



## CIRP College Senior Survey

Summer 2014

### Selected items Related to Critical Thinking and Reasoning

**Dates of Administration:** April 24, 2014 – May 13, 2014

**Method of Administration:** Web survey (Administered by CIRP)

#### Demographics and Response Rates

Responses 146/180 = 81%

Total opt out 15/180 = 8%

Valid Responses 131/150 = 72%

Male 60/131 = 46%

Female 71/131 = 54%

Longitudinal 128 matched pairs from first to senior year (97%)

Peer Group: Private, Nonsectarian 4-Year Colleges

#### 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 paired with the CIRP Freshman Survey findings to provide longitudinal data on students' growth during their undergraduate experience which can be used to understand the impact of college.

HMC participates in the CSS survey annually each spring, and surveys all graduating seniors. Typically, this survey is done using a paper survey, but this year that option was not available to us from CIRP, so we participated electronically.

The results of the CSS are used throughout the campus in departmental program reviews to evaluate growth and development on student learning outcomes; in career services to establish career and graduate school activities one year out; and by the college overall in accreditation and assessment activities.

#### Highlights:

The CSS contains several items that relate to critical thinking and reasoning, and as highlighted above, contains a longitudinal profile that allows us to examine changes from first year to senior year.

- Looking longitudinally, we saw modest increases in items that asked about specific skills associated with critical thinking and reasoning: supporting their opinions with a logical argument, seeking solutions to

problems and explaining them to others, evaluating the quality and reliability of information, seeking alternative solutions to problems, and looking up scientific research articles and resources.

- Women were more likely to seek solutions to problems and explain them to others and to look up scientific articles and resources than men; men were more likely to seek alternative solutions to problems and to challenge professor’s ideas in class.
- In looking at self-reported critical thinking and creativity scores, two things stand out. First, respondents at HMC rate themselves higher on critical thinking (4.54) than the peer group (4.33) and while 26% of male respondents at HMC put themselves in the highest 10% for creativity, only 7% of women do so.

<b>How often in the past year did you:</b>	<b>FY</b>	<b>SR</b>	<b>Change</b>
<b>Support your opinions with a logical argument</b>			
Frequently	81.9%	85.8%	3.9%
Occasionally	16.5%	14.2%	-2.3%
Never	1.6%	0.0%	-1.6%
<b>MEAN</b>	<b>2.80</b>	<b>2.86</b>	<b>0.06</b>
<b>Seek solutions to problems and explain them to others</b>			
Frequently	77.2%	87.4%	10.2%
Rarely	22.0%	12.6%	-9.4%
Sometimes	0.8%	0.0%	-0.8%
<b>MEAN</b>	<b>2.76</b>	<b>2.87</b>	<b>0.11</b>
<b>Evaluate the quality or reliability of information you received</b>			
Frequently	60.6%	78.7%	18.1%
Occasionally	37.8%	21.3%	-16.5%
Never	1.6%	0.0%	-1.6%
<b>MEAN</b>	<b>2.59</b>	<b>2.79</b>	<b>0.20</b>
<b>Seek alternative solutions to a problem</b>			
Frequently	54.8%	69.8%	15.0%
Occasionally	44.4%	30.2%	-14.2%
Never	0.8%	0.0%	-0.8%
<b>MEAN</b>	<b>2.54</b>	<b>2.70</b>	<b>0.16</b>
<b>Look up scientific research articles and resources</b>			
Frequently	37.8%	77.2%	39.4%
Occasionally	52.8%	21.3%	-31.5%
Never	9.4%	1.6%	-7.8%
<b>MEAN</b>	<b>2.28</b>	<b>2.76</b>	<b>0.48</b>

	Total		HMC Only	
How often in the past year did you:	HMC	Peer Group	Males	Females
Support your opinions with a logical argument				
Frequently	86.2%	72.5%	86.4%	85.9%
Occasionally	13.8%	26.0%	13.6%	14.1%
Never	0.0%	1.6%	0.0%	0.0%
<b>MEAN</b>	<b>2.86</b>	<b>2.71</b>	<b>2.86</b>	<b>2.86</b>
Seek solutions to problems and explain them to others				
Frequently	87.7%	70.4%	79.7%	94.4%
Rarely	12.3%	28.5%	20.3%	5.6%
Sometimes	0.0%	1.2%	0.0%	0.0%
<b>MEAN</b>	<b>2.88</b>	<b>2.69</b>	<b>2.80</b>	<b>2.94</b>
Evaluate the quality or reliability of information you received				
Frequently	80.8%	66.5%	79.7%	81.7%
Occasionally	19.2%	31.8%	20.3%	18.3%
Never	0.0%	1.7%	0.0%	0.0%
<b>MEAN</b>	<b>2.81</b>	<b>2.65</b>	<b>2.80</b>	<b>2.82</b>
Seek alternative solutions to a problem				
Frequently	70.8%	60.7%	76.3%	66.2%
Occasionally	29.2%	37.8%	23.7%	33.8%
Never	0.0%	1.5%	0.0%	0.0%
<b>MEAN</b>	<b>2.71</b>	<b>2.59</b>	<b>2.76</b>	<b>2.66</b>
Look up scientific research articles and resources				
Frequently	76.9%	62.0%	64.4%	87.3%
Occasionally	21.5%	29.8%	32.2%	12.7%
Never	1.5%	8.2%	3.4%	0.0%
<b>MEAN</b>	<b>2.75</b>	<b>2.54</b>	<b>2.61</b>	<b>2.87</b>
Accessed your campus' library resources electronically				
Frequently	52.3%	69.2%	39.0%	63.4%
Occasionally	44.6%	27.6%	57.6%	33.8%
Never	3.1%	3.1%	3.4%	2.8%
<b>MEAN</b>	<b>2.49</b>	<b>2.66</b>	<b>2.36</b>	<b>2.61</b>
Challenged a professor's ideas in class				
Frequently	5.4%	9.0%	6.9%	4.2%
Occasionally	51.2%	50.2%	69.0%	36.6%
Never	43.4%	40.8%	24.1%	59.2%
<b>MEAN</b>	<b>1.62</b>	<b>1.68</b>	<b>1.83</b>	<b>1.45</b>
Felt that faculty encouraged me to ask questions and participate in discussions				
Frequently	74.6%	68.3%	75.9%	73.5%
Occasionally	23.0%	29.3%	20.7%	25.0%
Never	2.4%	2.4%	3.4%	1.5%
<b>MEAN</b>	<b>2.72</b>	<b>2.66</b>	<b>2.72</b>	<b>2.72</b>

<b>LONGITUDINAL</b>				
<b>Rate yourself on each of the following traits as compared with the average person your age:</b>		<b>FY</b>	<b>SR</b>	<b>Change</b>
Creativity				
	Highest 10%	7.3%	15.4%	8.1%
	Above Average	43.9%	45.5%	1.6%
	Average	42.3%	35.0%	-7.3%
	Below Average	6.5%	4.1%	-2.4%
	Lowest 10%	0.0%	0.0%	0.0%
	<b>MEAN</b>	<b>3.52</b>	<b>3.72</b>	<b>0.2</b>

		<b>Total</b>		<b>HMC Only</b>	
<b>Think about your current abilities and tell us how strong or weak you believe you are in each of the following areas:</b>		<b>HMC</b>	<b>Peer Group</b>	<b>Males</b>	<b>Females</b>
Critical thinking skills					
	A major strength	61.4%	48.1%	65.5%	58.0%
	Somewhat strong	32.3%	38.3%	27.6%	36.2%
	Average	4.7%	12.6%	5.2%	4.3%
	Somewhat weak	1.6%	0.9%	1.7%	1.4%
	A major weakness	0.0%	0.1%	0.0%	0.0%
	<b>MEAN</b>	<b>4.54</b>	<b>4.33</b>	<b>4.57</b>	<b>4.51</b>
<b>Rate yourself on each of the following traits as compared with the average person your age:</b>					
Creativity					
	Highest 10%	15.9%	19.0%	25.9%	7.4%
	Above Average	43.7%	41.1%	31.0%	54.4%
	Average	37.3%	32.3%	41.4%	33.8%
	Below Average	3.2%	6.8%	1.7%	4.4%
	Lowest 10%	0.0%	0.7%	0.0%	0.0%
	<b>MEAN</b>	<b>3.72</b>	<b>3.71</b>	<b>3.81</b>	<b>3.65</b>