically significantly) likely to review their notes. They are statistically significantly less likely to summarize what they have learned in class or from course materials. These differences persist into the Senior year where the difference in identifying key information becomes statistically significant.

FIRST YEARS

	HMC	Peer	Comp	Sig
	n = 112	n = 16,740		
During the current school year, about how often have you done the following?				
<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	2.8		
Learned something that changed the way you understand an issue or concept	3.1	2.9	▲	p < .05
Reached conclusions based on your own analysis of numerical information (numbers, graphs, statistics)	3.1	2.6	▲	p < .001
Used numerical information to examine a real-world problem or issue	2.7	2.3	▲	p < .001
Evaluated what others have concluded from numerical information	2.7	2.4	▲	p < .001
Identified key information from reading assignments	3.1	3.2		
Reviewed your notes after class	2.7	2.8		
Summarized what you learned in class or from course material	2.6	2.8	▼	p < .01
During the current school year, how much has your coursework emphasized the following				
<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	3.5	3.0	▲	p < .001
Analyzing an idea, experience or line of reasoning in depth by examining its parts	3.3	3.1	▲	p < .05
Evaluating a point of view, decision, or information source	2.7	3.0	▼	p < .001
Forming a new idea or understanding from various pieces of information	3.1	3.0		
How much has your experience at this institution contributed to your knowledge, skills, and personal development in the following areas?				
<i>1 = very little; 2 = some; 3 = quite a bit; 4 = very much</i>				
Thinking critically and analytically	3.3	3.2		
Analyzing numerical and statistical information	3.4	2.6	▲	p < .001

SENIORS				
	HMC	Peer	Comp	Sig
	n = 94	n = 14,663		
During the current school year, about how often have you done the following?				
<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	2.7	3.0	▼	p < .01
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)	3.2	2.7	▲	p < .001
Used numerical information to examine a real-world problem or issue	2.3	2.5	▼	p < .05
Evaluated what others have concluded from numerical information	2.7	2.6		
Identified key information from reading assignments	3.1	3.3	▼	p < .01
Reviewed your notes after class	2.5	2.6		
Summarized what you learned in class or from course material	2.4	2.8	▼	p < .001
During the current school year, how much has your coursework emphasized the following				
<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	3.1	▲	p < .05
Analyzing an idea, experience or line of reasoning in depth by examining its parts	3.2	3.2		
Evaluating a point of view, decision, or information source	2.7	3.1	▼	p < .001
Forming a new idea or understanding from various pieces of information	3.0	3.1		
How much has your experience at this institution contributed to your knowledge, skills, and personal development in the following areas?				
<i>1 = very little; 2 = some; 3 = quite a bit; 4 = very much</i>				
Thinking critically and analytically	3.6	3.5		
Analyzing numerical and statistical information	3.7	2.9	▲	p < .001