National Survey of Student Engagement
2019
Selected Items Related to Critical Thinking and Reasoning

Dates of Administration: **February 14, 2019-March 12, 2019**
Method of Administration: **Web survey (Administered through NSSE)**

Demographics and Response Rates:

	First Years	Seniors
Overall Response Rate	**53% (124/236)**	**46% (96/208)**
% Female	52%	50%
% Am. Indian or AK Native	0%	2%
% Asian	24%	21%
% Black or African American	2%	1%
% Hispanic or Latino	19%	7%
% White	30%	39%
% International/foreign born	11%	16%
% Two or more races	8%	11%
% Unknown	6%	4%

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 2019, HMC participated in the *First Year Experiences/Senior Transitions* topical module. We also participated with 11 other schools in the inaugural year of the Sustainability Consortium. Items from the module and consortial data are discussed separately. The comparison group for the overall survey is our Carnegie Class (Private More Selective Baccalaureate Arts & Sciences Focus), and our Comparison Group for the FY/SR module in 2019 is all other institutions who participated in the module (277 other schools).

HMC participates in the NSSE survey annually each spring, surveying 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, and HMC first year students indicate that their courses have challenged them to do their best work (5.9 for first years and 5.4 for seniors). We promote student learning by challenging students and supporting them as they engage in various forms of learning. HMC first year respondents are significantly higher on analyzing numerical information as compared to first years in our peer group (3.3 and 2.5, respectively, $p < .001$). This difference persists into the Senior year (3.4 and 2.9, respectively, $p < .001$).

- 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, to form a new idea

or understanding from various pieces of information, and to analyze an idea, experience or line of reasoning than first years in our peer group. They also report their course work was less likely to ask them to evaluate a point of view, decision, or information source than first years in the peer group. HMC seniors are equally likely to apply facts, theories or methods to practical problems, analyze an idea, experience or line of reasoning in depth by examining its parts, or form a new idea or understanding from various pieces of information and less likely to evaluate a point of view, decision, or information source, than seniors in the peer group.

- 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 and 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 report a higher level of reaching conclusions based on their own analysis of numerical information than those from our comparison group but score lower on all the other items than respondents in the 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 just as likely to report identifying key information from reading assignments, reviewing their notes and summarizing what they have learned in class or from course materials than first year respondents in our peer group. Seniors are less likely to have done any of these that seniors in our peer group. assignments.

FIRST YEARS				
	HMC	**Peer**	**Comp**	**Sig**
	n = 124	n =8,203		
During the current school year, about how often have you done the following?				
1 = never; 2 = sometimes; 3 = often; 4 = very often				
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	3.1	2.9	▲	p < .05
Reached conclusions based on your own analysis of numerical information (numbers, graphs, statistics)	3.0	2.5	▲	p < .001
Used numerical information to examine a real-world problem or issue	2.8	2.3	▲	p < .001
Evaluated what others have concluded from numerical information	2.7	2.4	▲	p < .001
Identified key information from reading assignments	3.3	3.2		
Reviewed your notes after class	2.8	2.9		
Summarized what you learned in class or from course material	2.7	2.8		
During the current school year, to what extent have your courses challenged you to do your best work	5.9	5.4	▲	p < .001
During the current school year, how much has your coursework emphasized the following				
1 = very little; 2 = some; 3 = quite a bit; 4 = very much				
Applying facts, theories or methods to practical problems or in new situations	3.4	3.0	▲	p < .001
Analyzing an idea, experience or line of reasoning in depth by examining its parts	3.3	3.0	▲	p < .001
Evaluating a point of view, decision, or information source	2.8	3.0	▼	p < .05
Forming a new idea or understanding from various pieces of information	3.2	3.0	▲	p < .05
How much has your experience at this institution contributed to your knowledge, skills, and personal development in the following areas?				
1 = very little; 2 = some; 3 = quite a bit; 4 = very much				
Thinking critically and analytically	3.3	3.1		
Analyzing numerical and statistical information	3.3	2.5	▲	p < .001

SENIORS				
	HMC	**Peer**	**Comp**	**Sig**
	n = 96	n = 7,180		
During the current school year, about how often have you done the following?				
1 = never; 2 = sometimes; 3 = often; 4 = very often				
Examined the strengths and weaknesses of your own views on a topic or issue	2.7	2.9	▼	p < .05
Learned something that changed the way you understand an issue or concept	2.9	3.0		
Reached conclusions based on your own analysis of numerical information (numbers, graphs, statistics)	2.9	2.6	▲	p < .001
Used numerical information to examine a real-world problem or issue	2.3	2.5		
Evaluated what others have concluded from numerical information	2.4	2.5		
Identified key information from reading assignments	3.1	3.3	▼	p < .05
Reviewed your notes after class	2.4	2.6	▼	p < .05
Summarized what you learned in class or from course material	2.4	2.7	▼	p < .001
During the current school year, to what extent have your courses challenged you to do your best work	5.4	5.5		
During the current school year, how much has your coursework emphasized the following				
1 = very little; 2 = some; 3 = quite a bit; 4 = very much				
Applying facts, theories or methods to practical problems or in new situations	3.2	3.1		
Analyzing an idea, experience or line of reasoning in depth by examining its parts	3.1	3.1		
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	3.0		
How much has your experience at this institution contributed to your knowledge, skills, and personal development in the following areas?				
1 = very little; 2 = some; 3 = quite a bit; 4 = very much				
Thinking critically and analytically	3.5	3.5		
Analyzing numerical and statistical information	3.4	2.9	▲	p < .001