



CIRP College Senior Survey 2015 Selected Items Related to Critical Thinking and Reasoning

Demographics and Response Rates

Responses	170
Male	93
Female	77
Comparison Group:	30 Private, Nonsectarian 4-Year Colleges (n = 5,872)
Longitudinal:	149 matched pairs from first to senior year

Background:

The CIRP Senior Survey (CSS) focuses on a broad range of outcomes and post-college goals and plans, including academic achievement and engagement, student-faculty interaction, cognitive and affective development, student goals and values, satisfaction with college, degree aspirations and experience, and employment and advanced education plans. This report is focused on items on the CSS that relate to the student learning outcome of *critical thinking and reasoning*. Results are first presented for HMC seniors in comparison with seniors at the group of institutions listed above as “Comparison Group.” Second, results are paired with the CIRP Freshman Survey to provide longitudinal data on students’ growth during their undergraduate experience. This can be used to understand the impact of Harvey Mudd College.

HMC participates in the CSS survey annually each spring and surveys all seniors.

The results of the senior survey are used throughout the campus in departmental program reviews to evaluate growth and development on student learning outcomes; in Career Services to establish anticipated career and graduate school activities; and by the College overall in accreditation and assessment activities.

Highlights:

- HMC seniors exceed their peers at our comparison institutions on four of the five questions asking how often they engaged in certain habits of mind associated with critical thinking: support your opinions with a logical argument, seek solutions to problems and explain them to others, evaluate the quality or reliability of information you received, and looked up scientific research articles and resources. HMC seniors reported that they were less likely to seek alternative solutions to a problem than did their peers.

- HMC seniors reported less frequently accessing library resources electronically than did their peers. They were also less likely to report challenging a professor’s ideas in class.
- HMC seniors were more likely to agree that “this institution has contributed to my critical thinking skills” than seniors at the comparison institutions.
- Looking longitudinally, there were modest increases in items that asked about specific skills associated with critical thinking and reasoning, but the only statistically significant increases were for evaluating the quality and reliability of information and looking up scientific research articles and resources.

SENIORS				
	HMC	Comp	Diff	Sig
	n = 170	n = 5,872		
How often in the past year did you:				
<i>1 = Not at All, 2 = Occasionally, 3 = Frequently</i>				
Support your opinions with a logical argument	2.82	2.71	▲	p < .01
Seek solutions to problems and explain them to others	2.82	2.69	▲	p < .001
Evaluate the quality or reliability of information you received	2.74	2.63	▲	p < .01
Seek alternative solutions to a problem	2.52	2.61	▼	p < .05
Look up scientific research articles and resources	2.62	2.50	▲	p < .05
Since entering college, indicate how often you:				
<i>1 = Not at All, 2 = Occasionally, 3 = Frequently</i>				
Accessed your campus' library resources electronically	2.22	2.53	▼	p < .001
Challenged a professor's ideas in class	1.56	1.74	▼	p < .001
Please indicate how often you engaged in each during the past year:				
<i>1 = Not at All, 2 = Occasionally, 3 = Frequently</i>				
Felt that faculty encouraged me to ask questions and participate in discussions	2.64	2.58		
Please indicate your agreement with each of the following statements. This institution has contributed to my:				
<i>1=Strongly disagree, 2=Disagree, 3=Agree, 4=Strongly agree</i>				
Critical thinking skills	3.71	3.56	▲	p < .001

LONGITUDINAL (2009-2011 first-years and 2015 seniors)					
n = 149	<u>HMC</u> <u>FY</u>	<u>HMC</u> <u>SR</u>	<u>Change</u>	<u>Diff</u>	<u>Sig</u>
How often in the past year did you:					
<i>1 = Not at All, 2 = Occasionally, 3 = Frequently</i>					
Support your opinions with a logical argument	2.81	2.83	0.02		
Seek solutions to problems and explain them to others	2.79	2.84	0.05		
Evaluate the quality or reliability of information you received	2.56	2.76	0.20	▲	p < .001
Seek alternative solutions to a problem	2.49	2.54	0.05		
Look up scientific research articles and resources	2.35	2.64	0.29	▲	p < .001