



**National Survey of Student Engagement
2020
Selected Items Related to Critical Thinking and Reasoning**

Dates of Administration: February 4, 2020 - March 3, 2020¹
Method of Administration: Web survey (Administered through NSSE)

Demographics and Response Rates:

	First Years	Seniors
Overall Response Rate	52% (116/225)	42% (89/211)
% Female	49%	47%
% Am. Indian or AK Native	0%	0%
% Asian	22%	12%
% Black or African American	5%	5%
% Hispanic or Latino	15%	17%
% White	32%	38%
% International/foreign born	12%	8%
% Two or more races	7%	11%
% Unknown	7%	10%

Background:

HMC participates in the National Survey of Student Engagement (NSSE) annually each spring, surveying all first years and graduating seniors asking them 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. The Assessment and Accreditation Committee has worked with OIRE to develop a [cycle for the modules](#) that are relevant to HMC.

In 2020, right before transitioning to remote learning, HMC participated in NSSE and chose additional two modules: the [Civic Engagement Module](#) and the [Inclusiveness & Engagement with Diversity Module](#). While the comparison group for the overall survey is our Carnegie Class (Private More Selective Baccalaureate Arts & Sciences Focus – 27 other schools), our Comparison Group for the FY/SR module in 2020 is all other institutions who participated in the module...

NSSE results are used throughout the campus in academic and co-curricular programs to evaluate growth and development on student learning outcomes and by the college overall in its improvement efforts.

¹ HMC’s 2020 NSSE administration concluded before we transitioned to remote learning, however, some of our comparison schools may have had their NSSE administrations interrupted or disrupted by the transition to remote learning. More info about actions taken by NSSE to minimize the pandemic’s impact and the analyses completed to ensure data quality is available [here](#).

Highlights:

- Challenging intellectual work remains central to our mission, and HMC first year students indicate that their courses have challenged them to do their best work (6.0 for first years and 5.5 for peers, $p < .001$). HMC first year respondents are also significantly higher on reaching conclusions based on analyzing numerical information as compared to first years in our peer group (3.1 and 2.5, respectively, $p < .001$). However, the gap between HMC students and peers, while still significant, is smaller for seniors (2.9 and 2.6, respectively, $p < .001$).
- 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 as well as analyzing numerical and statistical information than those from our comparison group but score lower on all the other items than respondents in the peer group.
- 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 less likely to analyze an idea, experience or line of reasoning in depth by examining its parts, form a new idea or understanding from various pieces of information and to evaluate a point of view, decision, or information source, than seniors in the peer group. There is not significant difference in applying facts, theories or methods to practical problems between HMC seniors and seniors in our peer group.
- Another important part of critical thinking and reasoning is the development of learning strategies that support deeper engagement with issues. First year respondents at HMC are just as likely to report identifying key information from reading assignments and summarizing what they have learned in class or from course materials than first year respondents in our peer group while less likely to summarize what they learned in class or from course materials compared to their peers. Seniors are less likely to have done any of these than seniors in our peer group.

FIRST YEARS

	HMC	Peer	Comp	Sig
	n = 116	n =4,812		
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	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)	3.1	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	3.2	3.2		
Reviewed your notes after class	2.6	2.8	▼	p < .01
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	6.0	5.5	▲	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	3.4	3.0	▲	p < .001
Analyzing an idea, experience or line of reasoning in depth by examining its parts	3.3	3.1	△	p < .01
Evaluating a point of view, decision, or information source	2.8	3.1	▼	p < .05
Forming a new idea or understanding from various pieces of information	3.1	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	3.3	3.2		
Analyzing numerical and statistical information	3.2	2.5	▲	p < .001

SENIORS

	HMC	Peer	Comp	Sig
	n = 89	n = 3,921		
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	2.5	3.0	▼	p < .001
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)	2.9	2.6	△	p < .05
Used numerical information to examine a real-world problem or issue	2.3	2.5		
Evaluated what others have concluded from numerical information	2.6	2.6		
Identified key information from reading assignments	2.9	3.3	▼	p < .001
Reviewed your notes after class	2.4	2.6		
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	5.5	5.5		
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		
Analyzing an idea, experience or line of reasoning in depth by examining its parts	2.9	3.2	▼	p < .05
Evaluating a point of view, decision, or information source	2.6	3.1	▼	p < .001
Forming a new idea or understanding from various pieces of information	3.1	3.2		
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	3.6	▼	p < .01
Analyzing numerical and statistical information	3.4	2.9	▲	p < .001